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Report No: 38898 - MG

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 6.7 MILLION
(US$10 MILLION EQUIVALENT)

TO THE

REPUBLIC OF MADAGASCAR

FOR A

MADAGASCAR SUSTAINABLE HEALTH SYSTEM DEVELOPMENT PROJECT

April 20, 2007

Human Development III
Country Department 8
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective March 31, 2007)

Currency Unit = Ariary
Ariary 2050 = USD1
USD 1.51326 = SDR 1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AFD	*Agence Française de Développement* (French Development Agency)	MDG	Millennium Development Goals
AfDB	African Development Bank	MIS	Management Information System
AIDS	Acquired Immuno Deficiency Syndrome	MOH	Ministry of Health, Family Planning and Social Protection
CAS	Country Assistance Strategy	MTEF	Medium Term Expenditure Framework
CHD	*Centre hospitalier de district* (District Hospital)	MSPP	Multi-Sectoral STI/HIV/AIDS Prevention Project
CHR	*Centre hospitalier regional* (Regional Hospital)	MWMP	Medical Waste Management Plan
CHU	*Centre hospitalier universitaire* (University Hospital)	NCB	National Competitive Bidding
CNLS	*Comité National de Lutte contre le SIDA* (National HIV-AIDS Committee)	NHA	National Health Accounts
CPAR	Country Procurement Assessment Report	NHIS	National Health Information System
CFAA	Country Financial Accountability Assessment	NGO	Non-Governmental Organization
CRESAN 2	Second Health Sector Support Project	PCU	Project Coordination Unit
CSB	*Centre de Santé de Base* (Primary Health Center)	PDSS	*Plan de Développement du Secteur Santé* (Health Sector Strategy)
DHS	Demographic and Health Survey	PIM	Project Implementation Manual
EU	European Union	PRSC	Poverty Reduction Support Credit
EPM	*Enquête auprès des Ménages* (Household Survey)	PRSP	Poverty Reduction Strategy Paper
FANOME	Cost Recovery System	QCBS	Quality-Cost-Based Selection
FMR	Financial Monitoring Report	SALAMA	National Drug Procurement Agency
GDP	Gross Domestic Product	SBD	Standard Bidding Documents
GTZ	Deutsch Gesellschaft fur Technische Zusammenarbit GmbH	SHSDP	Sustainable Health System Development Project
HIPC	Heavily Indebted Poor Countries	STI	Sexually Transmitted Infections
HIV	Human Immunodeficiency Virus	SSD	Health Districts
IBRD	Int. Bank for Reconst. & Dev.	SSS	Central Health Statistics Service
ICB	International Competitive Bidding	UN	United Nations
IDA	International Development Association	UNAIDS	United Nations Programme on HIV/AIDS
IMCI	Integrated Management of Childhood Illnesses	UNDP	United Nations Development Programme
INSTAT	*Institut National de la Statistique* (National Statistical Institute)	UNFPA	United Nations Fund for Population Activities
JICA	Japanese International Cooperation Agency	UNICEF	United Nations Children's Fund
M&E	Monitoring and Evaluation	USAID	US Agency for International Development
MAP	Madagascar Action Plan	WHO	World Health Organization

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Task Team Leader:	Mukesh Chawla

MADAGASCAR
Sustainable Health System Development Project

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MADAGASCAR

MADAGASCAR SUSTAINABLE HEALTH SYSTEM DEVELOPMENT PROJECT

PROJECT APPRAISAL DOCUMENT

AFRICA REGION

AFTH3

Date: April 20, 2007	Team Leader: Mukesh Chawla
Country Director: Ritva S. Reinikka	Sectors: Health (100%)
Sector Manager/Director: Laura Frigenti	Themes: Child health (P);Other communicable diseases (P);Health system performance (P);Population and reproductive health (P);Nutrition and food security (S)
Project ID: P103606	Environmental screening category: Partial Assessment
Lending Instrument: Specific Investment Loan	

Project Financing Data

[ ] Loan [X] Credit [ ] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Total Operation Cost (US$m.): 15.00
Total Bank financing (US$m.): 10.00
Proposed terms: The proposed credit would be on standard IDA terms, with a maturity of 40 years, including a grace period of ten years.

Financing Plan (US$m)

Source	Local	Foreign	Total
BORROWER/RECIPIENT	5.00	0.00	5.00
International Development Association (IDA)	10.00	0.00	10.00
Financing Gap	-10.00	10.00	0.00
Total:	5.00	10.00	15.00

Amount of financing to be provided by

Source	Amount (US$m)

Borrower:
MINISTRY OF HEALTH AND FAMILY PLANNING
Madagascar

Responsible Agency:

Estimated disbursements (Bank FY/US$m)									
FY	0	0	0	0	0	0	0	0	0
Annual	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumulative	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Expec l cl g date:)ecem 3

Does the j t depart from the CAS i content l i ifi t respects? ***R PAD***	Yes [X] N
D t p :t any exceptions 3a p icies? ***R PAD D*** these :en approved management policy excepti the :t ncl critical il rated " ***R PAD :***	Yes Jo es No]
Does the project meet the Regional criteria for readiness for implementation? ***Ref. PAD D.7***	[X]Yes [ ] No

Project development objective ***Ref. PAD B.2, Technical Annex 3***
The project development objective (PDO) of the proposed Madagascar Health SWAp is to contribute to the strengthening of the health system, including financing, delivery and management, in order to improve the access and utilization of health services, especially in rural and remote areas, and scale-up the production and delivery of health programs with an emphasis on endemic infectious diseases, reproductive health (including family planning sexually transmitted diseases, and HIV/AIDS) and nutrition.

Project description *[one-sentence summary of each component]* ***Ref. PAD B.3.a, Technical Annex 4***

Which safeguard policies are triggered, if any? ***Ref. PAD D.6, Technical Annex 10***

Significant, non-standard conditions, **if any**, for:
Ref. PAD C.7
Board presentation:
5/22/2007

Loan/credit effectiveness:
6/29/2007

Covenants applicable to project implementation:

I. STRATEGIC CONTEXT AND RATIONALE

A. Country and sector issues

1. Madagascar has witnessed a remarkable downturn since becoming independent in 1961, with real per capita GDP declining by over 25 percent during the last four decades to US$290 in 2005. Caused in part by inward looking, highly protectionist policies and poor governance, Madagascar's disappointing economic outcome has resulted in a deterioration of physical and human capital. Two liberalization episodes in the late 1980s and 1990s led to growth but proved short-lived. The reforms of the late 1990s, aided by preferential trade access, resulted in export-oriented, private-sector led growth, averaging over four percent during 1997-2001. This progress was interrupted by a political crisis over the contested 2002 elections, resulting in an economic crisis, with GDP declining by 13 percent in that one year alone. However, the political crisis did bring to power a democratic force with a reform agenda and renewed hope for a more prosperous future.

2. Good progress has been achieved since the political and economic crisis of 2002. Prudent macroeconomic management created an environment conducive to economic rebound, reaping the fruits of previous liberalization reforms. Despite exogenous shocks such as cyclones and high oil prices, the macro-economic situation stabilized and the economy grew at about 10 percent in 2003 and has since continued to grow at a respectable 5 percent per year. Growth has come largely through improved performance in agriculture, especially higher rice production, higher tourism receipts, and continued public investments. Despite increases in world petroleum prices, a tight monetary policy has resulted in a decline in annual inflation from 27 percent in end-2004 to 10 percent in mid-2006. Similarly, the measures adopted to ensure exchange rate stability and competitiveness and to secure an adequate level of international reserves were broadly successful, leading to greater stability of the market-determined exchange rate in 2005. The Government has also taken steps to confront corruption and to improve the quality of public sector governance. In an effort to improve public resource management and strengthen public service delivery, the Government is preparing a legal framework for decentralization to the level of communes.

3. High growth has also resulted in improvements in basic social indicators, albeit from a low base. More children are in school today, and net primary enrolment rates exceed 90 percent. Immunization rates have improved and the number of births assisted by skilled medical personnel has increased. Infant and child mortality rates have declined significantly over the last decade and chronic malnutrition has decreased. Similarly, progress has been made on reducing poverty, which declined to 69 percent from its peak level of 80 percent at the time of the 2002 crisis. With the implementation of the rural roads program, reliable access to transport for the rural population has increased from 45 percent in 2003 to 57 percent in 2005. Access to safe drinking water in rural areas also improved during this period.

4. These positive developments are encouraging, but there is still a long way to go given where Madagascar is today relative to the rest of the world. The macroeconomic situation remains fragile, especially as revenue mobilization remains weak. Poverty rates are still very high while social indicators are low, and Madagascar is not likely to reach the poverty alleviation and health-related Millennium Development Goals (MDGs). The country also continues to face

fiscal problems, with significant revenue shortfalls in customs and tax collections leading to a decline in tax revenues. Although the economy has been on a rebound in the last two years, the capacity of the Government to raise revenue remains severely constrained. Moreover, external aid has been dwindling in recent years. As a result, overall government expenditure is falling in real terms and public spending on social programs is declining both in real terms and as a percentage of the government budget.

5. Health is a key goal of Madagascar's second-generation poverty reduction strategy, the Madagascar Action Plan (MAP), 2007-2011. The MAP – which sets very ambitious targets in the areas of maternal and child mortality, fertility rate, malaria, tuberculosis, sexually transmitted diseases and HIV/AIDS control, and reduction of malnutrition in children under the age of five – is multi-sectoral in nature and recognizes the importance of system and institution strengthening. Following the MAP, the health sector strategy formulated by the Ministry of Health, Family Planning and Social Protection (henceforth: MOH) in the *Plan de Développement du Secteur Santé*, or the PDSS, identifies a number of key bottlenecks to increased access and use of health services and improvements in health indicators in Madagascar. Four critical areas of weakness are highlighted: (i) *poorly equipped health centers and low levels of capacity to produce and deliver health services, especially in rural and remote areas* (managerial capacity at the level of communes is weak); (ii) *uneven staffing of health facilities, especially in rural and remote areas* (a large number of health centers, particularly in rural and remote areas, do not have adequate numbers of qualified staff); (iii) *low levels of health financing and inefficiencies in resource allocation* (Madagascar spent around US$6 per capita on health care in 2005, significantly lower than the average for sub-Saharan Africa, excluding South Africa, of US$15.4 per capita); and (iv) *inadequate demand for health services and low levels of utilization* (only 10 percent of the population reports an illness annually, and of this, only 40 percent seeks care from qualified medical personnel). The MAP provides the appropriate entry point for an integrated sector-wide approach in the design of the Sustainable Health System Development Project (SHSDP).

6. The World Bank has been supporting the health sector through a number of health-specific and multi-sectoral projects in the past decade, several of which are ongoing. These include the Second Health Sector Support Project (CRESAN 2), which was approved in November 1999 in the amount of US$40 million, with the objective of contributing to the improvement of the population's health status through more accessible and better quality of health services, especially primary health care services in rural areas. CRESAN 2, which received a supplemental credit of US$18 million in May 2005, supports priority health programs (with an emphasis on endemic infectious diseases, reproductive health and nutrition) and contributes to the strengthening of sector management and administrative capacity within MOH, especially at provincial and district levels. CRESAN 2 is expected to close in December 31, 2007. Other projects include the Multisectoral STI/HIV/AIDS Project (US$20 million, closing date: December 2007), Second Multisectoral STI/HIV/AIDS Project (US$30 million, closing date: December 2009), Community Development Fund (US$178 million, closing date: June 2008), and Second Community Nutrition Project (US$47.6 million, closing date: December 2008).

7. The proposed Madagascar SHSDP represents the next stage with respect to the World Bank and other development partners' support for the health sector. There is general consensus

among development partners that a sector investment and maintenance loan for financing the support to the health sector is preferred to general budget support as the primary vehicle for financing. There is widespread recognition that the challenges in health are too specific and the sector is too fragmented to fully benefit from pure budget support, and that a transition phase of sector specific support is needed. The World Bank's Independent Evaluation Group (which completed a country assistance evaluation in July 2006 of IDA's involvement in Madagascar for 1995-2005) also recommends limiting the role of budget support until there is a sustained improvement in collecting and managing public resources.

8. The approach that has been used in the design of this sector investment credit is one that encompasses the entire health sector and supports the health reform and scaling-up program of the Government of Madagascar. Many development partners, including United Nations Children's Fund (UNICEF), United Nations Fund for Population Activities (UNFPA), World Health Organization (WHO), United Nations Development Programme (UNDP), United States Agency for International Development (USAID), Japanese International Cooperation Agency (JICA), European Union (EU), African Development Bank (AfDB), *Agence Française de Dévéloppement* (AFD) as well as the French Cooperation, are currently working in Madagascar through parallel financing to address the dysfunctions and bottlenecks within the health care system. The Madagascar SHSDP would add value by facilitating greater coordination among development partners and ensuring that the ongoing interventions and support do not overlap, but rather are synergistically related to one another and consistent with the Government of Madagascar's vision for development results to be achieved in the sector. This intervention is thus part of a more complex, multisectoral agenda in Madagascar, and one of its main functions is to coordinate efforts of various stakeholders in order to achieve greater cohesion. More explicitly, given the on-going activities and the small amount of the proposed financing (US$10 million), this project aims at building capacity within MOH and coordinating on-going interventions in Madagascar and linking these closely to results. Based on a sector-wide approach, Madagascar SHSDP embodies a process that has Government leadership as its starting point and progresses towards increased harmonization of implementation mechanisms and use of country systems. What distinguishes this project from others before is the sustained, country-led partnership among development partners and key stakeholders in support of country-owned sector policies and strategies.

B. Rationale for Bank involvement

9. The proposed operation is included in the Country Assistance Strategy (CAS) for Madagascar covering the period of 2007-11. Key CAS goals supported by the project include "improving services to people" (Pillar II of the CAS) and "achieving better outcomes in education and health." In health, the focus in the CAS is on helping the Government make further progress on reducing child and maternal mortality by offering access to reproductive services, reducing child malnutrition, improving the availability of clean water and sanitation services, and keeping HIV/AIDS and sexually transmitted disease rates under control. The approach of the proposed Madagascar SHSDP – alignment with the government program as outlined in the MAP, harmonization and coordination with other donors, and integrated sector-wide approach to health – is consistent with the CAS principles and approach.

10. The rationale for the Bank's continued involvement in the health sector is strong. Consolidation and scaling-up of support for basic services in health is essential for Madagascar to achieve progress towards meeting the MDGs. The current financial support provided by CRESAN 2 will be exhausted by September 2007. The proposed Madagascar SHSDP will sustain and gradually enhance IDA financing as well as leverage other donor financing for the health sector in Madagascar within an agreed medium-term fiscal framework. The Bank is in a unique position to help Madagascar position itself to profit from scaling-up opportunities as they arise and play a catalytic role in leveraging additional resources, including those from other developmental partners. In line with IDA-14 goals on leveraging and partnerships, the IDA commitment to the health sector will be critical in leveraging a large amount of development assistance from other donors. The Bank is a nodal agency in a consortium that is being put together to support the health sector via the sector-wide approach. The consortium includes the AfDB, AFD, the EU, the French Cooperation, JICA, UNICEF, UNFPA, USAID, WHO, and the World Bank.

11. Madagascar SHSDP supports clear opportunities to boost progress on pro-poor and potentially high impact activities, including the immunization of children, control of malaria, and population and family planning. Finally, the Bank and other partners are well positioned to work with the Government on challenges of the health sector at the policy level. The involvement of the Bank is important to bring Government, civil society, and development partners together around a common vision of effective service delivery and improved accountability.

C. Higher level objectives to which the project contributes

12. Madagascar SHSDP supports the development of the health sector in Madagascar, with a strong focus on strengthening all aspects of health systems, including production, financing, delivery, stewardship and governance. The achievement of the goals of the sector wide program will, inter alia, include reduction in maternal, child and infant mortality, fertility rate, chronic malnutrition in children under the age of three, HIV prevalence, and prevalence of syphilis in pregnant women. The successful adoption of SHSDP is expected to yield a number of other development benefits as well, including stronger country ownership and leadership, and greater focus on results. In addition, the Sector-Wide Approach of Madagascar SHSDP will encourage and foster coordinated and open policy dialogue, guide allocation of resources based on priorities, and facilitate scaling-up of benefits to entire sector. It will also enhance sector-wide accountability with common fiduciary standards, and strengthen the country's capacity, systems and institutions.

13. The project's fiduciary dimensions and focus on strengthening public budgeting, financial management and procurement also fit with broader efforts in this direction supported by other Bank projects, especially the fourth Poverty Reduction Support Credit (PRSC). Channeling funds of participating development partners through a common and widely accepted program of reform will help strengthen oversight of sectoral programs and will have externalities beyond the health sector. Activities under Madagascar SHSDP also emphasize transparency and predictability in budgeting and sectoral planning and are thus in keeping with higher-level objectives in governance and public sector, and public expenditure management reform. Aspects

of the project and PDSS also respond to CAS objectives on stemming the decline in key services and addressing governance constraints to growth and poverty reduction.

II. PROJECT DESCRIPTION

A. Lending instrument

14. The proposed project will be financed through a sector investment credit of an amount equivalent to US$10 million, implemented over a 30-month period from July 2007 to December 2009. The initial IDA financing will be pooled with contributions from the AFD (tentatively US$15 million beginning January 2008), and supported through parallel financing by other development partners, including AfDB (US$10 million), JICA (US$2 million), UNICEF (US$14 million), UNFPA (US$2 million), USAID (US$15 million), and WHO (US$10 million). The European Union will continue to provide direct budget support to the Government of Madagascar, which indirectly supports the health sector. This project is the first phase of a longer term program which, over time, would aim at results-based financing. At the end of the two-and-a-half years of implementation, additional financing would be sought to continue support to the medium-term objectives of the MAP and PDSS through 2011.

B. Project development objective and key indicators

15. The project development objective of Madagascar SHSDP is to contribute to the strengthening of the health system and enhance the institutional capacity of MOH to improve the access and utilization of health services, especially in rural and remote areas.

16. A series of indicators will be used to monitor project, program and sector performance under SHSDP. Since the engagement of the World Bank and use of IDA resources will leverage wider support for the MAP and provide the necessary technical expertise and support for realization of MAP's objectives, Bank's performance will be measured by its ability to harmonize resources and efforts of all development partners, facilitate the measurement of results, strengthen capacity for measuring results; and improve management capacity within MOH. A broader panel consists of indicators tracking and measuring resources, processes, outputs and outcomes will be used to monitor the objectives of MAP and interventions under PDSS. For each series of indicators, the MOH will record the baseline value, confirm the frequency of monitoring and the institutions responsible for doing so, and set targets for achievement by 2011. These are summarized in detail in Annex 3.

C. Project components

17. Two fundamental guiding principles form the basis of the proposed health project in Madagascar. First, strengthening of the health system (including the private sector) is central to ensuring the production, financing and delivery of specific interventions such as those needed to reduce infant, child and maternal mortality, improve maternal health, dramatically reduce malaria, sexually transmitted infections, and HIV/AIDS, and improve the nutrition status of children in Madagascar. The health system encompasses all activities, organizations, governance arrangements, and resources (public and private) dedicated primarily to improving, maintaining,

or restoring the health of individuals and populations, and to prevent households from falling into poverty or becoming further impoverished as a result of illness. Second, health outcomes are multi-sectoral in nature, and are strongly influenced by income, education, access to clean water and sanitation, access to clean indoor environments, good country governance, and sound macroeconomic policy. Improving health outcomes, therefore, requires an effective multi-sectoral approach to health performance and outcomes.

Table 1: Relationship between MAP Objectives and Measures to Strengthen Health System

	Strengthening Delivery	**Management of Human Resources**	**Innovations in Health Financing**	**Stimulation demand and Utilization**
Provision of quality health services, esp. in remote areas	- Strengthen health centers to deliver basic package of services - Ensure adequate supply of drugs and equipment at all health centers - Provide Mobile Health Centers for remote areas - Strengthen capacity and competencies at decentralized levels	- Contract and redeploy nurses and midwives to all level 1 and 2 health centers - Improve working conditions of health personnel, especially in rural areas - Train nurses and midwives to deliver basic health services - Empower decentralized levels by transferring the necessary competencies and resources to better staff and manage health centers	- Develop innovative provider payment mechanisms to contract and redeploy nurses and midwives to all level 1 and 2 health centers - Develop innovative financing methods, such as social insurance or social security, to increase the use of health services by the poor	- Organize national/district campaigns to increase awareness so as to maximize utilization and effectiveness
Eradication of major diseases	- Strengthen capacity and competencies at decentralized levels to manage and coordinate campaigns for vaccination etc. and maximize coverage - Strengthen capacity and competencies at decentralized levels to manage and coordinate effective control of malaria, including spraying, bed-nets, etc. - Ensure adequate supply of equipment and testing facilities at all health centers for STIs	- Improve training of health agents to prevent, diagnose and adequately treat tuberculosis - Strengthen capacity of private services providers to diagnose and treat STIs.		- Organize national/district campaigns to increase awareness so as to maximize utilization and effectiveness
Implementation of a family planning strategy	- Strengthen capacity and competencies at decentralized levels to manage and coordinate campaigns for family planning - Ensure application of agreed quality standards and protocols at all health centers	- Improve training of health agents in family planning	- Develop innovative financing strategies to ensure sustainability and availability of Family Planning programs and training of health agents in family planning	- Organize campaigns to promote family planning and use of long-lasting contraceptive methods
Reduction in Infant and Child Mortality	- Ensure adequate supply of services and drugs for infant and child health at all health centers - Strengthen capacity and competencies at decentralized levels to organize and manage community agents and health workers on uniform procedures for treating children under 5.	- Improve training of health agents on uniform procedures for dealing with diseases in children under 5 - Train staff in health centers and first level hospitals in treating children and new-born babies		- Organize campaigns to raise awareness for improved management of children diseases
Reduction in Maternal Mortality	- Ensure adequate supply of drugs and equipment for management of pregnancies and deliveries at all health centers - Strengthen capacity and competencies at decentralized levels to manage community agents for implementation of the roadmap for reduction of maternal mortality.	- Train all staff in health centers and first level hospitals in pregnancy and delivery management		- Organize campaigns to mobilize communities for increased utilization of maternal and neo-natal services
Promotion of Hygienic Practices	- Strengthen capacity and competencies at decentralized levels to organize and manage community agents for promotion of hygienic practices			- Organize campaigns to promote widespread utilization of hygienic practices, including the WASH strategy

18. The design of SHSDP has been developed by MOH and the development partners on the basis of a matrix of key health programs and interventions, in which the rows list the intervention areas of the MAP and the columns list the key elements of system capacity that need to be strengthened. The project seeks to shift away from specific vertical interventions and strengthen institutional arrangements of the health sector, so as to increase the efficiency of donor support (including IDA resources) to the Government's health policy and programs. Table 1 shows the relationship between MAP objectives and measures supported by SHSDP to strengthen key systemic elements. MOH has full ownership of this matrix and of all the tasks listed in each of the cells, while the essential role of the Bank is seen to be that of providing assistance and support through this project to stitch together the different elements of the systemic and related interventions. The Bank's role is thus to guide the matrix and help the Government of Madagascar develop and use tools to track and monitor resource flows into the sector and to develop and use tools that will help sectoral leadership track changes in health system performance and health outcomes.

19. Activities and interventions directed toward control of HIV-AIDS and malaria, currently financed almost entirely by line interventions of MOH and some development partners, are not included as part of SHSDP at this stage, but will be gradually integrated in subsequent stages.

20. Madagascar SHSDP thus supports the four critical components as suggested by the four columns in Table 1, which seek to improve health financing, delivery and management through a programmatic approach encompassing strengthening delivery of resources, developing and managing human resources, improving health financing and management, and stimulating demand and utilization of health services. The fifth component of SHSDP is institutional strengthening, which will support the capacity and ability of MOH to track progress and make necessary adjustments in the course of implementation, and support the strengthening of the capacity of MOH in various domains, including planning and programming, financial management and procurement. Indicative allocations by component and by activity will be made for the project period; however, the actual allocations will be adjusted based on the bi-annual joint reviews by Government and its development partners in the health sector and based on the Government's Annual Work Program, as prepared by MOH. The detailed project description by component is in Annex 4.

21. ***Component 1: Strengthening Delivery of Health Services (US$5.3 million)***: This component seeks to strengthen health service delivery and quality of services at the primary and first referral levels in districts through capacity building of districts to better organize, manage and deliver health goods and services, and provision of goods and services to strengthen health centers, including drugs, medical supplies and equipment.

22. ***Component 2: Development and Management of Human Resources in the Health Sector (US$0.9 million)***: The objective of this component is to improve human resource management in the health sector with particular emphasis on rural areas. To this end, this component will finance development of innovative mechanisms to provide incentives to rural based personnel and promote enhanced performance of such personnel, and training of all health personnel on basic health service delivery, such as diagnosis and treatment of infectious diseases, pregnancy and delivery management, and health care-for children and new-born babies.

23. ***Component 3: Innovations in Health Financing Management (US$0.6 million):*** This component seeks to support creative resource mobilization and strengthen health resource allocation, through the development of a variety of mechanisms designed to mobilize additional health resources through programs such as social insurance, and through improved management of existing private and public funds for the health system.

24. ***Component 4: Improving Demand and Utilization of Health Services (US$1.05 million):*** This component will endeavor to stimulate demand for quality health services through community education and awareness campaigns, and developing mechanisms for conditional cash transfers.

25. ***Component 5: Institutional Strengthening (US$2.15 million):*** This component will support a number of system development and institutional strengthening activities, such as procurement and financial management and program oversight. In addition, the component will finance a number of monitoring and evaluation (M&E) activities, including development of an M&E plan, support to the National Health Information System and strengthening of Government's analytical capacity for better use and management of data.

26. Activities undertaken under these components are expected to result in significant improvements across a range of demand-side, supply-side and institutional aspects of the health system, especially in the production and delivery of quality services in rural and remote areas, in both public and private sectors. Visible results are expected in the deployment, effectiveness and morale of health teams at service delivery points, in particular in remote areas, accompanied by less obvious but important changes in the nature of support provided to them by district, regional and central level managers. Teams at the regional and district levels and at health care service delivery points will work together to plan, implement and monitor their programs in compliance with national priorities and strategies, and will be encouraged to systematically use quality assurance methods to solve problems, work collaboratively with local authorities, NGOs and other partners, and draw upon resources from outside of the health budget to address health problems in their communities.

D. Lessons learned and reflected in the project design

27. The design of Madagascar SHSDP draws upon a number of lessons learned from international experience and from implementation of a series of health projects in Madagascar. The following are the most important lessons:

28. ***Need for clear development goals acceptable to all stakeholders.*** Also linked to this is the need to agree on a coherent results chain and choose appropriate performance indicators that are in line with the development objectives. These should then be used for systematic monitoring and regular discussion of implementation performance with the Government.

29. ***Importance of a comprehensive and harmonized approach to the health sector.*** There is full agreement among the Government and the development partners on the need for a

comprehensive approach to decrease the burden on the health system at all levels of the health pyramid. The elaboration of a common strategy in the form of the PDSS was the first step in moving towards a comprehensive and harmonized approach. This planning exercise has helped both the Government and the donors to work in close partnership and share information, so as to develop an integrated and common strategy. By improving coordination and harmonization among donors, Madagascar SHSDP is expected to improve allocative efficiency by diminishing transaction costs for the Government. Moreover, budget execution in the health sector is very low in large part because MOH has problems in managing the available financial resources because of the difficulty of coordinating and monitoring donors' projects, limited financial absorption capacity, and heavy and complex procedures that vary from one donor to another. Madagascar SHSDP should help alleviate these difficulties.

30. ***Technical assistance and capacity building in planning and management is critical to success on the ground.*** Implementation experience from CRESAN 2 demonstrates the need for substantial technical assistance to MOH, particularly in the areas of planning, budget management and tracking. Since the 1990s, several donors have been strengthening the capacities at the health district level. The planning, programming and monitoring functions of regional and district health management teams have been strengthened through CRESAN 2, which has supported 40 percent of recurrent costs at the district level. The performance of the district management teams has improved as a result of technical support and staff recruitment. All but a few of the districts are now able to formulate their three-year plans and develop annual work programs using clear norms and criteria. Health system management at the district level is thus improving, although budget management capacity remains a major challenge. Experience shows that bottom-up planning accompanied by capacity strengthening activities and flexible financial resources to implement the activities are key elements for achieving results on the ground. For example, budget execution is much higher in CRESAN-supported districts than in others. Further, while the internal state budget has little flexibility across categories of expenditures, the more flexible CRESAN allocation to districts has allowed them to carry out innovative outreach activities to increase utilization of preventive health care services.

31. ***Analysis and use of data for decision-making.*** Madagascar has already set up a system of routine data collection for the health sector, and a large number of studies and surveys have been undertaken. Unfortunately, much of this information and data remains unused, and there is a pressing need to develop analytical capacity within this system to ensure better use of available data. Further, the creation of an integrated and comprehensive health sector monitoring and evaluation system will be essential for project management and will facilitate periodic evaluation of progress and decision-making.

E. Alternatives considered and reasons for rejection

32. Support to the health sector through budget support under the Poverty Reduction Support Credits was rejected because of the relative fragility of the macro environment which would expose the sector to economy-wide shocks outside the control of the Government. Although in recent years the Government has improved management of these external shocks (such as cyclones, oil price increase etc.), priority sectors cannot yet be insulated as necessary from such

negative events. The perceived fragility of public financial management, procurement systems and ministry efficiency in service delivery cautions against the use of budget support for a ministry which provides vital services to the population. Based on this assessment, it was deemed critical to earmark funds for the health sector under Madagascar SHSDP. The use of an Adaptable Program Loan was also considered given the phased programmatic approach. However, the development partners group did not want to condition subsequent phases of investment. Thus a sector investment loan was considered to be the best option under the current circumstances.

III. IMPLEMENTATION

A. Partnership arrangements, coordination and implementation support mechanisms

33. MOH will establish and agree on an Annual Work Program in cooperation with financing and implementing partners, consistent with the policy framework outlined in the PDSS and an estimated resource envelope for the following year. The Annual Work Program will also foresee appropriate technical assistance, training and institution strengthening measures to support the full integration of planning and managerial functions into the existing core government agencies. A Memorandum of Understanding signed by the Government and its development partners pooling their resources will outline organizational, institutional and coordination arrangements for implementation and the roles and responsibilities of each partner. Cooperation with development partners and supervision will be coordinated by means of bi-annual Health Summits between the Government and implementing agencies.

B. Institutional and implementation arrangements

34. MOH will be responsible for the overall oversight of the national health program as well as of Madagascar SHSDP. The Ministry's Management Team will function as the steering committee for oversight of implementation of project activities and monitoring of progress to achieving development objectives. The existing project coordination unit (PCU) for CRESAN 2 will be utilized for the day-to-day coordination of project activities. This PCU has already demonstrated its capacity both to manage IDA's financial management and procurement procedures and to innovate effectively at all levels of the health care system to improve the accessibility and quality of health services.

35. In close collaboration with the Directorate of Financial Affairs and the Directorate of Planning within MOH, the PCU will be responsible for annual program planning and budgeting. MOH, through its Secretary General, will: (i) ensure consistency of program activities with the Government's policy and strategy; (ii) approve the annual works program and budget; and (iii) follow-up on project performance and implementation progress. Specifically, the PCU will be responsible for program management including: (i) coordination of program implementation; (ii) consolidation of district-level work programs and budgets; (iii) maintenance of records and separate accounts for all transactions related to the PCU; (iv) preparation, consolidation and production of the program financial statements, quarterly financial management reports (FMRs) and other financial information required by the Government; (v) management of the pooled account; and (vi) monitoring and evaluation of the various activities supported under the project.

The PCU is currently headed by a Coordinator nominated by MOH, and existing staff include specialists in accounting, procurement and monitoring and evaluation.

36. The implementation of program activities will be entrusted to: (i) technical departments of MOH; and (ii) operating units at the regional/district levels, which will receive timely payments from the PCU based upon submission of satisfactory quarterly budgeted work plans. The operating units at the regional/district levels will manage disbursements from their own bank accounts. Under the supervision of the financial officer(s), they will maintain records and accounts for all transactions, and prepare financial report and other basic information on project management/monitoring as required by the PCU.

37. The PCU will continue reporting directly to the Secretary-General and will carry out administrative tasks, including keeping accounts, organizing and overseeing procurement, and overseeing activities carried out by other MOH directorates, districts or undertaken with external assistance. An in-depth capacity assessment of the PCU and MOH undertaken during appraisal confirms that the PCU is adequately staffed and that appropriate resources have been earmarked to meet project implementation needs.

38. Bi-annual health summits will be led by MOH with the participation of all stakeholders and development partners as well as representatives from civil society, private sector and other relevant ministries. Progress on the national program will be reviewed during these summits and will provide input into the Annual Work Program for the Ministry. These Summits will also allow evaluation of progress in achieving the development objectives and towards the MDGs. These discussions will also be used to fine-tune the project and the program to changes that might occur in the sector and to coordinate, at technical level, with all partners.

C. Monitoring and evaluation of outcomes/results

39. The five-year PDSS lays down a Results Framework to be used as the foundation for several critical programmatic events and processes, including strategic planning, communication, monitoring and evaluation, and learning. The Results Framework focuses on monitoring resources, processes and outputs directly related to actions and activities implemented by MOH. In order to assess the relevance, performance and success of ongoing and completed programs and projects, three broad sets of indicators will be used: (i) one set to measure and track availability and use of resources; (ii) one set to assess the effectiveness of system processes, and (iii) one set to measure the outputs resulting from these processes. Finally, a set of outcome indicators will be used for broad sector monitoring and attention by high-level policy makers and development partners. In addition, the interventions supported by the World Bank and IDA will be monitored through a parallel but related system that will track the specific inputs and results that will be facilitated, enabled or procured through Bank and IDA involvement.

40. The institutional arrangements for monitoring and evaluation under the Results Framework will involve a progressive absorption of the functions of the PCU into the core departments of the Ministry. In the meantime, the PCU will be responsible for organizing the collection, analysis, presentation and dissemination of the four sets of indicators, with the technical support of development partners. Data collection will mainly take place using the

existing reporting mechanisms. Overtime, a Center for Health Policy and Development will be established within the Ministry, which would oversee the monitoring of progress on the Results Framework. Other functions of this body would include data analysis for decision making, health policy analysis, and health policy and management training.

D. Sustainability

41. Although the Government will continue to rely on external assistance for health sector financing in the foreseeable future, the Government will need to take steps to improve the financing of recurrent expenditures within the national budget. The Sector-Wide Approach adopted for this project, based on the national health policy and an integrated annual budget, is expected to reduce the fragmentation of financing provided to the sector, improve technical and allocative efficiency of public expenditures, and contribute to the sustainability of investments. Moreover, the alignment of the national health budget and human resource strategy with the agreed priorities would further enhance sustainability, especially since all development partners would have a de facto vested interest in building the institutional capacity of the Ministry to make allocation and disbursement decisions, implement strategies, and evaluate impact.

E. Critical risks and possible controversial aspects

Table 2: Risks and Risk Mitigation Measures

Risks	Risk rating w/ mitigation	Risk Mitigation measures
From Outputs to Objectives: Health personnel do not want to move to rural areas.	S	A specific project component focuses on identifying innovative solutions to attract qualified health personnel to rural areas.
Project time is too short and resources limited to have a measurable impact	M	The project is part of a long term multi-donor effort and aims during the first two years at strengthening the health systems.
Health service strengthening does not result in utilization of health services	M	A specific component deals with stimulating health service preventive behavior as well support to the poorest
Ministry moves away from agreed activities and redirects own budget resources away from agreed priorities	M	The Bank health team will work closely with the macro team to ensure budget tracking by Finance and protect certain priority programs. Government's commitment to MAP goals at the highest level helps maintain focus on priorities.
From Components to Outputs: Demand for basic health services is stimulated but supply cannot respond	S	The program includes support to increase the quality and quantity of services supplied. Demand stimulation activities may be linked to capacity increases.
Conditional cash transfers do not reach the intended target population	M	Experience with FANOME / solidarity funds suggests that some people may be left out of community-based targeting. The project includes development and piloting of alternative targeting mechanisms.
Risk of delays in the production of financial reports, and audit may not be conducted in compliance with international auditing standards.	S	Integration of the CRESAN 2 accounting staff into the PCU structure. Elaboration and implementation of an accounting manual of procedures and organization of training for staff. Review of the CRESAN 2 computerized accounting system in order to satisfy reporting requirements. Recruitment of an international auditing firm acceptable to IDA to carry out annual audits of the project financial statements.
Overall Risk Rating	M	

L=Low; M=Moderate; S=Substantial; H=High

F. Loan/credit conditions and covenants

42. Conditions and covenants pertaining to the credit include the following:

(a) Board Conditions: (i) Opening of pooled account in a local commercial bank under conditions acceptable to donors.

(b) Conditions of Effectiveness: (i) Establishment of an internal audit department within MOH; and (ii) Adoption of project implementation manual and the project accounting manual.

(c) Financial Covenants: (i) The PCU shall maintain records and accounts in accordance with sound accounting practices; (ii) Financial statements shall be audited bi-annually by independent auditors acceptable to IDA; (iii) Independent auditors will be appointed within four months after the effectiveness date; and (iv) PCU will produce quarterly FMRs.

IV. APPRAISAL SUMMARY

A. Economic and financial analyses

43. The underlying rationale for Madagascar SHSDP – the need for the Government to improve budget sustainability by incrementally increasing public financing for the health sector, mitigating allocative and technical inefficiencies, improving targeting of resources for vulnerable groups and high priority health programs, and for reducing fragmentation in donor support and strengthening linkages with MAP and PDSS – is a valid one.

44. With less than US$300 per capita and about 70 percent of its population living in poverty, Madagascar is one of the poorest countries in the world. After becoming independent in 1961 the country witnessed a long period of economic decline due to poor governance and protectionist and inward looking policies. Two liberalization episodes in the late 1980s and 1990s improved economic performance. After the second episode, the country experienced a period of growth powered by the dynamisms of the industries that benefited from preferential trade access. Between 1997 and 2001, GDP grew at about 4 percent per year, while inflation was kept under control. However, the political crisis in 2002 halted this trend as GDP dropped by about 13 percent. After 2002 the new Government's sound macroeconomic management was able to consolidate the gains of previous liberalizations and, despite large external shocks, growth resumed and has continued at about 5 percent per year. Despite all this progress many challenges remain given the country's low socioeconomic indicators and the government's difficulties in mobilizing internal resources. Fiscal resources have never been above 11 percent of GDP and the country depends more and more on highly unpredictable foreign funds.

45. Madagascar spends very little on health, a situation that will worsen once donor financed projects close. According to the National Health Accounts 2003, Madagascar spent about US$12 per capita on health that year, corresponding to about 3.5 percent of GDP. At the current level of expenditures, the country will not be able to achieve the health-related MDGs. MOH, with the support of UNICEF, calculated that an additional US$5.40 per capita would be needed in the next three years to achieve a 41 percent reduction in child mortality and a 35 percent reduction in

neonatal and maternal mortality needed to sustain progress in achieving these MDGs. This financing gap cannot be lessened in the short run with internal resources given the Government's macroeconomic constraints.

46. The Government is unlikely to sustain even these low levels of expenditures on health, much less achieve the expenditure levels of the Medium Term Expenditure Framework (MTEF), without additional financial aid from the donor community. The CRESAN 2 project, which has supported financially the health sector since 1999, is scheduled to close in December 2007. This project alone increased the funding of the ministry by US$ 40 million. For instance, in 2004 this project financed close to 31 percent of all MOH expenditures classified as investments. This figure rose to 65 percent in 2005. Other projects that have also supported the sector are also approaching their closing dates, including the Multisectoral STI/HIV/AIDS Project (US$20 million), which will close in December 2007, and the Community Development Fund (US$ 176 million), which will close in December 2008.

47. Madagascar SHSDP aims at filling this gap while at the same time lessening some of the public expenditure management bottlenecks confronting the Government, including volatility of donor funds and large transaction costs created by projects with different management and reporting mechanisms. In addition, the proposed project will contribute to lessening some of the distortions created by the fragmented foreign aid, especially as all donors agree not only to support a health strategy with a corresponding MTEF, and to progressively harmonize their procedures to follow a unique monitoring and evaluation system. This coordination and harmonization between donors will lessen the volatility of donor support and will decrease the transaction costs of the ministry as it would not need to follow different procedures to manage different projects.

48. Government intervention in some of the activities financed by Madagascar SHSDP is justified as they are aimed at reducing market failures due to the presence of externalities or public goods. Infectious diseases, particularly malaria, are the major causes of mortality and morbidity in Madagascar, especially among children under five. SHSDP will finance many activities aimed at prevention and treatment of many of these diseases, such as immunization for childhood illnesses, testing and treatment of sexually transmitted diseases, etc. In addition, SHSDP will finance activities aimed at reducing the inequalities in access and utilization of health services. Some of these activities will also improve efficiency in the use of public resources.

49. There are large income inequalities in the utilization of health services in Madagascar, due partly to lower physical access to health services in rural isolated areas, and partly to financial and cultural barriers to access services. The recurrent budget of the ministry of health is unequally distributed across regions, and in general, richer regions receive higher amounts of recurrent budget per capita than poorer regions. This partly reflects an unequal distribution of qualified medical personnel, which benefits richer urban areas, and partly the higher concentration of health facilities in better-off regions. SHSDP will seek to lessen this unequal distribution of resources by financing the development of mechanisms to provide services in underserved areas. The project will also finance the re-deployment of medical personnel to these underserved areas.

50. An estimated 39 percent of all resources managed by MOH were spent on ambulatory services provided by basic health centers (*centres de santé de base* – CSBs) and hospitals, 17 percent on preventive and public health services, and 7 percent on inpatient care. In general, the distribution of public resources in the health sector gives priority to the most cost effective interventions to ensure health improvements as the largest percentage was used for both preventive and public health services and ambulatory care. However, there is room for improvement, as a fifth of all resources go to the central administration of the ministry and as many resources, about 0.5 percent of the entire budget of 2006, went to the construction of a medical complex in Antananarivo. SHSDP will further improve the allocative efficiency of public expenditure as it will finance preventive care, public health activities, and first referral hospitals for activities related to maternal health. More specifically, the focus of SHSDP is in the most cost-effective interventions to prevent and treat the illnesses that represent the major burden of disease in Madagascar by focusing on health interventions that can be provided by the households and communities themselves and for those that can be provided at primary health care facilities. This is reflected in the project's emphasis on consumer awareness campaigns, strengthening of community participation on health care, and on improving the quality of the services provided at health centers. By improving coordination and harmonization among donors, Madagascar SHSDP will also improve allocative efficiency by diminishing transaction costs and thus diminishing administrative costs of MOH when handling different donor supported projects.

51. The benefits of the proposed project can also be determined in terms of systems and process related benefits, e.g., better planning, financing, organization and management of the health sector and other key actors, and household-oriented benefits, as exemplified by better access and utilization of health services and improved health status, especially of vulnerable groups living in rural areas, women and children.

B. Technical

52. The project will rely on simple, cost-effective and widely available techniques to address priority health issues. In some problem areas, new strategies will be studied and tested. The project components have been prepared on the basis of international as well as regional norms and practices, and will be implemented in accordance with acceptable standards. Decisions on civil works and equipment necessary to expand and upgrade the health delivery system will be made based on an approved Health Infrastructure Development Plan (*Carte Sanitaire*), and on standardized architectural plans and list of equipments, discussed and agreed with Government and donors. Investments and recurrent costs estimates for the project have been based on estimates of prevailing market unit costs, with appropriate allowance for inflation. A reasonable level of physical contingencies has been included in the cost estimates.

53. The strengthening of decentralized health services, nationwide, will require significant investments to strengthen management and planning capacities at provincial and district levels. Accordingly, the project will support capacity building activities at all levels. Capacities to properly maintain buildings and equipment will also be strengthened at provincial and district levels and a greater involvement of the private sector will be sought. Lastly, the project will also strengthen the capacity of selective technical programs dealing with sector priority problems

such as infectious diseases, nutrition, family planning, and emerging diseases, such as HIV/AIDS.

C. Fiduciary

54. ***Procurement.*** The third Country Procurement Assessment Review (CPAR) for Madagascar was conducted in November 2002, and as a result of reforms undertaken, the new procurement code was adopted on July 2004, with simplification of procedures and compliance with international standards. To ensure that the new regulations are adequately applied, provide sufficient oversight and control, and improve efficiency through proper delegation of responsibilities, new procurement institutions have been established, and the legal texts, such as decrees for implementation and standard bidding documents, were issued. During the preparation of the proposed project, the World Bank team agreed with the Borrower that IDA Guidelines and Standard Bidding Documents (SBDs) would be widely used. To mitigate risks of delays for the proposed project, proper prerequisites for the use of Bank SBDs, including evaluation reports for National Competitive Bidding (NCB) procedures were agreed upon with Government during negotiations. The existing Project Implemental Manual (PIM) will be updated to reflect the arrangements for the proposed project.

55. A Procurement Capacity Assessment of MOH, including training needs and arrangements, was conducted as part of the project preparation. MOH has proposed that the existing procurement unit of the CRESAN 2 will continue to function as the procurement unit for the new project and in accordance with the provisions of the Procurement Code. This unit is adequately staffed with two procurement officers and an assistant. On the basis of the assessment, it was agreed that the PCU will maintain these staff members and will keep transactions separate based on source of financing. Nevertheless, the PIM will need to be revised to address the needs for the new project. This update will need to be completed by effectiveness. Moreover, the organization of the procurement filing needs to be reviewed and procurement training undertaken for PCU staff on the new features of the Bank's procedures in accordance with 2004 Guidelines. As part of supervision missions and in addition to regular post procurement reviews, independent procurement and technical audits will be carried out as needed.

56. ***Financial management.*** The conclusion of the financial management assessment is that the existing PCU for CRESAN 2 and the related operating units of the MOH satisfy the Bank's minimum financial management requirements specified in OP/BP 10.02. However, some improvements will be needed to further strengthen the financial management system and allow efficient use of report-based disbursement.

57. To efficiently address the challenges of the proposed project, a financial management plan has been developed and agreed upon with MOH to ensure an environment which mitigates fiduciary risk. This plan includes measures to be taken prior to effectiveness and actions to be implemented in the medium-term. As a result, transitional financial management arrangements will need to be established while the sector/national fiduciary systems are being strengthened. Measures to be taken are the following:

- Availability of a qualified technical assistant acquainted with both national financial management system and Bank financial management procedures to strengthen the financial management capacity of the MOH and specially the *Direction Administrative et Financier* and supervise the financial management aspects of all programs to be implemented by MOH;
- Extension of the contracts of the 17 financial management officers recruited under CRESAN 2 to: (i) provide the regional operating units with necessary capacities to quickly disburse and account for project funds; (ii) ensure, at the regional and district levels, the use of funds for the purposes intended; and (iii) assure timely preparation of periodic financial reports required for proper monitoring of activities implemented by regional operating units, with respect to financial and physical aspects;
- Elaboration of a chart of accounts to satisfy the requirements of the borrower, IDA and other development partners in financial/accounting/technical information related to the program;
- Update and implementation of the Program Accounting Manual to ensure consistent application of policies and operating instructions, proper record keeping and adequate safeguarding of assets. This manual spells out procedures to be applied not only at the central but also at the regional levels;
- Customizing and upgrading the computerized accounting system acquired within the context of CRESAN 2 in order to: (i) meet user needs; (ii) satisfy the Government, IDA and other donor financial/technical information requirements; and (iii) ensure timely production of annual financial statements and quarterly FMRs for monitoring program activities;
- Creation of an internal audit department within MOH to enhance internal controls and address areas of concern identified during program implementation. This department will be staffed with an adequate number of auditors, and will collaborate closely with the General Inspectorate for Finance once it is fully functional;
- A Pooled Account will be opened in a commercial bank (BFV: Bank for Trade Development) in the name of MOH to receive credit/grant proceeds from IDA and AFD as well as other donors who may wish to pool funds; and
- Three regional accounts will be opened in a commercial bank to deposit funds from the Pooled Deposit account in order to ensure prompt payment of contractors/suppliers operating in the regions.

58. To mitigate risks raised by the limited capacity of the Auditor General (*Chambre des Comptes*) the partners and Government agreed that, as an interim measure, an international private auditing firm acceptable to donors will carry out the audit of the program accounts jointly with the Auditor General. This audit will be performed bi-annually and conducted in accordance with International Standards of Auditing. The auditors will be recruited within three months after the effectiveness date. The audit report will be submitted to IDA no later than six months after the end of each period. No significant problems have been encountered so far in terms of audit covenants: all audit reports related to Bank-financed projects in Madagascar have been received in due time.

59. To build and strengthen the financial management capacity of MOH staff at all levels, a capacity building program is being developed in the medium-term through the ongoing public financial management reforms supported by IDA (Governance and Institutional Development Project) and other development partners. Institutional strengthening activities are also being undertaken under Component 5 of this project. A technical assistant will be also recruited within

three months after credit effectiveness to strengthen MOH in project financial management and supervise the financial management aspects of all programs to be implemented by the Ministry.

D. Social

60. A poverty and social impact analysis carried out in 2005 highlighted the absence of citizen involvement in monitoring service quality in health as well as a lack of empowerment of local health committees, which represent a key focus of community level involvement in the health system. Moreover, Madagascar's physical characteristics of having numerous remote and difficult to access areas makes it difficult to rely only on top-down supervision to monitor quality and performance of the 2,240 CSBs. The poverty and social impact analysis found that poor quality of services was one of the two key factors limiting use of public health centers, the other constraint being financial.

61. In this context, the quality of health services could be improved if there was support for engaging local communities in the monitoring of health quality, and if the accountability and transparency of the relationship between the service providers and users was strengthened at the local level. Social accountability mechanisms need to be established in order to provide community members with simple but effective reporting mechanisms as well as sensitize them to service norms and rights and responsibilities of various actors in provision of health care.

62. Experience with the application of social accountability mechanisms in other countries highlights their effectiveness in reducing absenteeism, improving treatment of clients, and increasing utilization of health services. Such mechanisms may also provide greater transparency and demand for timely allocations from the communes to pay for medicine dispensers and guards. Empowering the health committees to apply pressure on the mayors' office to allocate these funds for training them and providing them with transport allowances to participate in health management committees also help. These represent relatively small investments, since the potential payoff can be large, especially given the critical role played by the dispenser in providing drugs, an essential element in access and quality of health care.

63. An ongoing pilot is testing and adapting a community score card to the health sector, and is expected to provide valuable lessons on how such mechanisms could be adapted and more systematically integrated into the health sector monitoring. A draft implementation manual has been developed, and could be used for eventually scaling up these mechanisms. These pilots are being tested both in areas in which top-down performance and quality enhancement programs are in place as well as in areas without these programs.

64. During the pilot stage, the Community Scorecard mechanism was selected because it was a more accessible mechanism for a wider variety of actors, and did not require sophisticated statistical or analytical skills. The proposed social accountability mechanisms would directly tie into the multiple activities of the project, including development and management of human resources in the health sector, improving demand and utilization of health services, and monitoring and evaluation.

E. Environment

65. The proposed project has been classified as Category B for environmental screening purposes, given the risks associated with the handling and disposal of medical wastes.

F. Safeguard policies

66. The only safeguard triggered is the environmental assessment, because a Medical Waste Management Plan (MWMP) is required. The Project does not trigger any of the Banks social safeguard's policies, since land will not be acquired and civil works will be limited to rehabilitation of existing infrastructures. Although the project may finance malaria campaign activities as a lender of last resort if the Presidential Malaria Initiative is not able to sufficiently finance the malaria program, Madagascar has ratified the Stockholm convention in 2005, and the Government does not plan to use any DDT in spraying during the Bank Project implementation period.

67. A MWMP was developed for the Multi-Sectoral HIV/AIDS Prevention Project (MSPP), and is under implementation. Since that date, MOH has installed 200 small-scale burners to burn medical wastes in all 200 health centers rehabilitated under CRESAN 2. The construction of full incinerators at district level is underway, and some are already functional. The MWMP also specifies medical waste disposal and management actions that are to be carried out in the different types of health facilities.

68. The National Policy on Medical Waste Management was adopted in September 2005. This policy primarily relates to solid waste with a summary description on the liquid waste, and contains the following elements: (i) global and specific objectives as regards management of medical waste; (ii) the legal framework and law; (iii) waste characteristics with the prescribed elimination modes; (iv) norms, safety standards and measures to be adopted as well as critical equipment; and (v) a description of the monitoring system and an action plan with impact and results indicators for a period of four years. The Government recently modified the plan and policy to include more details on the management of liquid waste from health facilities. The revised plan was approved and disclosed on March 23, 2007 in the Infoshop and disclosed in-country over the period March 20-26, 2007.

69. MOH has demonstrated clear ownership of the problems related to management of medical waste, as well as the ability to plan for and prepare these activities. It has been an integral player in the development of this policy as well as information, education and communication activities and training conducted at various levels.

Table 3: Safeguard Policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[X]	[ ]
Natural Habitats (OP/BP 4.04)	[ ]	[X]
Pest Management (OP 4.09)	[ ]	[X]
Physical Cultural Resources (OP/BP 4.11)	[ ]	[X]
Involuntary Resettlement (OP/BP 4.12)	[ ]	[X]
Indigenous Peoples (OP/BP 4.10)	[ ]	[X]
Forests (OP/BP 4.36)	[ ]	[X]
Safety of Dams (OP/BP 4.37)	[ ]	[X]
Projects in Disputed Areas (OP/BP 7.60)*	[ ]	[X]
Projects on International Waterways (OP/BP 7.50)	[ ]	[X]

G. Policy Exceptions and Readiness

70. **Policy Exception.** The proposed project does not require any exceptions from Bank policies.

71. **Readiness.** The main design parameters and operating systems for the project were established under CRESAN 1 and 2. The project is deemed ready for implementation, subject to fulfillment of the conditions for effectiveness.

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas*

Annex 1: Country and Sector or Program Background

Madagascar Sustainable Health System Development Project

I. MACROECONOMIC DEVELOPMENTS

72. Madagascar has witnessed a remarkable downturn since becoming independent in 1961, with real per capita GDP declining by over 25 percent during the last four decades to US$290 in 2005. Caused in part by inward looking, highly protectionist policies and poor governance, Madagascar's disappointing economic outcome has resulted in a deterioration of physical and human capital. Two liberalization episodes in the late 1980s and 1990s led to growth but proved short lived. The reforms of the late 1990s, aided by preferential trade access, resulted in export-oriented, private-sector led growth, averaging over 4 percent during 1997-2001. This progress was interrupted by a political crisis over the contested 2002 elections that resulted in an economic crisis, with GDP declining by 13 percent in that one year alone. However, the political crisis did bring to power a democratic force with a reform agenda and renewed hope for a more prosperous future.

73. Indeed, good progress has been achieved since the political and economic crisis of 2002. Prudent macroeconomic management following the crisis created an environment conducive to economic rebound, reaping the fruits of previous liberalization reforms. Despite exogenous shocks such as cyclones and high oil prices, the macro-economic situation stabilized and the economy grew at about 10 percent in 2003 and has since continued to grow at respectable 5 percent. Growth has come largely through improved performance in agriculture, especially higher rice production, higher tourism receipts, and continued public investments. Despite increases in world petroleum prices, a tight monetary policy has resulted in a decline in annual inflation from 27 percent in end-2004 to 10 percent in mid-2006. Similarly, the measures adopted to ensure exchange rate stability and competitiveness, and to secure an adequate level of international reserves were broadly successful leading to greater stability of the market-determined exchange rate in 2005. The government has also taken steps to confront corruption and to improve the quality of public sector governance. In an effort to improve public resource management and strengthen the system of delivery of public services, the government is preparing a legal framework for decentralization to the level of communes.

74. High growth has also resulted in improvements in basic social indicators, albeit from a low base. More children are in school today, and net primary enrolment rates exceed 90 percent. Immunization rates have improved and the number of births assisted by skilled medical personnel has increased. Infant and child mortality rates have declined significantly over the last decade and chronic malnutrition has decreased. Similarly, progress has been made on reducing poverty, which declined to 70 percent from its peak level of 80 percent at the time of the 2002 crisis. With the implementation of the roads program in rural areas, rural population with reliable access to transport increased from 45 percent in 2003 to 57 percent in 2005. Access to safe drinking water in rural areas also improved during this period.

75. These positive developments are encouraging, but there is still a long way to go given where Madagascar is today relative to the rest of the world. The macroeconomic situation remains fragile, especially as revenue mobilization remains weak. Poverty rates are still very

high while social indicators are very low, and Madagascar is not likely to reach the poverty alleviation and health-related MDGs. The country also continues to face fiscal problems, with significant revenue shortfalls in customs and tax collections leading to a decline in tax revenues. Although the economy has been on a rebound in the last two years, the capacity of the Government to raise revenue remains severely constrained. Moreover, external aid has been dwindling in recent years. As a result, overall government expenditure is falling in real terms and public spending on social programs is declining both in real terms and as a percent of the Government budget.

II. HEALTH SECTOR

Health Status and Outcomes

76. The last decade witnessed marked health improvements in Madagascar, especially among children. According to the Demographic and Health Survey (DHS), infant and child mortality fell by 43 percent and 41 percent, respectively, between 1997 and 2004. Although some issues have been raised regarding the reliability of these marked drops in mortality, other determinants of child survival – such as morbidity and coverage of important health interventions – have also improved. For instance, the prevalence of diarrhea in children decreased about 63 percent and the proportion of anemic children fell about 31 percent between 1997 and 2004. At the same time, vaccination, vitamin A supplementation, and exclusive breastfeeding increased.

Table 1: Neonatal, Infant, Child, and Maternal Mortality, Madagascar, 1997-2004

	Neonatal	Infant	Under-5	Maternal
1997	40.4	96.3	159.2	488
2003/2004	31.6	57.8	93.9	469

Source: DHS 1997, 2003/2004. Note: maternal mortality is expressed per 100,000 live births among children born in the four years before the survey.

77. Maternal mortality has remained stable at about 470 per 100,000 live births since 1997, jeopardizing the likelihood that Madagascar will reach this MDG by 2015. While antenatal care has increased to 80 percent and the presence of skilled staff at birth has increased from 47 percent to 54 percent, the full benefit of skilled attendance at birth can only be realized if the referral system, comprising all of the essential elements of access to the whole spectrum of obstetric care including emergency services, is fully functional. Some progress has been achieved in recent years in addressing this challenge through such means as establishment of better communication networks between primary and first level referral facilities using solar based radios, strengthening of blood banks at district level, provision of ambulances and obstetric care equipment and the rehabilitation and re-equipping of some district and referral facilities. Moreover, deaths due to abortion contribute significantly to the maternal mortality rate (40 percent in rural areas, and approximately 52 percent in Antananarivo alone), suggesting that improved access to family planning advice and services would considerably improve maternal health in the medium-term. Overall, significantly more intensified efforts are needed for more systematic improvements in referral services and emergency obstetric care, particularly in rural areas.

78. Communicable diseases, especially malaria, diarrhea, and respiratory track infections, often in association with malnutrition, are the main causes of mortality and morbidity in the country, mainly among children under five. The MOH statistical yearbook 2004 shows that 24 percent of outpatient consultations are due to respiratory track infections, followed by 18 percent due to fever (suspected malaria), and 8 percent due to diarrheal illnesses. Among children under five, respiratory track infections, suspected malaria, and diarrheas represented 33 percent, 22 percent, and 14 percent of primary health care consultations in 2004. Most vaccine preventable diseases seem to be under control in Madagascar – indicative of high vaccination coverage – and in 2004 less than 1 percent of all children's consultations at the primary health care level were due to measles.

79. Although the prevalence of HIV/AIDS in the country remains low, it has rapidly increased among high risk groups. With a prevalence of about 1 percent among pregnant women (overall, there were an estimated 180,000 persons were living with HIV in 2005) HIV/AIDS in the country still does not represent the heavy burden it does in other Sub-Saharan African countries. While knowledge of HIV/AIDS satisfactorily progressed between 1997 and 2003/04 from 69 percent to 79 percent for women, and to 88 percent for men, behavior change has lagged behind among high-risk groups in hot spot areas as well as among the general population. Since the establishment of the *Comité National de Lutte contre le SIDA* (CNLS) to implement the HIV/AIDS program, a sector-wide approach has been put in place with the main partners (World Bank, Global Fund, AfDB, USAID, GTZ, UNICEF, UNAIDS, etc.) to implement numerous activities (information, education, mass media communication, cinemobiles in villages, distribution of STI treatment kits, etc.). The CNLS is rightly reorienting its strategy to: (i) concentrate activities on behavioral change and in the most high risk zones; (ii) strengthen mass and peer communication on STI, HIV testing, and reduction of stigma; (iii) develop routine testing, and voluntary counseling; and (iv) strengthen public private partnerships as a way to address the weakness of public health services.

80. Bilharziosis, lymphatic filariases, tuberculosis, leprosy and malaria also represent a large health burden to the population. Bilharziosis affects about two and a half million people in Madagascar, mostly in the western and central parts of the country. Lymphatic filariases affects all areas of the country but especially the poor rural coastal areas. In some of these areas, the prevalence is thought to be higher than 50 percent. Tuberculosis also represents an important health burden in the country with an estimated 20,000 cases per year with a detection rate of only 62 percent. Finally, despite marked reductions in the incidence of leprosy, Madagascar remains one of the few countries in the world that has not eradicated this disease. By end 2005 it had the highest registered prevalence in the world (2.5 per 10,000). While Madagascar has made some headway on the control of malaria, tuberculosis and leprosy, these efforts have lost some ground mainly due to delays in access to resources, and the deterioration of the existing surveillance system. Madagascar has secured sizable resources for the control of malaria, tuberculosis and HIV/AIDS treatment mainly through the Global Fund grant facility. Recently however, delays in implementation have occurred due lengthy processes in defining appropriate strategies (e.g., for malaria) or delays in access to available funds. Nevertheless, social marketing of highly subsidized permanently impregnated bed nets have increased mother and child prevention in the coastal regions. Diagnosis and treatment of tuberculosis improved with the expansion of the directly observed therapy system and increased drug availability nationwide.

81. Many effective interventions to improve child and maternal survival and to prevent or treat many of these communicable diseases exist and can be delivered at low cost. For instance, for the prevention and treatment of diarrhea, pneumonia, and malaria, the main causes of morbidity and mortality among children under five, the following interventions have proven effective and can be delivered at low cost: breastfeeding, oral rehydration treatment, antibiotics for pneumonia, vitamin A supplementation, and others. Similarly, to improve maternal survival many preventive and curative interventions exist that can be delivered at low cost: family planning, folic acid supplementation, skilled attendance, emergency obstetric care, and others. Most of these interventions can be delivered by basic health services or by the communities or households themselves after some guidance from health personnel.

82. The coverage of many of these effective interventions to improve child survival has increased markedly over the years. Exclusive breastfeeding, the use of oral rehydration salts or home remedies in case of diarrhea, and vaccination rates have markedly increased over the last decade which, together with the distribution of water purification products through social marketing, have contributed to improvements in child survival.

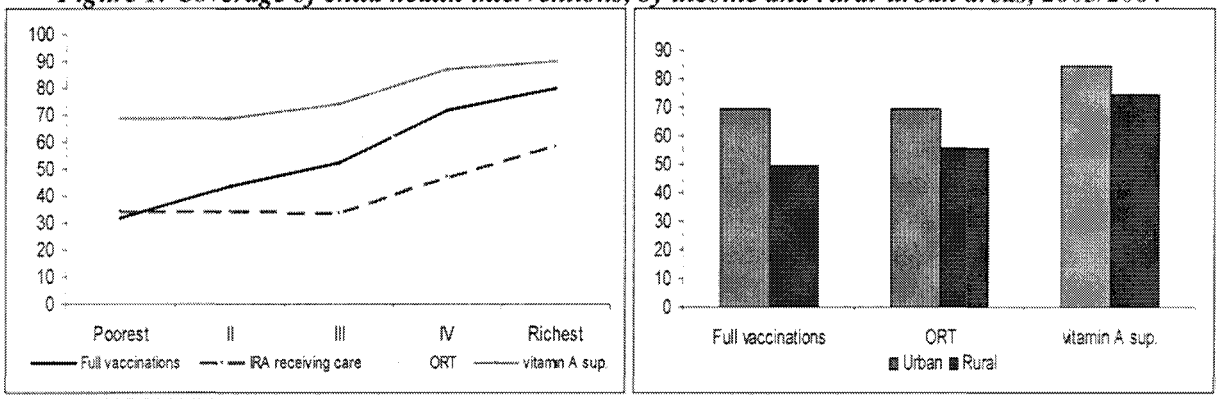
Table 2: Coverage of effective child health interventions, Madagascar, 1992 - 2004

	DPT 1	DPT 2	DPT 3	Measles	All	ORS/RHS	Vit[a] A	Exclusive breastfeeding
1992	76.5	66.3	53.8	54	43.4	25.6		37.1
1997	67.7	60.1	48.4	46	36.2	23.4	4	47.6
2003/2004	71.3	66.7	61.4	59	52.9	42.4	76	67.2

Source: DHS 1992, 1997, 2003/2004; a: ever before survey in 1997 and during 6 preceding years in 2003/2004

83. There are large socio-economic differences in the coverage of many of the high impact health interventions, especially those needed to improve child survival. For instance, the percent of children fully immunized is 2.5 times higher among the richest 20 percent of the population than among the poorest 20 percent. In the case of vitamin A supplementation, the socio-economic differences are much lower but still persist. These differences also reflect the failure of the health system to reach the poorest segments of the population.

Figure 1: Coverage of child health interventions, by income and rural-urban areas, 2003/2004

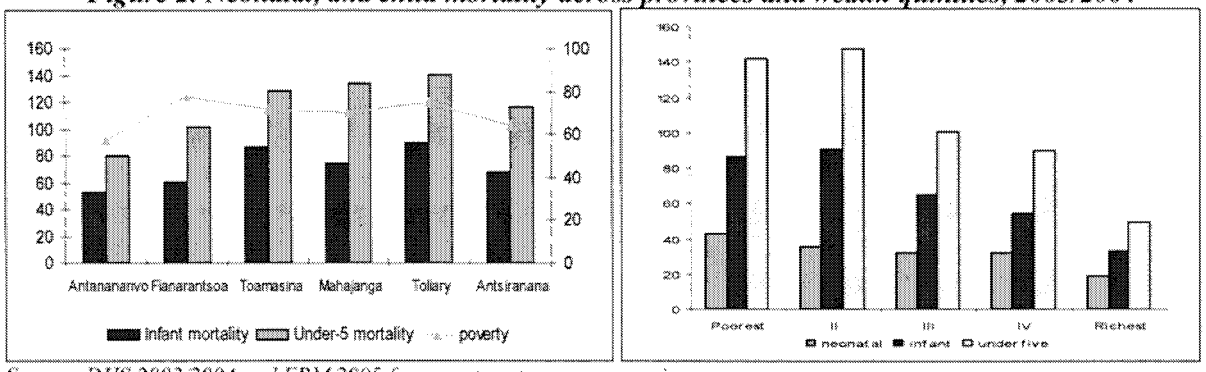


Source: DHS 2003/2004

84. Large income and regional differences in health outcomes remain significant obstacles to reach the MDGs. There are large regional disparities in health outcomes in the country, partly

reflecting large income differences. The provinces of Antananarivo and Antsiranana have one of the lowest percents of people living in poverty – and these are also the provinces with the lowest levels of infant and child mortality. There are also large socioeconomic differences in child survival, which is not surprising as income is one of the main determinants of child health. The mortality rate among children and infants among the poorest 20 percent of the population is more than three times higher than among children among the richest 20 percent.

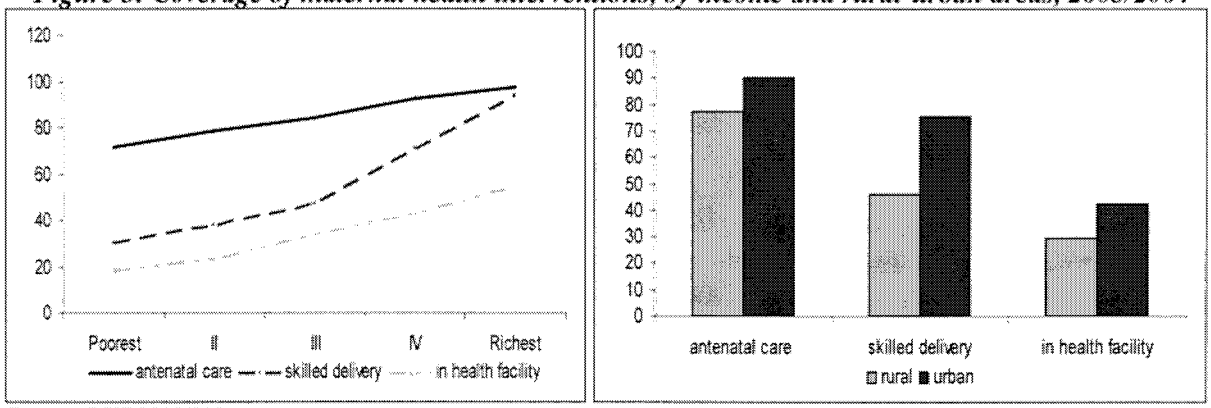
Figure 2: Neonatal, and child mortality across provinces and wealth quintiles, 2003/2004



Source: DHS 2003/2004 and EPM 2005 for poverty rates across provinces.

85. In the case of maternal health, the low percent of births that are attended by skilled personnel and deficiencies in the referral system in case of complications have thwarted improvements in maternal survival. Data from the last DHS shows that while more than 70 percent of women receive at least two antenatal care consultations, only about 51 percent of births are attended by skilled health personnel, which significantly limits the possibility of receiving proper attention in case of complications. There are also large socio-economic and geographical differences in the percent of women receiving antenatal care and in the percent of births attended by qualified health personnel.

Figure 3: Coverage of maternal health interventions, by income and rural-urban areas, 2003/2004



Source: DHS 2003/2004

86. Finally, community multi-sectoral approaches will also be needed to ensure that households have access to clean water and sanitation, which will increase protection against the spread of water-borne diseases. The *Enquête auprès des Ménages* (EPM) 2005 found that 41 percent of the population does not have access to toilets and about 50 percent of the population

does not have access to a safe source of drinking water. Improving this situation does not depend only on MOH, but these interventions will have a high impact on health.

Organization of the Health System

87. The health delivery system in the country follows a four-level pyramidal system. The basic health centers (*centre de santé de base* - CSB I and CSB II) are the first point of contact in the system. In 2004, there were 1,106 CSB I and 1,842 CSB II spread across the entire country and catering to approximately 10,000 people each. In addition, there are 85 district-level hospitals in district headquarters (*centre hospitalier de district* - CHD I) based in district headquarters but offering similar services to those offered in a CSB II. The second step in the pyramid is made up of 55 CHD II hospitals (2004), also based in district headquarters but offering emergency surgery and comprehensive obstetrical care. At the third level there are 4 regional hospitals (*centre hospitalier regional* - CHR) in the whole country, offering second referral services. At the fourth level, there are six university hospitals (*centre hospitalier universitaire* – CHU) offering comprehensive national referral services.

88. The public sector – and especially the primary health care facilities (CSB I and II) – offers the bulk of health care services in the country, especially in rural areas. In urban areas, more than 30 percent of first contacts with the health system occur in a public primary health care facility, while in rural areas more than 70 percent of all first contacts occur at a public facility. On the other hand, the private sector accounts for about 30 percent of all first contacts in urban areas and about 14 percent in rural areas. Overall, more than 40 percent of consultations take place at private providers among the richest 20 percent of the population. The private sector, mainly concentrated in urban areas, also represents an important share of service delivery. About one out of every five primary health care facility and two out of every five referral hospitals are privately owned. The majority of these facilities are concentrated in Antananarivo and other major cities. The private sector has an even larger presence in the retail sale of pharmaceuticals. There are 203 pharmacies, located mainly in Antananarivo, and 1,625 drug retailers distributed throughout the country.

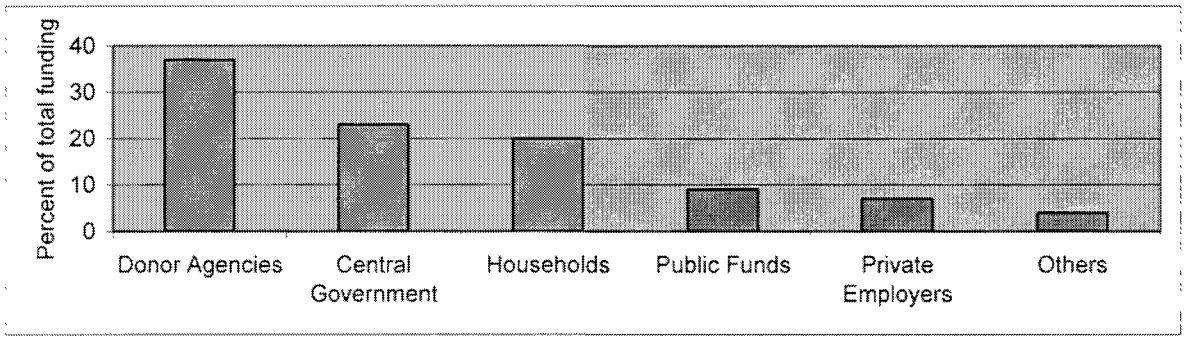
Table 3: Consultation at public and private facilities, by income quintiles (EPM 2005)

	CH*	CSB 1	CSB 2	Private Clinic	Private doctor	Other	Total
Urban							
Most poor	20.1	18.6	38.8	3.1	3.2	16.2	100
2ème Quintile	14.9	11.3	31.6	5.9	24.3	11.3	100
3ème Quintile	20.4	14.7	25.4	16.3	13.2	8.8	100
4ème Quintile	11.2	10.5	29.4	8.1	31.9	7	100
Most rich	23.3	4.9	20.6	7.5	32.7	7	100
Total	19.0	9.5	26.2	8.3	26.0	8.6	100
Rural							
Most poor	5.1	25.5	58.0	0.9	6.2	4.1	100
2ème Quintile	4.9	19.0	53.9	2.1	7.0	13	100
3ème Quintile	3.5	12.9	56.9	3.0	12.6	11.3	100
4ème Quintile	1.2	11.6	66.9	2.1	11.4	6.9	100
Most rich	5.7	10.0	50.8	3.6	20.4	7.4	100
Total	4.0	15.1	57.3	2.5	12.2	8.6	100

Financing of the Health Sector

89. Foreign aid represents the largest source of finance for the health system, followed by public and private funds. The 2003 NHA exercise estimated that donor funds represented 37 percent of all finances flowing to the health sector. Public funds represent about 32 percent of the total, and include resources that the Ministry of Economy, Finance, and Budget allocates for health related expenditures, other public funds such as direct loans to the treasury, and public employee funds. The majority of the public resources come from general taxation although a share comes from loans from external agencies, including the World Bank. Finally, the private sector represents 31 percent of the total financing by source. Households themselves are the main source of private financing, representing 20 percent of all resources flowing to the sector. The majority of household expenditure is out-of-pocket expenditure in both public and private facilities as pre-payment mechanisms only cover a small proportion of the formal sector workers. Community health insurance schemes are only just starting in the country, and cover a very small percent of the population.

Figure 4: Sources of finance (percent), Madagascar 2003



Source: National Health Accounts 2003, (MOH, 2005).

Health Sector Challenges and Issues

90. The health sector in Madagascar faces many challenges relating to the level of overall financing, utilization of health services, distribution of health personnel, availability of drugs and medical supplies in health facilities, and internal administration of the health system, including budget execution. These are discussed in detail.

The overall level of financing for health is very low

91. According to the 2003 National Health Accounts (NHA), total health expenditures in Madagascar were estimated to be approximately US$11.9 per person, which is around 3.5 percent of the GDP. External assistance is a key source of health financing, though out-of-pocket payments are also large. In terms of distribution, there are large inequalities across regions, with richer regions receiving relatively more resources. This regressive distribution of resources represents an obstacle to access and utilization of quality health care. Insignificant resources flow to the CSBs, which partially explains the low quality of the services rendered at this level. Resource mobilization and allocation remain the cornerstones of the health sector strategy in Madagascar, as the country strives to increase the resources allocated to the health sector.

The demand and utilization of health services are very low

92. A large proportion of the population does not receive care when in need. Data from the EPM 2005 shows that only two out of every five people receive care in case of illness or injury. In addition, there are large regional differences in the percent of people receiving care, with about 65 percent of people reporting an illness or injury in Diana region receiving care compared to only 23 percent in Vatovavy Fitovinany and Melaky, two of the poorest regions in the country.

93. Financial barriers to access represent the main cause of low utilization of health services. The EPM 2005 shows that the cost of receiving care is the main reason reported for non-utilization of services in case of illness. These financial barriers are often related not only to the direct cost of the services but also to other expenditures, such as transportation costs and the opportunity cost of seeking care. The Government has tried to alleviate these financial barriers, first by eliminating user fees during the political crisis and then by creating FANOME and the Equity funds. After the 2001 economic crisis, health service fees were abolished, including copayment on drugs, following which utilization of health services increased significantly. However, given that the increase in health resources – mainly from HIPC – was not sufficient to compensate for the loss of user fees, drug stock-outs became were common and the quality of services deteriorated further as the workload of the already insufficient health personnel increased. At the end of 2003, the Government reinstated user fees, and by 2004, a new cost recovery system – FANOME – was put in place. This system was accompanied by an exemption mechanism to ensure that the poor had access to health care. Further, a small percent of the sale of drugs (2.2 percent) is now set aside for an Equity Fund in each primary health care center to allow free access to drugs for the poor.

94. Early evaluation of these reforms suggests that: (i) utilization of health facilities decreased following the reintroduction of user fees, although the exact role of the re-introduction of the fees is not clear since the purchasing power of the population has also decreased; (ii) stocks of drugs and supplies have improved following the reintroduction of user fees; (iii) the new Equity Fund successfully targets the poor as almost all people in the exemption list can be classified as being poor; (iv) coverage by the Equity Fund is very limited, and despite widespread poverty, only one percent of the population is on the exemption list; and (vi) funds collected (2.2 percent of the sale of drugs) are not enough to guaranteed the sustainability of the Equity Funds.

95. Despite the documented high prevalence of poverty among the general population and the introduction of payment mechanisms to assist those who have been identified as poor to have access to basic health services (*fonds d'équité*), the small number of persons who claim to be indigent implies that there may be significant cultural barriers to identifying oneself publicly as poor or indigent. Similar measures have been gradually introduced in hospitals, given the impoverishing effects of hospitalization, where most surgical and other consumables are not available and must be purchased in private outlets, ending up in unreasonably expensive bills.

96. Geographic access to health care facilities is limited in rural areas, and about 10 percent of those needing care live very far from a health facility and do not utilize health services when ill. A health mapping exercise done in 2000 showed that only about 57 percent of the population

lives within 5 km of a primary health care center, though the situation has improved recently with the establishment of 216 new facilities.

The distribution of health personnel across the country is very uneven

97. A fundamental issue underlying the uneven production and delivery of health services in Madagascar is the huge variation in the allocation, training and competency levels of medical personnel. Almost 50 percent of the personnel of MOH are concentrated in the area of Analamanga. A few hospitals in the large cities have a disproportionately huge number of doctors and specialists, whereas there are huge unsatisfied needs for certain vital specialties such as gynecology, surgery, pediatrics, etc. at the level of the provinces. Likewise, the distribution of doctors across rural and urban areas also shows huge imbalances. In addition, the relatively low productivity of medical personnel in the public sector also poses a major problem. Besides shirking and absenteeism, poor productivity is also a result of poor basic training of the medical personnel (for example, many general practitioners do not know much about childbirth), unavailability of essential goods and equipments to facilitate diagnosis and treatment, low levels of remuneration, etc. As a result, quality of care suffers, especially at the level of the CSB and in rural areas, and the system is marked by little or no integration of preventive and curative care, absence of continuity of the care, irrational use of drugs, etc. Even non-clinical activities are of poor quality, with bad patient reception, long waiting hours, and absence of communication with the patient.

Table 4: Average number of personnel per health facilities in urban and rural areas

		All employees	Qualified employees	Of which, number of doctors	Observations
Urban					
	CSB II	11.5	6.5	2.3	54
	Total	**10.9**	**6.2**	**2.2**	**57**
Rural					
	CSB I	2.5	0.8	0.0	24
	CSB II	4.1	1.9	0.9	72
	Total	**3.7**	**1.6**	**0.7**	**96**
All CSB		**6.4**	**3.3**	**1.2**	**153**
Average number of Staff					
	CSBI	5.0	2.0	0.0	
	CSBII	9.0	4.0	1.0	

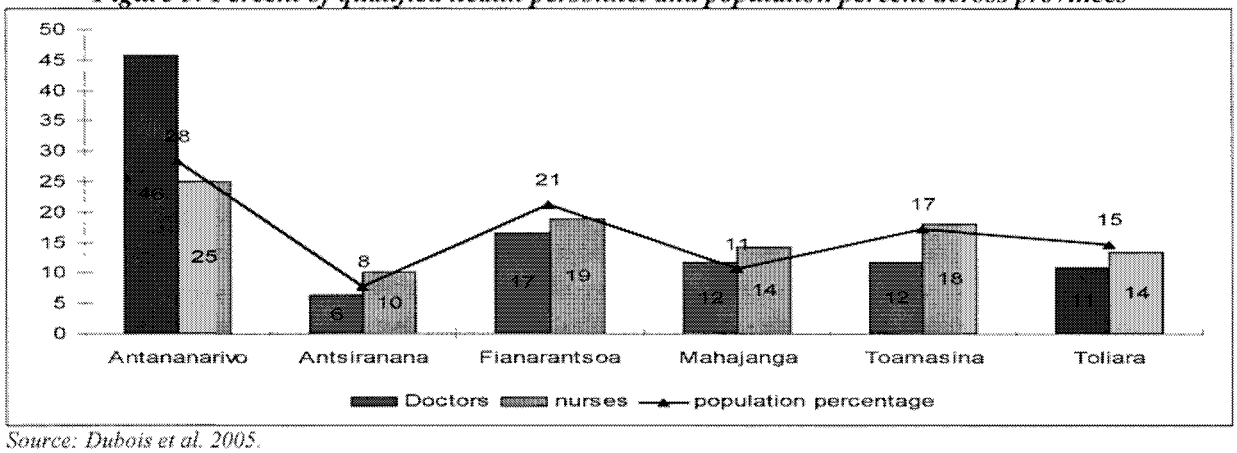
Source: EEEFS2 2005 and for the personnel standards Dubois et al 2006.
Note: There were only 3 observations of CSB I in urban areas and thus the results are not shown.

98. Table 4 compares the average number of personnel in CSB in 2005 with standards established by national norms. While the health facilities in urban areas on average have more qualified health personnel than required by the national standard, health facilities in rural areas have much less staff, especially nurses, midwives, and health aides.

99. The majority of the qualified health care personnel are concentrated in the province of Antananarivo. This is especially the case for physicians, as this province has 46 percent of all doctors working in the public sector but has only 28 percent of the country's population. Nurses

and midwives (not shown in the graphs) are much better distributed as the share of each province is similar to their population share.

Figure 5: Percent of qualified health personnel and population percent across provinces



Source: Dubois et al. 2005.

Health facilities are poorly equipped

100. The continued supply and distribution of drugs and medical supplies to the health facilities is still not assured. After the 2001 crisis, the Government eliminated user fees at facility level and started to distribute pharmaceuticals free of charge. During this time, a health facility survey recorded widespread drug stock-outs in the CSBs. Only 15 percent of the public primary health care centers did not suffer shortage in the supply of a group of essential drugs. About 30 percent of facilities had shortages of chloroquine, cotrimoxazole, mebendazole, and alchohol; about 46 percent had shortages of paracetamol; and more than half were out of acetylsalicylic acid. The mean duration of the stock-out varied from 70 days for acetylsalicylic acid to 32 days for mebendazole. After the re-introduction of fees and the FANOME/Equity Fund, the situation has improved although drug shortages are still a problem. Over 20 percent of health facilities, especially in rural areas, have shortages of oral rehydration salts, serum glucose, folic acid, and lidocaine. For some of these drugs the median duration of stock-out was three months.

101. Adequate supply of drugs was restored with the reintroduction of cost recovery in January 2004 (after a period of free distribution during the 2002 crisis), and the 35 percent markup on generic drugs is among the lowest in Africa. However, this low level of mark-up does not leave much room for additional resources to improve quality. While the Government has succeeded in maintaining low drug prices through subsidies to compensate for the high devaluation during 2004, it will have to carefully manage the restoration of prices reflecting drugs' real cost in the near future.

Table 5: Percent of CSB with drug shortages, by type of drugs and rural-urban areas, 2005

CSB only	Rural	Urban	Total	Average number of days	Median number of days
Drugs					
Mebendazole	7.3	5.3	6.5	81.0	51
Chloroquine	10.4	3.5	7.8	45.5	35
Cotrimoxazole	7.3	12.3	9.2	58.1	45
90° Alcohol	14.6	14.0	14.4	90.2	60
Oral rehydration salts	26.0	10.5	20.3	76.8	60
Paracetamol	10.4	10.5	10.5	38.6	30
Glucose serum	44.8	21.1	35.9	97.7	90
Folic acid	24.0	26.3	24.8	71.5	60
Acide acétylsalicylique	24.0	10.5	19.0	102.7	90
Lidocaine	43.8	21.1	35.3	80.1	90
Number of Observations.	***96***	***57***	***153***		

Source: EEEFS II 2005

102. There are other indications of low quality of services at public facilities. In 2003, only 59 percent of public basic health centers had access to clean water, 53 percent had electricity, and only 16 percent had transportation. Further, only 21 percent of public facilities collected all the information required by the IMCI protocol (age, weight, health card, temperature, and breathing frequency). Similarly, in only 8 public facilities out of 58 children were examined for the standard four signs of health risk (vomit, convulsions, anemia, and capacity to drink). Additionally, only 61 percent of anemia or severe malnutrition cases were correctly identified in public facilities. The situation has changed only marginally in 2005, and 61 percent of CSB now have access to a water source and 54 percent to electricity. However, in 2005 more than 90 percent of facilities collected information on age, weight, health care and temperature of children.

103. The health system performs poorly at the hospital level also, limiting referral to urban areas and only when it is not further compounded by financial barriers. The quality of service delivery in hospitals is affected by the lack of proper medical specialists, equipment, maintenance, proper drugs and consumables. However, the creation of the health regions has significantly modified the set-up of district health facilities and reference hospitals. With support from development partners, hospital level services are being reviewed and should lead to a reorganization of the referral system and a transformation of the role and mandates of district and regional hospitals for more effective and efficient service delivery. The program of creation of essential services particularly in surgery and emergency medicine and the re-equipment and rehabilitation of health facilities is progressing well and will continue.

Table 6: Characteristics of CSB infrastructure by type of facility and rural and urban area, 2005

CSB	Water (pump and tap)	Électricity	Means of transport	Fosse à ordures	*Obs..*
Public/Private					
Public	61.4	53.6	51.0	55.6	153
Private – non religious	71.9	96.9	45.3	56.3	64
Private - religious	89.7	94.8	43.1	34.5	58
Area					
Rural	47.2	46.5	53.5	62.2	127
Urban	89.2	94.6	43.2	41.9	148
Faritany					
Antananarivo	74.4	87.8	28.0	51.2	82
Fianarantsoa	76.2	57.1	52.4	33.3	42
Toamasina	69.8	67.4	62.8	79.1	43
Mahajanga	62.5	72.5	52.5	40.0	40
Toliara	67.6	64.7	70.6	61.8	34
Antsiranana	61.8	67.6	44.1	41.2	34
All CSB	69.8	72.4	48.0	51.3	275

Source: EEEFS II, 2005.

Budget execution is weak

104. Management of the health system at the local level is improving, although budget management capacity remains a major challenge. The planning, programming and monitoring functions of regional and district health management teams have been strengthened. All regions and districts have adjusted their budgeting process to the new budget/program format, and some have begun to introduce performance-based planning using management tools and technical support from various partners. The performance of the district management teams has started to improve as a result of technical support and staff recruitment. All but a few of the districts are now able to formulate their three year plans and develop annual work programs along clear norms and criteria. However, implementation of those annual plans is still weak due to poor implementation capacity, insufficient resource flows to the regions and districts and low capacity for procurement of the large quantities of commodities and equipment needed to expand health services. Furthermore support from regional and communal administrative authorities is still weak. This situation is in part due to substantial limitations at central level, where budget management functions remain weak and require increased efforts to strengthen the administrative and managerial capacity of the health system. The execution of MOH budget in 2005 and 2006 was low, and there is need for continuing efforts at developing capacity at central, regional and district levels and at devoting increased attention for more systemic support and monitoring of budget distribution and implementation.

Health Sector Reform Program

105. MOH is continuing to implement initiatives to improve access and utilization of health services and improve health outcomes. A new sector policy was adopted in June 2005, in which emphasis was placed on the need to re-orient health resource allocations to underserved areas and improve public expenditure management. Prevention and treatment of malaria and other major communicable diseases were also among the key priorities. Moreover, the policy sought to achieve closer integration and coordination of health sector interventions with other activities that impact health status such as water and sanitation, nutrition, transport, and rural development, and aimed to expand the coverage of risk-coping strategies such as mutual health insurance schemes and solidarity mechanisms.

106. To estimate the sector's investment needs over the next ten years, a process of analytic work was initiated using the Marginal Budgeting for Bottlenecks programming tool. The analysis has highlighted the importance of adequate investment in the development of human resources as well as infrastructure, especially referral facilities. The analysis is based on a dynamic path characterized by various growth scenarios including linear increases in service delivery and/or frontloading for infrastructure and equipment supply. Estimates from the modeling exercise indicate that significant resources would be necessary to enable Madagascar to meet the health-related MDGs by the target date of 2015. The planned expansion of essential health services, including enhanced clinical referral capabilities for neo-natal and obstetric care, would require additional resources over the short-to-medium term to set the country on a dynamic path toward realizing the health-related MDGs. The first base scenario calls for an increase of US$3.80 per capita and aims at progressing steadily towards the child mortality, malnutrition, malaria and HIV MDG targets through increased use of well known high impact health interventions such as immunization, family planning, use of impregnated bed-nets and social marketing of health and sanitation products including oral re-hydration therapy. The other scenarios call for a tripling to quadrupling of spending on health to support a significant expansion of clinical services which will be necessary to make progress on the maternal mortality MDGs.

107. Madagascar's efforts to provide services to the poor focus on increasing the availability of quality services and ensuring the financial accessibility of these services. Health is a key goal of Madagascar's poverty reduction strategy, and health policy issues feature prominently in the country development plans, including the Madagascar Action Plan (MAP), 2007-2011. The National Health Sector Strategy and Development Plan (*Plan de Développement du Secteur Santé*, or PDSS), covering the period 2007-2011, seeks to list and define the various interventions necessary for the realization of the MAP objectives in a logical framework of priorities, activities and results.

108. The primary focus of the reforms in the health sector is to strengthen the health system and increase its capacity to provide the necessary production, financing, delivery and management support for delivery of services necessary to meet the eventual objectives of reducing child and maternal mortality, controlling illnesses due to malaria, sexually transmitted diseases, and HIV-AIDS. Accordingly, ongoing efforts are being targeted to strengthen delivery of health services, develop and manage human resources in the health sector, introduce innovations in health financing, including resource mobilization and resource allocation, and

improve demand and utilization of health services. Table 7 summarizes the objectives and interventions described in the MAP and PDSS.

Table 7: MAP Objectives and Interventions

Objectives	Interventions
Provision of quality health services, esp. in remote areas	- Strengthen health centers to deliver basic package of services - Ensure adequate supply of drugs and equipment at all health centers - Provide Mobile Health Centers for remote areas - Strengthen capacity and competencies at decentralized levels - Contract and redeploy nurses and midwives to all level 1 and 2 health centers - Improve working conditions of health personnel, especially in rural areas - Train nurses and midwives to deliver basic health services - Empower decentralized levels to better staff and manage health centers - Develop innovative provider payment mechanisms to contract and redeploy nurses and midwives to all level 1 and 2 health centers - Develop innovative financing methods to increase the use of health services by the poor, through such mechanisms as social insurance or social security - Organize campaigns to increase awareness so as to maximize utilization and effectiveness
Eradication of major diseases	- Strengthen capacity and competencies at decentralized levels to manage and coordinate campaigns for vaccination etc. and maximize coverage and effectiveness - Strengthen capacity and competencies at decentralized levels to manage and coordinate effective control of malaria, including spraying, distribution of bed-nets, etc. - Ensure adequate supply of equipment and testing facilities at all health centers for sexually transmitted diseases - Improve training of health agents to prevent, diagnose and adequately treat tuberculosis - Strengthen capacity of private services providers to diagnose and treat STIs. - Organize campaigns to increase awareness so as to maximize utilization and effectiveness
Implementation of a family planning strategy	- Strengthen capacity and competencies at decentralized levels to manage and coordinate campaigns for family planning - Ensure application of agreed quality standards and protocols at all health centers - Improve training of health agents in family planning - Develop innovative financing strategies to ensure sustainability and general availability of Family Planning programs and training of health agents in family planning - Organize campaigns to promote family planning and use of long-lasting contraceptive methods
Reduction in Infant and Child Mortality	- Ensure adequate supply of services and drugs for infant and child health at all health centers - Strengthen capacity and competencies at decentralized levels to organize and manage community agents and health workers on procedures for treating children under five - Improve training of health agents on uniform procedures for dealing with diseases in children under five - Train staff in health centers and first level hospitals in treating children and new-born babies - Organize campaigns to raise awareness for improved management of children diseases
Reduction in Maternal Mortality	- Ensure adequate supply of drugs and equipment for management of pregnancies and deliveries at all health centers - Strengthen capacity and competencies at decentralized levels to organize and manage community agents for implementation of the roadmap for reduction of maternal mortality. - Train staff in health centers and first level hospitals in pregnancy and delivery management - Organize campaigns to mobilize communities for increase utilization of maternal and neo-natal services
Promotion of Hygienic Practices	- Strengthen capacity and competencies at decentralized levels to organize and manage community agents for promotion of hygienic practices including the WASH strategy - Organize campaigns to promote widespread utilization of hygienic practices, including the WASH strategy

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

Madagascar Sustainable Health System Development Project

World Bank Projects

109. **Second Health Sector Support Project (US$40 million credit; US$22 million supplemental credit).** The project was approved in November 1999, and a supplemental credit (US$18 Million) prepared in 2005. The development objective of the project is to contribute to the improvement of the health status of the population through more accessible and better quality health services. The project has three specific objectives: (i) improve quality of health and access to primary health care services with a focus on rural areas; (ii) support priority health programs with emphasis on endemic infectious diseases, reproductive health (including family planning, sexually transmitted diseases and HIV/AIDS) and nutrition; and (iii) strengthen sector management and administrative capacity within MOH and at provincial and district levels. The project is rated satisfactory on both IP and DO ratings.

110. **Multisectoral STI/HIV/AIDS Project – MSPP I (US$20 million credit).** This project was approved in November 2001. Its development objective is to support the Government of Madagascar's efforts to promote a multi-sectoral response to the HIV/AIDS crisis and contain the spread of HIV/AIDS on its territory. To do so, the project builds capacity and scales up the national response to HIV/AIDS and STIs, a key risk factor and contributor to the spread of HIV/AIDS. The project has financed, *inter alia,* sector strategies and pilot projects, including communication campaigns, the implementation of the local response, and M&E activities. It is rated satisfactory on both IP and DO ratings.

111. **Second Multisectoral STI/HIV/AIDS Project – MSPP II(US$30 million credit).** The project was approved in July 2005, and made effective in May 2006. The closing date is December 31, 2009. The development objectives of MSPP II are the same as those of the MSPP, i.e., to support the Government of Madagascar's efforts to promote a multi-sectoral response to the HIV/AIDS crisis and to contain the spread of HIV/AIDS on its territory. To do so, the project will intensify and will build capacity to carry out the national response to HIV/AIDS and sexually transmitted infections (STIs), a key risk factor for and contributor to the spread of HIV/AIDS. In addition, MSPP II will seek to improve the quality of life of persons living with HIV/AIDS through increased access to quality medical care and to non-medical support services. Given the current epidemiological situation, the project will put an even stronger focus than the original project on at-risk groups in high prevalence areas, while moderately expanding services to other affected groups (e.g., orphans and other vulnerable children). The project consists of the following components and sub-components: (i) harmonization, donor coordination, and strategies; (ii) support for health sector response; (iii) STI/HIV/AIDS prevention and care; (iv) monitoring and evaluation; and (v) project management and capacity building. The project is rated satisfactory on both IP and DO ratings.

112. **Community Development Fund (US$178 million).** The project was approved in April 2001 and made effective in October 2001. The closing date is June 30, 2008. The project has benefited from two supplemental credits. The objectives of the project are to improve the use of and satisfaction with project-supported social and economic services amongst participating rural

and urban communities. The project has six components: (i) transfers of funds to community associations; (ii) capacity building activities; (iii) transfers of funds to communes; (iv) project administration and supervision; (v) social safety net activities; and (vi) cyclone emergency and disaster relief activities. The project is rated satisfactory.

113. **Second Community Nutrition Project (US$47.6 million).** The project was approved in May 1998, and received two supplemental credits of US$10 million each in December 2003 and November 2006. The closing date is December 2008. The development objectives of the Project are to improve the nutritional status of children under the age of three, pregnant and lactating women, and school-aged children. The Project also aims to ensure long-term sustainability of nutrition outcomes by improving the quality and quantity of food intake by children at home. The Project is implemented by SEECALINE, an executing agency operating since 1993 which has demonstrated capacity in effectively supporting poor communities and in monitoring nutritional status through contracting local NGOs whose capacity has been built by the project.

114. **Governance and Institutional Development Project (US$30 million).** The Governance and Institutional Development (PGDI) project was approved in November 2003 and became effective in March 2004. The closing date is June 30, 2009. An additional financing of US$5 million is under preparation. The development objective of the project is to assist the Government of Madagascar in implementing the Poverty Reduction Strategy Paper (PRSP), by rationalizing and modernizing budget, and public expenditure management; improving accountability and transparency of Government operations; and, by strengthening the capacity of public institutions, in light of complex change processes. The two main components address the following: i) improving transparency, and economic governance will require a comprehensive reform of the public finance system; and ii) institutional development and capacity building activities in selected government institutions.

Projects of Other Development Agencies

Table 1: Projects of Other Development Agencies

Donors	Project name	Sector Issue	Implementation Status
European Union	• Budget Support (PARP)	• General budget support	Ongoing
African Development Bank (AfDB)	• SANTE II • SANTE III HIV/AIDS and transmissible diseases	• Provision of essential drugs, health facilities • HIV/AIDS and tuberculosis	Ongoing
USAID	• Mother and child health • Family planning and reproductive health • Nutrition • STI/HIV/AIDS		Ongoing
GLOBAL FUND	• Malaria grant round 3 and 4 (CRESAN and PSI) • HIV/AIDS round 4 (SE/CNLS) • Tuberculosis round 4 (SE/CNLS)		Ongoing
JICA	• Mother and child health	• Hospital rehabilitation	Ongoing
UNICEF	• Child health • HIV/AIDS	•	Ongoing
WHO	• Reproductive health • Malaria • Institutional capacity building • Immunization	• Technical assistance	Ongoing
UNDP	• HIV/AIDS	• Technical assistance	Ongoing
UNFPA	• Reproductive health		Ongoing
French Cooperation	• FSP	• Technical assistance, training, HIV/AIDS, hospitals rehabilitation, district support	Ongoing
GAVI	• Immunization		Ongoing
GTZ	• District, regional support • HIV/AIDS	• Mahajunga • Technical support, public-private partnership	Ongoing

Annex 3: Results Framework and Monitoring

Madagascar Sustainable Health System Development Project

115. The National Health Sector Strategy and Development Plan (Plan Développement du Secteur Santé, or PDSS) lists and defines the various interventions necessary for the realization of the MAP objectives in a logical framework of priorities, activities and results. The five-year PDSS lays down a Results Framework which captures the key elements of the results chain and links inputs, resources, outputs and outcomes. Developed through extensive consultation with development partners and others stakeholders, the Results Framework provides program-level bases for managers to gauge progress toward the achievement of results and to adjust relevant programs and activities accordingly. In addition, it provides an important opportunity for MOH to work with its development partners and stakeholders to build consensus and ownership around shared objectives and approaches to meeting those objectives. MOH sees the Results Framework as a "living" management tool, to be used as the foundation for critical programmatic events and processes, including strategic planning (by outlining program objectives and contributions of operations and their outputs to achieving these objectives), communication (by setting out priorities, clarifying expectations and accountabilities, and identifying common areas and synergies across operations), monitoring and evaluation (by measuring progress and making adjustments as needed) and learning (by determining what works and what does not and comparing across similar operations).

116. The fundamental premise of the Results Framework is that health status and outcomes depend on a host of factors that include public health interventions, economic environment, social environment, sociopolitical environment, and life-cycle-related issues. It recognizes that activities and actions within the health system, while necessary, would be insufficient by themselves to bring about the desired improvements in health, including meeting the health-related MDGs, since measures to achieve these improvements would require interventions across many other sectors, such as water and sanitation, infrastructure, education and environment, which also have a direct or indirect effect on health and well-being. Recognizing that measuring and tracking the myriad interventions across all these sectors would be a huge and difficult exercise for any one implementing agency, the Results Framework focuses on monitoring resources, processes and outputs directly related to actions and activities implemented by MOH, and tracking a set of broad indicators of health outcome and status that would subsume the effects of interventions of other sectors and ministries. The dashboard of outcome indicators – effectively the end-result of all interventions by all sectors as well as households and individuals themselves that have some bearing on health and well-being – will be used for broad sector monitoring and attention by high-level policy makers and development partners. Table 1 presents the full MAP/PDSS Results Framework.

Table 1: Results Framework

	What results on the ground are important?			**How does the World Bank contribute to these results?**	**How do we know if implementation is on track?**	
	How do we measure these results?	What intermediate actions/policies are needed to achieve these results?	How do we measure progress in intermediate actions/policies?			
Strategic Policy Objectives	**Outcome Indicators**	**Intermediate Interventions**	**Output Indicators**		**Resource Indicators**	**Process Indicators**
Ensure availability of quality health services for all	Maternal mortality rate: from 469 per 100 000 live births to 273 per 100 000 live births in 2011 Total Fertility Rate: from 5.2 in 2003 to 3 in 2011 Infant-juvenile mortality rate: from 94 per 1,000 live births in 2003 to 73 per 1,000 live births in 2011 Infant mortality rate: from 58 per 1,000 live births in 2003 to 45 per 1,000 live births in 2011 Prévalence of chronic malnutrition in children under the age 3: from 40% in 2003 to 21% in 2011	▪ Strengthen health centers to deliver basic package of services ▪ Ensure adequate supply of drugs and equipment at all health centers ▪ Strengthen capacity and competencies at regional and district levels ▪ Train, contract and redeploy nurses and midwives to all level 1 and 2 health centers ▪ Improve working conditions of health personnel, especially in rural areas ▪ Develop innovative payment mechanisms for health personnel in rural areas ▪ Develop innovative financing methods to increase the use of health services by the poor ▪ Organize campaigns to increase awareness and maximize utilization	▪ Population Coverage ▪ Number of CSBs that have at least one qualified physician available and working full time ▪ Availability of tracer drugs at the level of CSBs	**Strengthening Delivery of Health Services** ▪ Support to improve functionality of existing primary and first referral health centers at the district and community level ▪ Provide technical assistance to MOH to identify and resolve gaps in the delivery of health services. **Development and Management of Human Resources** ▪ Develop and implement incentive and performance-based mechanisms for redeployment of medical personnel to rural areas ▪ Provide training and coaching to health personnel to strengthen capacity to strengthen competencies at regional and district levels **Innovations in Health Financing Management** ▪ Develop and	▪ Percentage of the state budget allocated to health ▪ Execution of the state budget for health ▪ Total expenditures on health, (public and private) per capita	▪ Number of texts and documents elaborated and adopted ▪ Number of teams formed for monitoring and evaluation ▪ Number of regions where the epidemiologic monitoring system is functional ▪ Number of SSD with a health development plan prepared in with CTD and implemented ▪ Number of SSD that have computerized management of Human Resources ▪ Percenatge of remote areas overseen by a permanent or contracted technical specialist Pourcentage de zones ▪ Number of CSBs built ▪ Number of CSBs in line with technique norms of Ministry ▪ Number of CSBs equipped in line with technical norms of Ministry ▪ Number of CHRR equipped in line with technical norms of Ministry ▪ Number of CHD1 transformed into CHD2 in line with technical norms of Ministry
Eliminate principal transmissible diseases		▪ Strengthen capacity and competencies at regional and district levels ▪ Ensure adequate supply of equipment and testing facilities at all health centers for sexually transmitted diseases ▪ Train health agents to				

	What results on the ground are important?			**How does the World Bank contribute to these results?**	**How do we know if implementation is on track?**	
Strategic Policy Objectives	How do we measure these results? **Outcome Indicators**	What intermediate actions/policies are needed to achieve these results? **Intermediate Interventions**	How do we measure progress in intermediate actions/policies? **Output Indicators**		**Resource Indicators**	**Process Indicators**
		prevent, diagnose and adequately treat tuberculosis ▪ Strengthen capacity of private services providers to diagnose and treat STIs ▪ Organize campaigns to increase awareness		implement innovative mechanisms for improving resource mobilization and strengthening resource allocation and management. **Improving Demand and Utilization of Health Services** ▪ Promote awareness of health needs and available services at the community level ▪ Provide technical assistance to develop and implement innovative financial mechanisms to increase demand for health services **Institutional Strengthening and Monitoring & Evaluation** ▪ Strengthen capacity of MOH in planning, procurement, financial management and budget management ▪ Provide technical assistance and training to MOH for the development of a monitoring and evaluation system		▪ Number of health personnel working on preventive issues ▪ Number of private and public health agents trained in SONU/MSR ▪ Number of SSDs implementing the approach "Reaching Each District" as regards vaccination ▪ Percentage of CSB with staff trained in PCIME ▪ Number of health centers providing services for rehabilitated malnourished children ▪ Tuberculosis detection rate ▪ Total number of voluntary testing centers ▪ Percentage of CSB undertaking PTME activities ▪ Number of SSD staff trained on safe and healthy behavior
Control HIV-AIDS						
Implement an effective strategy of family planning		▪ Strengthen capacity and competencies at regional and district levels ▪ Ensure application of agreed quality standards and protocols at all health centers ▪ Train health agents in family planning ▪ Develop innovative financing strategies to ensure sustainability of Family Planning programs ▪ Organize campaigns to promote family planning and use of long-lasting contraceptive methods				
Reduce child and infant mortality		▪ Train health agents on uniform procedures for dealing with diseases in children under 5 ▪ Organize campaigns to raise awareness				
Reduce maternal and neo-natal mortality		▪ Ensure adequate supply of drugs and equipment for management of pregnancies and deliveries at all health centers ▪ Strengthen capacity and competencies at regional and district levels to organize				

	What results on the ground are important?			How does the World Bank contribute to these results?	How do we know if implementation is on track?	
Strategic Policy Objectives	How do we measure these results? **Outcome Indicators**	What intermediate actions/policies are needed to achieve these results? **Intermediate Interventions**	How do we measure progress in intermediate actions/policies? **Output Indicators**		**Resource Indicators**	**Process Indicators**
		and manage community agents for implementation of the roadmap for reduction of maternal mortality ▪ Train all staff in health centers and first level hospitals in pregnancy and delivery management				
Improve nutrition and food safety						
Ensure supply of drinking water to the population & promote hygiene and sanitation		▪ Strengthen capacity and competencies at regional and district levels to organize and manage community agents for promotion of hygienic practices ▪ Organize campaigns to promote hygienic practices				

117. The engagement of the World Bank and use of IDA resources will be used to leverage wider support for the MAP and to provide the necessary technical expertise and support for realization of MAP's objectives. Besides providing financial resources to upgrade health centers at district and regional levels, the Bank will contribute significantly toward institutional strengthening and capacity building, both for measurement of results as well as for strengthening management in the health system. Indeed, building capacity to define, measure, and use information on health outcomes and health system performance would be a practical and valuable outcome to achieve, especially given the limited amount of IDA financing of the project (total of US$10 million). Moreover, such capacity building would be very beneficial to the Government of Madagascar and the development partners in terms of measuring progress and identifying areas of need based on data. Ultimately, stronger capacity in measuring results would provide the country with the ability to evaluate performance and use performance data for well-informed policy making. Table 2 presents a set of quantitative and qualitative indicators will be used to track the results of Bank interventions. The output indicators are a subset of the indicators developed by MOH to track progress in the PDSS.

Table 2: Bank's Results Indicators

Indicators	**Parameter measured by this indicator**	**Source of info & data**	**Frequency of measurement**	**Target, December 2009**
Output Indicators				
Number of primary and secondary health care facilities in line with technical norms of Ministry	Technical Norms	MOH	Annual	
Number of packages of drugs and consumables distributed to primary and secondary health facilities	Availability of drugs in health facilities	MOH	Annual	
Number of safe delivery kits provided	Supply Standards	MOH	Annual	
Number of caesarian delivery kits provided	Supply Standards	MOH	Annual	
Number of maternal kits distributed	Supply Standards	MOH	Annual	
Number of health personnel trained in the provision of delivery of quality services	Management of Quality Assurance	MOH	Annual	
Process Indicators				
Number of joint work plans prepared	Harmonization and Coordination	External Evaluation	Annual	Full harmonization
Number of joint annual review with development partners undertaken	Harmonization and Coordination	External Evaluation	Annual	Full harmonization
Center for Health Policy and Planning is developed in MOH	Capacity building on measurement of results	MOH	End of Project	Center developed
National Health Information System is developed and functioning in MOH	Capacity building on measurement of results	MOH	End of Project	NHIS developed and functioning
Data on illness, utilization and treatment are collected regularly at district level and reported to a central coordinating agency	Ability to measure results	External Evaluation	Annual	Regular reporting of data to a central coordinating agency
Utilization and treatment data is used to inform policy making in the health sector	Management capacity building	External Evaluation	Annual	Regular reporting of data to policy plan. agency
Regional and district levels are more able to manage health centers and coordinate provision of health services	Management capacity building	External Evaluation	Annual	
Increased resources transferred to regions and districts and used to improve health center performance	Management capacity building	External Evaluation	Annual	
Innovative provider payment mechanisms to contract and redeploy nurses and midwives in remote areas developed	Improvements in Health Financing	MOH	End of Project	

Innovative financing methods developed to increase the use of health services by the poor, through such mechanisms as equity funds and social insurance	Improvements in Health Financing	MOH	End of Project	
Number of national/district campaigns organized to increase awareness so as to maximize utilization and effectiveness	Stimulation of Demand	MOH	Annual	
Number of community health provision scorecards prepared, discussed and disseminated	Social Accountability	MOH	Annual	

118. Tables 3 to 5 present selected indicators from the general Results Framework for the PDSS that will be monitored by the Bank during the implementation of Madagascar SHSDP to track and evaluate progress under the PDSS.

Table 3: PDSS Resource Indicators

Indicators	Parameter measured by this indicator	Source of info and data	Frequency of measurement	Baseline	2011
Percentage of the state budget allocated to health	Contribution of the state to the health sector	National Budget; Law of Finances	Annual	8.74% in 2005	11.67%
Execution of the state budget for health	Ability of MOH to manage their allocations	National Budget; Law of Finances; MOH	Quarterly	65% in 2005	100%
Total expenditures on health, (public and private) per capita	Total spending on health	National Health Accounts	Annual	$11.9 in 2003	$16.00

Table 4: PDSS Process Indicators

Indicators	Parameter measured by this indicator	Source of the information and data	Frequency of measurement	Baseline	2011
Strengthening the health system					
Number of teams formed for monitoring and evaluation	Competence in planning, follow-up and evaluation	MOH	Annual	0 in 2006	133
Number of regions where the epidemiologic monitoring system is functional	Epidemic Response Capacity	MOH	Annual	0 in 2006	22
Number of regions that have computerized management of Human Resources	Management of Human Resources	MOH	Annual	0 in 2006	22
Percentage of CSBs upgraded to be in compliance with national norms	Infrastructure Standards	MOH	Annual	30% in 2006	80%
Number of CHRRs upgraded to be in compliance with national norms	Equipment Standards	MOH	Annual	16	22
Number of CHDs upgraded to be in compliance with national norms	Essential surgery services	MOH	Annual	0	60
Number of health personnel trained on preventive issues	Management of quality assurance	MOH	Annual	150	1,238
Number of Community agents on maternal care and neonatals					
Number of private and public health sector agents trained in emergency obstetric care	SONU et MSR comptencies	MOH	Annual	56	150
Number of health districts institutionalizing routine EPI	Supply of vaccination services	MOH	Annual	50	111
Number of malnutrition treatment health centers upgraded to be in compliance with national norms	Nutrition services	MOH/ONN	Annual	100	1000

Table 4: PDSS Process Indicators, cont'd

Indicators	Parameter measured by this indicator	Source of the information and data	Frequency of measurement	Baseline	2011
Transmissible diseases					
Tubeculosis detection rate	Information on suspected patients and performance of diagnostic centers	MOH	Annual		70
Number of Voluntary Testing centers	HIV voluntary testing services	MOH	Annual		66
Percentage of CSB undertaking PTME activities	Supply of PTME services	MOH	Annual		100
Health protection and promotion of safe and healthy behavior					
Number of SSD staff trained on safe and healthy behavior	Competecy in health protection and promotion of safe and healthy behavior	MOH	Annual		222

Table 5: PDSS Output Indicators

Indicators	Parameter measured by this indicator	Source of the information and data	Frequency of measurement	Baseline	2011
Population Coverage	Population located within 5 kms of health facility	MOH	Annual	40%	60%
Number of CSBs that have at least one qualified physician available and working full time	Availability and distribution of qualified medical personnel	MOH	Annual	152	1821
Availability of tracer drugs at the level of CSBs	Availability of medicines in health facilities	MOH/Salama	Annual	85%	90%
Proportion ill seeking outpatient care at CSBs	Use of CSB services	MOH	Annual	49%	60%
Average occupancy rate of hospital beds	Use of hospital services	MOH	Annual	34%	50%
Percentage of children born in health facilities	Medical attention at childbirth	MOH	Annual	51%	70%
Proportion of pregnant women sleeping under ITN	Use of mosquito net by pregnant women	MOH/DHS	Annual/5 years	50%	100%
Proportion women using contraceptives	Use of contraceptive methods	MOH	Annual	12%	30%
Full vaccine coverage for children under 1 year	Proportion of completely vaccinated children	MOH/DHS	Annual/5 years	60%	80%
Tuberculosis cure rate	Treatment compliance	MOH	Annual	74%	85%
Percentage of CSB with available water supply	Water supply in CSBs	MOH	Annual	10%	65%

119. Table 6 presents selected indicators from the general Results Framework for the MAP that will also be monitored by the Bank during the implementation of Madagascar SHSDP.

120. There are many issues with the existing institutional arrangements of collection, reporting and use of data. The Health Information System in Madagascar collects data on 74 indicators related to service provision (outpatient care, family planning program, maternal health, child health, STI/AIDS, communicable diseases (including tuberculosis, malaria, bilharziose, etc.), dentistry, evolution of pathologies, logistic management data for family planning, nutritional surveillance of children (growth monitoring), surveillance of pregnant women (antenatal care, delivery), and cost recovery from drug sales. The smallest data collection unit is the CSB, and

the Health Information System exists and works in all public CSBs. Each month CSBs send a monthly activity report to health districts (SSD), who aggregate these monthly reports from all CSBs in their catchment area and send a summary SSD report (*rapport mensuel de suivi de district*, or RMSD) to the central health statistics service (SSS). At the CSB level, data collection is on paper; however, all SSDs have computer databases and routinely use that to send data to SSS. SSS consolidates all data received from SSDs, and makes this information available to program managers and policy makers. Accuracy, timeliness and use of data are huge problems in the existing health information system, especially at the levels of SSDs and SSS.

Table 6: MAP Outcome Indicators

Indicators	Parameter measured by this indicator	Source of the information and data	Frequency of measurement	Baseline (2003)	2008/2013
Maternal mortality rate	Risk of death due to maternity for a woman of reproductive age	DHS	5 years	469 per 100 000 live births	273 per 100 000 live births
Total Fertility Rate	Average number children that a woman would have until the end of her fertile life	DHS	5 years	5.2	3
Infant-juvenile mortality rate	Measure of probability of dying before the fifth birthday	DHS	5 years	94%	73%
Infant mortality rate	Measure of probability of dying before the first birthday	DHS	5 years	58%	45%
Prevalence of chronic malnutrition in children under three	Proportion of children of insufficient weight (index weight/age)	MOH	Annual	40%	21%
HIV Prevalence rate	Number of people infected by HIV compared to number of people at risk	Study	3 à 5 years	0.95%	<0.8%
Prevalence of syphilis in pregnant women	Number of pregnant women with syphilis compared to number of pregnant women exposed to the risk	DHS	5 years	4.2%	2.1%

120. There are many issues with the existing institutional arrangements of collection, reporting and use of data. The Health Information System in Madagascar collects data on 74 indicators related to service provision (outpatient care, family planning program, maternal health, child health, STI/AIDS, communicable diseases (including tuberculosis, malaria, bilharziose, etc.), dentistry, evolution of pathologies, logistic management data for family planning, nutritional surveillance of children (growth monitoring), surveillance of pregnant women (antenatal care, delivery), and cost recovery from drug sales. The smallest data collection unit is the CSB, and the Health Information System exists and works in all public CSBs. Each month CSBs send a monthly activity report to health districts (SSD), who aggregate these monthly reports from all CSBs in their catchment area and send a summary SSD report (*rapport mensuel de suivi de district*, or RMSD) to the central health statistics service (SSS). At the CSB level, data collection is on paper; however, all SSDs have computer databases and routinely use that to send data to SSS. SSS consolidates all data received from SSDs, and makes this information available to program managers and policy makers. Accuracy, timeliness and use of data are huge problems in the existing health information system, especially at the levels of SSDs and SSS.

121. To ensure effective planning, monitoring and evaluation of its various programs, MOH has decided to establish regional level units responsible for planning, monitoring and evaluation. The 22 regional health offices have only recently been established and have a key role to play supporting program implementation via the 111 SSDs, and the approximately 2500 CSBs and local hospitals. Terms of reference for these units and for its key staff were approved in February 2007. These units, which report to the regional health directors, represent the central level *Direction de Suivi-Evaluation and Audit*. As such, the principal function of these new units will be to ensure that reliable and timely data concerning health indicators is provided to the regional health directors and to the central level SSS so that this data can be used for planning, monitoring and overall management purposes.

122. Currently, although an extensive and often overlapping data collection system exists within the Madagascar health sector, the system exhibits serious problems concerning data quality and timeliness and its potential as a management tool is not being realized. Given this situation, the World Bank will support MOH to strengthen these regional level units so they become operational within a reasonable time period (6-12 months). Following that for a period of 12-24 months, the Bank will support MOH to provide targeted support to the district health services and front-line community level health service providers within their jurisdictions to ensure that improvements are made in the collection, transmission, analysis and use of health sector data so that verifiable progress is made towards achieving national development and health sector objectives. In all these efforts, the emphasis will be on ensuring the accuracy (quality) and timeliness of data. It will also require ensuring that all those who require this data will have easy and reliable access to it. A Center for Health Policy and Development is proposed to be established under MOH, which would take data from SSS and carry out the necessary analysis to inform policy formulation and decision making.

123. An important aspect of the support to be provided to the regional units will be ensuring a clear and effective definition of their roles and responsibilities vis à vis SSS and SSD. Significant progress has been made under CRESAN 2 in developing the district level capacity to analyze data coming from the CSBs and hospitals in order to identify program goals that were not being met in order to ensure that these facilities and their staff receive the attention and support required to improve their performance and results. It is expected that a similar management for results approach can be instilled in the new regional health offices and at the central level. For this reason, it will be important to ensure an appropriate articulation and complementarity of roles and responsibilities between the different administrative levels.

124. Related to improving the efficiency of the Madagascar health information system in terms of the quality and timeliness of data, while ensuring this data is more widely used for management purposes, there is also the need to simplify and rationalize the different data collection requirements. Currently, for example, staff working in a CSB is required each month to complete at least ten different data collection forms. This arises in part because the various "vertical" programs such as vaccinations, family planning, malaria, and nutrition, do not receive the data they require from SSS for reporting purposes due to the delays experienced in preparing the consolidated national data. As a result they seek this data directly at the district level. This duplication of data collection and reporting is excessive and means a significant portion of CSB staff time is devoted to filling forms rather than to treating patients or working in prevention

programs. MOH has established a working group (*comité ad hoc*) to look into this and prepare a harmonized data collection system. A final element that merits support concerns human resource management. Currently there is no data base or computerized system to monitor and help manage MOH's approximately 15,000 staff. Although a Department of Human Resources was created three years ago, it is still being organized and is not yet able to play its role effectively. As a result, there are serious problems in all areas including assignments, promotions and rationale allocation of staff.

Annex 4: Detailed Project Description

Madagascar Sustainable Health System Development Project

Component 1: Strengthening Delivery of Health Services (IDA financing: US$5.3 million equivalent)

125. The objective of this component is to strengthen the delivery of health services at the primary and first referral levels in districts and to significantly improve the availability of quality health services, especially in remote areas. Following the country's ongoing efforts to decentralize resources, functions and responsibilities to district levels, this component will support the strengthening of the capacity of the districts to better organize, manage and deliver health goods and services to all, especially those living in rural and remote areas, but with continuing technical support and stewardship from the center. Community action in the management and financing of peripheral health services is seen as the most critical element for improving service quality and ensuring long-term sustainability. This will provide the basis on which prime mother and child health care interventions, such as immunization, prevention and control of common diseases and pre- and post-natal care, will be made accessible to the majority of the population, and on which HIV/AIDS-related actions will be accelerated.

126. The following activities are included under this component:

a) *Support in improving functionality of existing primary and first referral health centers at the district and community level*, to deliver the basic package of services, including the provision of the necessary drugs, equipments and testing facilities, especially for infant and child health, maternal health, and priority infectious diseases, and provision of basic water and sanitation facilities at health centers that do not have existing water supply on-site. The project will:
   - Rehabilitate, equip and upgrade primary and first referral health care facilities so at to bring them up to compliance with national norms. The rehabilitation will include provision of basic water and sanitation facilities.
   - Provide a package of drugs and consumables to selected primary and first referral health care facilities, with priority accorded to health facilities that are properly staffed and record high utilization rates.
   - Contribute to the fight against priority infectious diseases, including but not restricted to: (i) in-house insecticide campaigns to prevent malaria outbreaks (financier of last resort if support through other initiatives such as Global Fund and the Presidential Malaria Initiative is not available on time); (ii) immunization against rabies; (iii) pest prevention and surveillance activities; and (iv) filariosis elimination.
   - Support improvement of mother and child health and increase family planning through provision of safe delivery kits for normal and complicated births, maternal kits, and purchase of contraceptives.
   - Support implementation of innovative strategies to meet the health needs of populations in remote areas.

b) *Provision of technical assistance to MOH* in order to identify gaps in the delivery of health services and suggest actionable recommendations to strengthen supply. In particular, the project will:

- Review needs for essential drugs at the first and second referral health centers, and update the list of essential drugs to be available nationally, including in hospitals.
- Undertake an assessment of the institutional and organizational performance of hospitals, and suggest ways for improving managerial effectiveness;
- Provide support implementation of hospital management pilots;
- Support measures for the fight against priority infectious diseases.

Component 2: Development and Management of Human Resources (IDA financing: US$0.9 million equivalent)

127. A fundamental issue underlying the uneven production and delivery of health services in Madagascar is the huge variation in the allocation, training and competency levels of medical and paramedical personnel. Almost 50 percent of the personnel of the Ministry of Health are concentrated in the area of Analamanga. A few hospitals in the large cities have a disproportionately large numbers of doctors and specialists, whereas there are unsatisfied needs for certain vital specialties such as gynecology, surgery, pediatrics, etc. at the level of the provinces. Likewise, there are major imbalances in the distribution of doctors across rural and urban areas.

128. In addition, the relatively low productivity of medical and paramedical personnel in the public sector also poses a significant problem. Besides shirking and absenteeism, poor productivity is also a result of poor basic training of the medical personnel (for example, many general practitioners do not know much about childbirth), unavailability of essential goods and equipments to facilitate diagnosis and treatment, low levels of remuneration, etc. As a result, quality of care suffers, especially at the level of the CSB and in rural areas, and the system is marked by little or no integration of preventive and curative care, absence of continuity of the care, irrational use of drugs, etc. Even non-clinical activities are of poor quality, with bad patient reception, long waiting hours, and absence of communication with the patient.

129. In order to improve the human resource management in the health sector, the Government is developing a sector-wide strategy, including defining professional profiles critical to the health sector, revising standards and redeploying personnel based on criteria and standards aimed at improving the rural-urban balance, ensuring stability and continuity of doctors in rural districts, and changing the structure of incentives for doctors and other medical personnel at all levels of health care provision.

130. The following activities are included under this component:

a) *Development and selective implementation of incentive and performance-based mechanisms for redeployment of medical and paramedical personnel to rural areas*, and development of contracting mechanisms to correct the urban-rural imbalance. The project will:
   - Support the development and implementation of protocols for improving the working conditions of medical personnel in rural areas.
   - Support the development and management of career plans and effective human resources management tools.

b) *Provision of training and coaching to health personnel to strengthen capacity to strengthen competencies at regional and district* levels in order to assume a leadership role in mobilizing health providers as well as organizing and coordinating community agents to implement the roadmap for reduction of maternal mortality, promote hygienic behavior, and promote the integrated use of family planning services. The project will:
   - Support training of all health personnel, including doctors (public and private), nurses, midwives and other health agents, in the provision of services necessary to provide quality services, including capacity to diagnose and treat infectious diseases, children and new-born babies, and management of pregnancies and deliveries.
   - Support the development of new training strategies, both for basic and continuing education such as the creation of new and/or shorter curricula/diploma, implementation of pilot experiences with private paramedical schools to increase the number of paramedics available throughout the country, strengthening of basic training in coherence with the burden of diseases and public health objectives, and creative ways to gain access to medical training and expertise.

Component 3: Innovations in Health Financing Management (IDA financing: US$0.6 million equivalent)

131. According to NHA 2003, total health expenditure in Madagascar is estimated to be approximately US$11.9 per person, equivalent to about 3.5 percent of GDP. External assistance represents over 37 percent of total spending in the health sector. Public funds constitute the next largest source (32 percent), followed by out-of-pocket payments (31 percent). Currently donor support is provided mainly through projects, though the sector has also benefited from general budget support that the Government has received from PRSC financed by the World Bank and the European Union. Community insurance systems are at an early stage of development, and only cover a very small percentage of the population.

132. The public sector is the principal financing agent, managing 55 percent of total funds, with the bulk of the operational budget of the Ministry devoted to salaries. Budget execution has been weak, averaging about 77 percent annually, and has been below the average of the other Ministries during most of the last decade.

133. In terms of distribution, there are large inequalities across regions, with richer regions receiving relatively more resources. This regressive distribution of resources constitutes an obstacle to ensuring access and utilization of quality health care by all, a key goal of the National Health Policy and the MAP. Moreover, insufficient resources flow to the CSBs, partially explaining the low quality of the services rendered at this level. There are no clear criteria for distribution of health resources across regions that take into account the size of the population and their needs, the level of poverty in the region, and the number of facilities.

134. Resource mobilization and allocation remain the cornerstones of the health sector strategy in Madagascar, as the country strives to increase the resources allocated to the health sector. Innovative ways of mobilizing resources, including social and community health insurance, are being considered under the strategy. In addition, public-private partnerships are also under being explored as potential means of generating new resources.

135. The following activities are included under this component:

Provision of technical assistance and support for the development and selective implementation of innovative mechanisms for improving resource mobilization and strengthening resource allocation across sectors in order to meet the priority objectives of the government. The project will finance technical assistance to develop the following tools:

- Innovative resource mobilization mechanisms, including equity funds, social insurance, community insurance, etc.
- Mechanisms for better management of available public and private funds, including pooling of budgetary and non-budgetary sources of financing, priority spending and provision for catastrophic care. The project will finance technical assistance (together with the Bank's Governance and Institutional Development Project) so as to increase the budget execution rate, and foster accountability and efficiency in financial resource allocations and a reserve fund for catastrophic and epidemic care.
- Innovative provider payment mechanisms, including contracting, especially for nurses and midwives for deployment in rural and remote areas. Some of these mechanisms will be tested through implementation.

Component 4: Improving Demand and Utilization of Health Services (IDA financing: US$1.05 million equivalent)

136. Utilization of health services in Madagascar is very low. Only 10 percent of the population reports an illness, and of those, only 40 percent seek care. There are huge variations in service use across regions, with significantly lower rates of utilization in the remoter areas of the country. Utilization of health services is especially low among the poor, implying inequity in utilization of care. This low level of utilization also results in an underutilized health system and idle resources.

137. The following activities are included under this component:

a) *Promotion of awareness of health needs and available services at the community level* in order to support increased utilization rate of health services. The project will:
   - Support strengthening of community education to increase awareness of health needs and available services so as to increase utilization and effectiveness through both mass media campaigns and community-based activities.
   - Support the organization of national/regional/district campaigns to promote improved and integrated management of children illnesses, family planning, use of long-term contraceptives, increased utilization of maternal and neonatal services, hygienic practices, etc. The project will support selective innovative pilot experiences aimed at increasing the utilization rate of health services.

b) *Provision of technical assistance for the development and selective implementation of innovative financial mechanisms* to increase demand for health services. The project will:
   - Support development of a system of conditional cash transfers in order to provide financial incentives to seek care, especially for the poor and vulnerable sections of society. A pilot will be launched to increase compliance with tuberculosis treatment.

Component 5: Institutional Strengthening (IDA financing: US$2.15 million equivalent)

138. A critical objective of this component is to provide support to the strengthening of country systems in the health sector and specifically within the Ministry of Health, including procurement capacity, financial management systems, budget execution, program oversight and planning and use of data for decision making (evidence based planning). Moreover, close partnerships need to be developed between the Ministry of Health and other relevant ministries, in particular Water and Education. Finally, the oversight and monitoring of private sector partners in the health sector is fundamental to having a comprehensive picture of the health system in Madagascar.

139. Another objective of this component is to support the establishment of an effective Monitoring and Evaluation (M&E) system. M&E systems provide information on inputs, structures, outputs and outcomes, and are central to improving management of results and strengthening performance. The goal of the proposed M&E plan is to link the system strengthening activities supported by the project to the MAP objectives and create an integrated and coherent framework to monitor and evaluate progress across multiple dimensions. This will provide the necessary information to decision-makers to assess achievement of project objectives and make the necessary adjustments from time to time in response to evolving conditions either within or external to the project.

140. International experience of M&E systems points to the importance of engaging all stakeholders in the M&E development process. The project's M&E plan will present a special challenge and opportunity to assist in the coordination and implementation of multisectoral activities as well as monitoring the impact of health activities across sectors.

141. The following activities are included under this component:

a) *Strengthening of the capacity of MOH in planning and programming, procurement, financial management and budget management*, and strengthening supervisory capacity of districts, and support to the preparation and implementation of Annual Work Plans. The project will:

- Provide support to the decentralization process at the regional and district health operational district level through strengthening of supervisory capacity led by the district level to ensure smooth and regular functioning of health facilities, including CSBs and first referral health facilities, especially for emergency surgeries, and support the move towards more integration of health activities.
- Provide support to the bottom-up planning through subsidizing the implementation of the district annual work plan (continuation of CRESAN2 support to avoid disruption of financial flows at the peripheral level). The Government commits however to start increasing its allocation to the peripheral level, and to improve its internal procedures to be able to manage the district financial allocations with the same flexibility as the IDA projects by the end of end of the project.
- Provide support for the establishment of a Center for Health Policy and Development in order to strengthen the capacity of the Ministry in the areas of planning, data analysis, policy formulation and program oversight.

b) *Provision of technical assistance and training to MOH for the development and operationalization of a monitoring and evaluation system* and strengthening capacity to collect and analyze health information and data. The project will:

- Provide support to the development and operationalization of an M&E system, including at the regional and district levels, including capacity building and technical assistance for implementing entities in M&E through education and training at central, regional and district levels.
- Provide support to the development of a National Health Information System (NHIS) to improve routine data collection.
- Provide support to strengthening of analytical capacity to facilitate analysis of national, regional and community-level data collected through a variety of sources at different time intervals and using multiple data collection methodologies.
- Contribute to the financing of the DHS.
- Undertake annual financial audits and one technical audit during the project implementation period.
- Support operating costs of the PCU.

Annex 5: Project Costs

Madagascar Sustainable Health System Development Project

Project Cost By Component and/or Activity	Local US$ million	Foreign US$ million	Total US$ million
Component 1: Strengthening Delivery of Health Services	4.3	1.0	5.3
Component 2: Development and Management of Human Resources	0.6	0.3	0.9
Component 3: Innovations in Health Financing Management	0.3	0.3	0.6
Component 4: Improving Demand and Utilization of Health Services	0.55	0.5	1.05
Component 5: Institutional Strengthening	1.55	0.6	2.15
Total Baseline Cost	7.3	2.7	10.0
Physical Contingencies			
Price Contingencies			
Total Project Costs	7.3	2.7	10.0
Interest during construction			
Front-end Fee			
Total Financing Required			

Annex 6: Implementation Arrangements

Madagascar Sustainable Health System Development Project

I. INSTITUTIONAL ARRANGEMENTS

142. The implementation of the National Health Program is overseen by MOH through its relevant directorates and services. Decisions are made by a management team comprised of all division chiefs and representatives from health districts. This team will be responsible for closely monitoring project activities (including the follow-up of performance indicators, sector issues and health status/epidemic trends), donor coordination, and for making concrete recommendations of ways to improve overall project implementation.

143. Responsibility for Madagascar SHSDP coordination will rest with the Project Coordination Unit (PCU), made up essentially of staff from the project unit of the current IDA financed health project. This Unit has also been selected by the Global Fund to manage the Malaria 4th and 5th round funds. It has performed its duties satisfactorily and acquired experience in managing IDA-funded activities, coordinating donors, NGOs, various MOH services and district health authorities. Other donors have expressed interest in using this PCU for the execution of their activities, and the PCU will be staffed accordingly.

144. Given the project's wide array of activities in different sectors, the Project Coordination Unit will collaborate with the following MOH Directorates: (a) Health District Development *(Direction de developpement des districts sanitaires);* (b) Infectious diseases directorate *(Direction de la lutte contre les maladies transmissibles);* (c) Preventive medicine (which includes Nutrition and Family planning services); (d) Planning and research, (e) Health care establishments *(Direction des etablissements de soins),* and (f) Pharmacy and laboratory for the project component on institutional strengthening.

145. The head of the PCU will report to the Secretary General and the Minister of Health, and will participate in the MOH management team together with the other central directors, and the senior staff of the health districts. The project staff will have an internal controller to oversee all administrative and financial transactions; a highly qualified accountant with at least one assistant; two procurement specialists; a procurement assistant; an architect/engineer in charge of the civil works; and at least one assistant. Implementation of project activities will be the responsibility of the above-listed MOH Directorates who will collaborate with the decentralized health districts. The project implementation manual will be revised to further define the roles and responsibilities of all concerned partners.

II. PARTNERSHIP ARRANGEMENTS

146. A large number of donors are active in the health sector in Madagascar. Donor collaboration on the design and implementation of the health strategy in Madagascar has been excellent, and the scope of partnerships is expected to increase even more under the sector wide approach – both because of the more formal approach to donor coordination under SHSDP as well as because the health sector strategy as outlined in the PDSS is comprehensive and includes all areas of the health system, inter alia including population and family planning, disease

control, management of preventive and acute health care services, strengthening of the health system, and promotion of hygiene. Three formal mechanisms of coordination will be used

(1) Health Summits

147. MOH will organize two summits a year, one in March and one in September, and will invite officials from Ministries of Finance, Water and Sanitation, Education, etc., development partners, civil society organizations active in the health sector, and other stakeholders. The first Health Summit would review the previous year's performance and result in a set of conclusions and recommendations for MOH that are endorsed by the Summit's participants and will form the basis of the Ministry's actions during the rest of the year, including adjustments in the Annual Work Program for the remaining part of the year. The second Health Summit would review progress over the last six months and provide the basis for adjustments and course correction for the next year. Participants would review the Annual Work Program for consistency with MAP and PDSS and with findings of the annual sector review carried out in the first Summit. This would result in a final Annual Work Program for the coming year that is agreed with participating development partners, incorporates their respective contributions, reflects their collective recommendations on priority areas for action, and forms the basis for the following Summit's monitoring of performance. This collective approach to sector monitoring and coordination is expected to improve efficiency, accountability and prioritization of donor support to the health sector. The first such Summit will take place in September 2007.

(2) Memoranda of Understanding

148. A Memorandum of Support will be signed by agencies pooling their funds for Madagascar SHSDP, in this case the World Bank and AFD. This Memorandum will specify issues of special relevance to the pooled funds: namely, institutional arrangements, fiduciary arrangements, assessment and monitoring provisions, disbursement arrangements, information-sharing and conflict resolution expectations, and arrangements for adding new partners during implementation. A broader Memorandum of Support will be signed by the President of Madagascar, Ministers of Health and Finance, and representatives from all development partners, including the World Bank, UNICEF, UNFPA, WHO, USAID, AfDB, EU, JICA, etc.

(3) Joint Supervision Arrangements

149. Participating development partners will arrange regular joint supervision missions and work closely together on team composition, planning and implementation with counterparts to minimize administrative efforts for the government. This will include coordination of the policy dialogue in line with specific areas of expertise of individual agencies to allow for efficient allocation of resources and use of government capacities. Regular supervision missions are envisaged twice every year, and in addition to the fiduciary requirements of participating development agencies, will support the bi-annual Health Summits in their review of the implementation of the PDSS and SHSDP. To the extent possible, development partners will also coordinate the use of parallel funds available for implementation support measures and share evaluation results and background reports as applicable.

Annex 7: Financial Management and Disbursement Arrangements

Madagascar Sustainable Health System Development Project

Introduction

150. Madagascar SHSDP represents the next stage in support to the health sector by the Bank and other development partners. The main objective is to contribute to the strengthening of the health system, including financing, delivery and management, so as to improve the access and utilization of health services, especially in rural and remote areas, and scale-up the production and delivery of health programs with an emphasis on endemic infectious diseases, reproductive health and nutrition. To support this strategy, IDA financing is likely to be pooled with contributions from AFD and supported through parallel financing by other development partners. To strengthen donor collaboration and ensure harmonization of borrower and donor fiduciary system, a Memorandum of Understanding will be signed by the government and the cooperating partners pooling their funds for this project.

151. The Madagascar SHSDP has five components to be implemented by MOH and related operating units located at the regional and district levels. A preliminary financial management assessment carried out at the concept stage determined that the program will be implemented in a high-risk environment. This is derived from the fact that Government's financial management systems are generally weak and capacity is low. The Ministry of Health is no exception. In addition, financial management capacity at the regional and district levels is weak. To address this high fiduciary risk and efficiently meet the challenges of Madagascar SHSDP, transitional institutional arrangement was agreed with MOH specifying that the financial management aspects of this program will be entrusted to the financial management unit of the Project Coordination Unit (PCU) of the ongoing Second Health Sector Support Project (CRESAN 2) which has extensive experience in managing Bank Funds. This unit will keep the existing experienced and qualified fiduciary staff from CRESAN 2, including three accountants, and will be in charge of overall coordination of the program as well as the fiduciary aspects, including budgeting, accounting, financial reporting, disbursement operations and procurement. The unit is expected to be supplemented with the redeployment of a MOH accountant. The unit will be supervised by the Administrative and Financial Director, who in turned will be supported by a technical assistant for the duration of the project.

152. The financial management arrangements of MOH (through CRESAN 2) and related operating units were assessed during the pre-appraisal mission. The objective of this assessment was to determine whether these implementing entities have capacity to handle pooled donor funds and have also in place acceptable financial management arrangements, which will ensure: i) the funds are used only for the intended purposes in an efficient and economical way; ii) the preparation of accurate, reliable and timely periodic financial reports that would allow the Bank, other donors and the Government to plan and implement the program, monitor compliance with agreed procedures, and assess progress towards its objectives; and iii) the entities' assets and records are safeguarded. Given the decentralized nature of the program and the number of operating units involved, the coordination and reporting mechanisms between these entities and the PCU has been also looked at to ensure that the arrangements in place will allow for smooth implementation of program's activities as well as to ensure that credit proceeds are used only for

the purposes for which the credit was granted, with due regard to economy, efficiency, and the sustainable achievement of the program's development objectives. The assessment also includes a determination of the program's readiness for report-based disbursement.

153. The financial management assessment was carried out jointly with the AFD in accordance with the World Bank Financial Management Practices Manual issued by the Financial Management Board on November 3, 2005. With regard to operating units responsible for the implementation of project activities at the regional and district levels, the assessment was undertaken for a representative sample, by using a set of financial criteria, as these entities generally use the same system and procedures, and have the same level of capacity. The conclusions of this assessment were discussed with MOH representatives, i.e. the Director of Finance within MOH and the national Coordinator of the ongoing CRESAN 2.

Summary Project Description

154. The primary focus of Madagascar SHSDP is to strengthen the health system and increase its capacity to provide the necessary production, financing, delivery and management support for delivery of services necessary to meet the eventual objectives of reducing child and maternal mortality, controlling illnesses due to malaria, sexually transmitted diseases, and HIV-AIDS. Activities undertaken are expected to result in significant improvements across a range of demand-side, supply-side and institutional aspects of the health system, especially in the production and delivery of quality services in rural and remote areas, in both public and private sectors.

155. The likely contribution of each donor is as follows (subject to change):

Donors	Amount
IDA	**$ US$10 million**
AFD	**$ US$18 million**
Total	**$ US$28 million**

Country issues

156. The World Bank's CFAA/CPAR, completed in 2003, and some diagnostic works carried out over the last three years by the Bank and other donors, identified a range of weaknesses and issues hampering the performance of Madagascar's budget and expenditure management system. To address these issues, the Government developed in 2004, 2005 and 2006, in conjunction with all key development partners, a priority action plan for public finance reform.

157. While overall implementation progress of the reform program is encouraging, significant efforts are needed in the following areas: i) improvement of the budget execution rate in priority sectors; ii) strengthening of the capacity of the line ministries in public financial management, especially in the implementation of the new program budget structure; iii) strengthening of cash management; iv) production of the treasury accounts within the legal timeframe; v) increase in the number of skilled and experienced auditors at the "*Chambre des comptes*" commensurate with the complexity and increased number of missions to be undertaken; and vi) reinforcement

of control over State-owned companies and national public institutions. To mitigate risks in public expenditure management, the World Bank, through the Governance and Institutional Development Program, and a number of donors continue to support Government's public finance reforms reflected in its annual priority action plan.

158. Regarding the accounting profession, some positive developments have been noted over the last three years. However, a number of local accounting firms continue to operate below the international standards. To improve the capacity and the competitiveness of local auditing firms, the following measures have been taken while auditing Bank/IDA financed projects: i) mandatory partnerships of local auditors with international accounting firms; ii) effective participation of the international accounting firm in audit fieldwork; and iii) submission of audit report jointly signed by the local and international audit firms. An accounting and auditing Review on Standards and Codes would be certainly helpful to identify clearly both issues and actions to be taken to strengthen the capacity of the accounting profession in Madagascar.

159. The use of country systems still remains risky for Madagascar due to some fiduciary weaknesses that require much more time to solve. As a result and after exchanges of views with the borrower (Ministry of Finance and MOH) it was agreed, in the context of SHSDP to use partially the country system and to establish transitional financial management system arrangements while the sector/national fiduciary systems are being strengthened.

Strengths, Weaknesses and Action Plan

160. The project financial management is strengthened by the following salient features:

- The organizational structure within MOH/CRESAN 2 defines the lines of responsibilities and authority that exist and seems appropriate for planning, directing and controlling operations.
- CRESAN 2 has strong experience in managing World Bank funds. The accounting/budgeting system is adequate as well as the internal control system. It has also a qualified and trained accounting staff very knowledgeable with Bank procedures.
- Existence of an internal auditor within CRESAN 2 that could be integrated into the Internal Audit Department to be created within MOH.

161. The main deficiencies noted in the financial management system are summarized in the following table which also provides relevant measures to address them:

Significant weaknesses	Actions	Date due by	Responsible
The Directorate of Financial Affairs (within MOH) which is supposed to supervise the PCU accounting staff is not familiar with the Bank procedures in financial management and disbursement.	Ensure CRESAN 2 accounting staff retained in the PCU structure.	06/01/07	MOH/DFB
	Strengthening the financial management capacity of the MOH by hiring, under terms and conditions acceptable to IDA, a Technical Assistant acquainted with both national financial management system and Bank FM procedures.	Not later than three months after effectiveness	MOH/DFB

Significant weaknesses	Actions	Date due by	Responsible
Lack of qualified staff at the regional and district levels	Extension of the contract of the seventeen (17) financial management officers recruited under CRESAN 2 to: i) provide the regional operating units with necessary capacities to quickly disburse and account for funds of SHSDP; ii) ensure, at the regional and district levels, the use of funds for the purposes intended; and iii) assure timely preparation of periodic financial reports required for proper monitoring of activities implemented by regional operating units, with respect to financial and physical aspects.	06/01/07	MOH/DFB
	Before credit effectiveness, a training session will be organized to familiarize accounting staff of MOH, PCU and all financial management officers with the Bank procedures in financial management and disbursements.	06/30/07	Consultant/ IDA
Absence of a Chart of accounts reflecting program components and activities outlined in the Project Concept Note/Project Appraisal Document.	Elaboration of a chart of accounts in sufficient details (by categories, project components/activities/objects, budgetary nomenclature, geographic codes) to satisfy reporting requirements. The Chart of accounts and related accounting procedures will be formalized in the updated accounting manual.	05/31/07	Consultant
Absence of an appropriate accounting manual of procedures describing the accounting system, the project Chart of accounts, policies and procedures to be applied, and models of financial statements and FMRs.	Update and implementation of an accounting manual of procedures acceptable to donors to provide clear guidance to project staff working both at the central, regional and districts levels	Before Effectiveness	Consultant
	Organization of users training to ensure proper application of procedures, proper record keeping and adequate safeguarding of assets.	06/15/07	Consultant
Absence of an internal audit function	Creation of an internal audit department within MOH to enhance internal controls and address areas of concern identified during program implementation.	Before effectiveness	MOH
Incapacity of the computerized system in place (used by the CRESAN 2) to satisfy entirely the needs of Madagascar SHSDP and the requirements of the Government, IDA, and other development partners in financial/accounting /technical information.	Customizing and upgrading the computerized accounting system acquired by CRESAN 2 in order to: i) meet the users needs; ii) satisfy the government, IDA and other donors requirements in financial/technical information; and iii) ensure timely production of annual financial statements and quarterly Financial Monitoring Reports (FMRs) for monitoring program activities.	06/15/07	Consultant

Significant weaknesses	Actions	Date due by	Responsible
	Organization of users training by the consultant to ensure efficient use of all modules offered by the software.	06/30/07	Consultant
Absence of acceptable arrangements in auditing.	Recruitment of an international private auditing firm acceptable to IDA to carry out the audit of Madagascar SHSDP accounts jointly with the Auditor General. This audit will be performed bi-annually and conducted in accordance with International Standards of Auditing.	Three months after effectiveness	MOH, IDA

Institutional and Implementation arrangements

Project oversight

162. Policy guidance and overall project oversight will be the responsibility of the Minister of Health who will execute its mandate by liaising with the Pool's Donors. The PCU, in close collaboration with Directorate of Financial Affairs (DAF) and the Directorate of Planning (DEP), will be in charge of the annual program planning and budgeting. MOH through its General Secretary will: i) assure consistency of program activities with the Government's policy and strategy; ii) approve the annual works programs and budgets; and iii) follow-up on project performance and implementation progress.

Project coordination and implementation

163. The CRESAN 2 PCU will be responsible for program management including: i) coordination of the implementation of the program; ii) consolidation of the district work programs and budgets; iii) maintenance of records and separate accounts for all transactions related to the PCU; iv) preparation, consolidation and production of the program financial statements, quarterly FMRs and other financial information required by the government; v) management of the pool account; and vi) monitoring and evaluation of the various activities supported under the project. The PCU is currently headed by a Coordinator named by MOH and includes specialists in accounting, procurement and monitoring and evaluation.

164. The implementation of program activities will be entrusted to: i) technical departments of MOH; and ii) operating units at the regional/district levels, which will receive timely payments from the PCU-based upon submission of satisfactory quarterly budgeted work plans. The operating units at the regional/district levels will manage disbursements from their own bank accounts. Under the supervision of the financial officer(s), they will maintain records and accounts for all transactions related to them, and prepare financial report and other basic information on project management/monitoring as required by the PCU.

Budgeting

165. The expected program period for Madagascar SHSDP is two years and six months. A program implementation plan and disbursement schedule has been drawn up and is included in

the Project Appraisal Document. It is from this disbursement schedule (as may be subsequently revised) that annual budgets will be drawn.

166. The annual budget will be prepared in line with the Government's policy and strategy. The DAF, DEP and the Program Coordinator will be responsible for coordinating the preparation of an annual budget for the program. Budgeting arrangements for the project will be described in details in the project accounting manual of procedures. The annual estimates will reflect financial requirements of the program and should be finalized three months before the beginning of the fiscal year, and submitted to the Ministry of Finance for discussion and decision-making in conformity with the defined calendar. The budget format will be based on the program components/activities/categories/geographic codes. It will show: i) expenditure estimates per quarter and a total expenditure for the whole year; and ii) funds expected from IDA, AFD and other donors (if any). The upgraded accounting software to be implemented will be able to cater adequately for the budgeting arrangements, comparing planned and actual costs and reporting variances. Prior to implementation of the project, MOH staff will attend a specific training to ensure efficient use of the new system and proper preparation of FMRs.

Accounting

167. Madagascar SHSDP will use an accounting system in compliance with generally accepted accounting standards and the *Plan Comptable des Opérations Publiques* and donor requirements. This system will operate on a double entry accrual principles and will use standard book accounts (journals, ledgers and trial balances) to enter and summarize transactions. Revenue will be recorded when cash is received, while expenses and related liabilities will be recorded when incurred, especially upon receipt of goods, works and services.

168. The regional operating units will maintain a simple cash book showing clearly cash received, payments made for each component/activities for which they have implementation responsibility, and cash balances. They also will prepare on a quarterly basis, in collaboration with the financial officers, a more simplified form of reporting on sources and uses of funds, and send it to PCU for consolidation with their activity reports.

169. To strengthen the project financial management system, it was agreed that a consultant will be recruited to update the accounting manual of procedures (for MOH/PCU and related operating units) describing the outline of the accounting system(s), the accounting policies to be followed, the Chart of accounts, the formats of books and records, the financial reporting, and relevant information to facilitate record keeping and maintenance of proper control over assets. The consultant will also provide adequate training to staff to ensure better understanding and proper application of all procedures described in this manual. The accounting manual of procedures should be finalized and submitted to IDA prior to credit effectiveness.

170. While all the donors involved in Madagascar SHSDP appreciate the need to use government systems, the IFMIS system implemented within the Ministry of Finance does not serve the needs of SHSDP without many urgent corrections in the short term. As this is not practicable, an interim measure has been therefore taken while the government system is being improved. To ensure timely production of financial information required for managing and

monitoring program activities, the PCU will use an integrated computerized system acquired within the context of the CRESAN 2, which in particular facilitates: annual programming of activities and project resources, record-keeping (general accounting and cost accounting), financial and budgetary management, fixed assets management, procurement management, preparation of CRESAN 2 financial statements and quarterly FMRs as required by IDA.

171. However, this software needs to be customized and upgraded to: i) meet the users needs; ii) satisfy the Government, IDA and other donors requirements in financial/technical information; and iii) ensure timely production of SHSDP program financial statements and quarterly FMRs as required by donors for monitoring program activities. To avoid double data capture, this system should also allow for extracting efficiently all required information from the database ORACLE presently in place and used by MOH for recording commitments, "liquidations" and settlement orders. The consultant in charge of this update will provide users training to ensure efficient use of all modules offered by the software. The terms of reference for this consultant have been reviewed by the Bank Financial Management Specialist. Since the update of the software is underway and expected to be finalized prior to June 15, 2007, the inclusion of this measure as effectiveness condition will not be necessary.

Internal Control and Internal Auditing

172. The CRESAN 2 PCU is being transformed into the PCU for the Madagascar SHSDP. It will be staffed with: i) a qualified Financial Management Specialist acquainted with both national financial management system and Bank financial management procedures, responsible for overall supervision of finance, accounting, budgeting and reporting; and ii) two qualified and experienced accountants from CRESAN 2. To ensure effective transfer of skills and allow the PCU to respond to a possible increase of the volume of financial management tasks once other donors provide financing, an accounting assistant will be selected among the MOH staff based on qualification and experience. To strengthen the financial management capacity of the DAF and to help it to adequately supervise the PCU, a technical assistant acquainted with Bank procedures will be recruited not later than two months after credit effectiveness.

173. The MOH/PCU and related operating units will have an administrative and accounting procedures manual describing clearly the lines of responsibilities and authority that exist with appropriate segregation of duties. It will also provide sufficient information to facilitate record-keeping and the maintenance of proper control over assets.

174. To ensure efficient use of credit funds for the purposes intended and consistent application of procedures on procurement, financial management, disbursement, an internal audit Department will be created within MOH prior to credit effectiveness. This Department will collaborate closely with the General Inspectorate for Finance when this later is fully functional, and will report directly to the Minister of Finance and the Minister of Health. All issues identified during internal audit should be addressed quickly to improve the program performance.

Financial Reporting

175. To monitor the implementation of SHSDP, PCU will produce the following reports that should be prepared in compliance with international accounting standards:

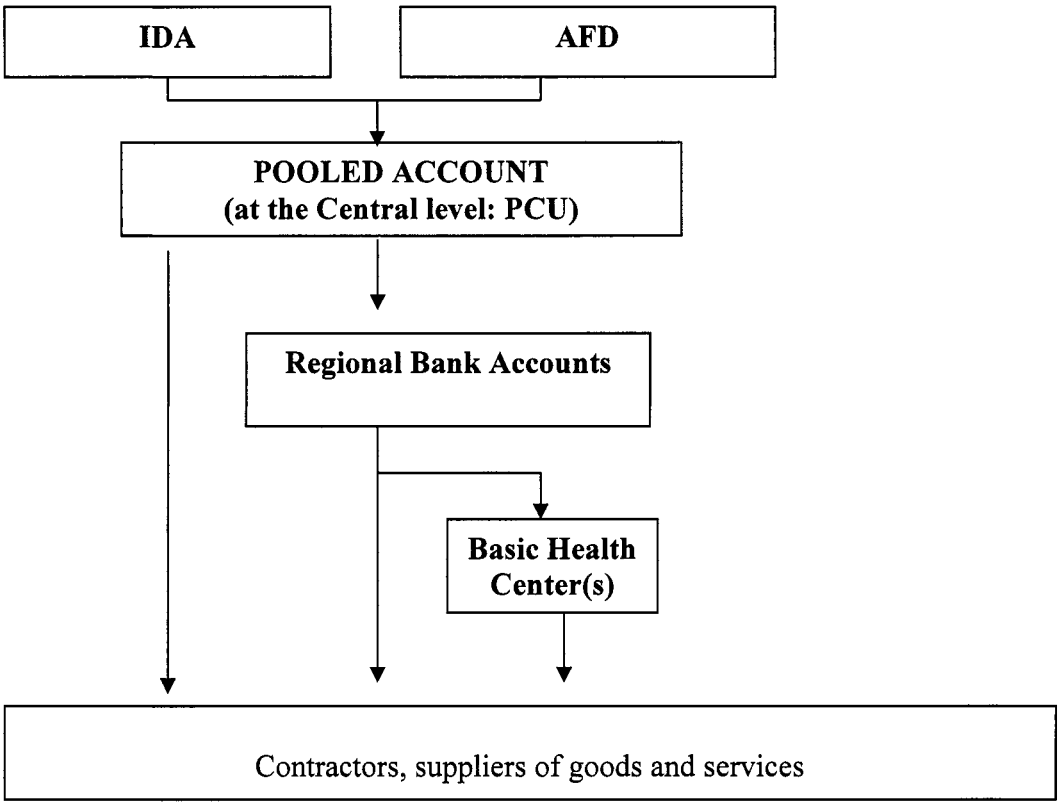
- ***Annual financial statements*** comprising: i) Summary of Sources and Uses of Funds (by components/project activities/credit category and showing all sources of funds); ii) Project Balance Sheet; iii) the Accounting Policies Adopted and Explanatory Notes; iv) a Management Assertion.
- ***Quarterly FMRs:*** FMRs include financial reports, physical progress reports and procurement reports to facilitate project monitoring. FMRs should be submitted to IDA within 45 days of the end of the reporting period (quarter). Models of quarterly FMRs and annual financial statements will be presented in the project accounting manual of procedures.

Auditing

176. The financial statements of SHSDP (including the PHRD grant) will be audited by an international private auditing firm acceptable to donor, in collaboration with the Auditor General. This audit will be performed bi-annually and conducted in accordance with International Standards of Auditing. The auditors should be recruited within three months after the effectiveness date. The audit report will be submitted to IDA not later than six months after the end of each period. The auditors will be required to: i) express an opinion on the project financial statements; ii) carry out a comprehensive review of the internal control procedures and provide a management report outlining any recommendations for their improvement. The terms of reference of the audit will be reviewed by the financial management specialist of the Bank/IDA to ensure the adequacy of the audit scope, drawing special attention to particular risk areas identified during project preparation.

Funds Flow and Disbursement arrangements

177. Funds flow arrangements for the project are as follows:



178. For the implementation of SHSDP, the following bank accounts will be opened in local commercial banks under conditions satisfactory to donors:

- **A Pooled Account** to be managed by PCU: Denominated in $US, disbursements from the Pooled Donors Fund will be deposited on this account to: i) finance works/goods/services eligible under the Pooled Account as indicated in the Financing Agreement; ii) replenish regional bank accounts;
- **Regional bank account(s**: Denominated in local currency, disbursements from the Pooled Account will be deposited on these accounts opened in local commercial banks to ensure prompt payment of contractors/suppliers operating at the regional/district levels for works/goods/services eligible under the Pooled Account;
- **Donor Special account(s)**: Denominated in foreign currency, these accounts will receive the contributions of other donors opting to support the program through parallel financing (Parallel-Financing Donors).

179. While disbursing proceeds to the Pooled Account, the credit account may be used to:
   - reimburse the borrower for expenditures paid from the borrower's resources;
   - advance credit proceeds into a pooled account of the borrower that is held in a commercial bank acceptable to donors to finance eligible expenditures as they are

incurred and for which supporting documents will be provided at a later date (see below: Disbursement from the Pooled Account).
- make a direct payment to a third party;
- enter into special commitments in writing to pay amounts to a third party in respect of expenditures to be financed out of the credit proceeds, upon the borrower's request and under terms and conditions agreed the Bank and the borrower.

180. There will be a minimum value for applications for direct payment, and special commitment that may have to be made for transaction-based disbursements. The minimum value will be documented in the disbursement letter related to SHSDP. The accounting manual of procedures describes in details the application steps and requirements for requesting a reimbursement, a direct payment for third party, and applying for a special commitment.

Disbursement from the Pooled Account

181. Flows of funds from the Pooled Account will be governed by a Memorandum of Understanding that will be signed by all donor partners and the government. IDA and AFD will deposit in the Pooled account their contribution as per agreed Annual Work Program, in an agreed proportion and periodicity (on a six months basis) as defined in the Memorandum. Disbursements to the Pooled account will be done based on quarterly FMRs. Under this disbursement method, a forecast of program expenditures will be agreed between the MOH/PCU and donors, covering a period of six months. The borrower may request an advance for an amount not exceeding this cash forecast. Supporting documentation for these disbursements will submitted with the subsequent FMR and reviewed by donors to confirm eligible expenditures during the period covered by the FMR. The project will finance Goods (equipment, safe delivery kits, drugs and medical supplies and maternal kits -- estimated total value US$4.9 million) and Consulting Services for technical assistance, training and strengthening supervisory and implementation capacity at district and regional levels (estimated value US$4.25 million). In addition, the project will finance project operating costs, financial audits and local costs of the Demographic Health Survey (estimated value US$ 0.85 million). The cash request at the reporting date will be the amount required for the forecast period as shown in the approved FMRs less the balance in the Pooled Account at the end of the quarter. Subsequent disbursements from Pooled Account will therefore be made in respect of this cash request. Detailed disbursement procedures will be described in the project accounting manual of procedures.

Disbursement from regional bank accounts

182. The amount to be advanced to each regional operating unit will be determined on the basis of a quarterly work program for an amount not exceeding a fixed ceiling indicated in the operations manual. Subsequent payments will be based on the satisfaction of certain criteria: a technical (physical progress) and financial performance assessment carried out by MOH/PCU and submission of acceptable documentation for previous releases.

183. Each regional operating unit will submit quarterly the following documents: i) a progress report showing physical achievements, a summary of the use of funds by activity, and a copy of

the bank statement. All documents supporting expenditures will be retained by the operating units and made available for review by the PCU staff, the internal auditor, Bank/donors supervision mission and the independent auditors as necessary.

Supervision Plan

184. Taking into account the level of risk associated with the financial management aspects of this program, the financial management specialist will pay more frequent visits to the MOH/CRESAN 2 to ensure timely implementation of all actions expected to be in place prior to credit effectiveness. When project expenditures begin, a supervision mission will be conducted at least twice a year based on the risk assessment of the project. The mission's objectives will include that of ensuring that strong financial management systems are maintained for the project throughout its life. A review will be carried out regularly to ensure that expenditures incurred by the project remain eligible for SHSDP funding. The Implementation Status Report will include a financial management rating for the component. The financial management specialist will also review quarterly FMRs, the audit reports and follow-up on timely implementation of recommendations from auditors.

Annex 8: Procurement Arrangements

Madagascar Sustainable Health System Development Project

A. General

185. Procurement for the proposed project would be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated May 2004; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, and the provisions stipulated in the Legal Agreement. The various items under different expenditure categories are described in general below. For each contract to be financed by the Credit, the different procurement methods or consultant selection methods, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

186. **Advertisement:** A General Procurement Notice will be published in UN Development Business and Development Gateway Market (dgMarket) and will show all International Competitive Bidding (ICB) for goods and works and major consulting service requirements. Specific Procurement Notices will be issued in Development Business and dgMarket and at least one newspaper with nationwide circulation for ICB contracts and before preparation of shortlists with respect to consulting contracts above US$200,000, in accordance with the Guidelines.

187. **Procurement of Works**: Works procured under this project would include: provision of basic water and sanitation facilities at health centers, services to strengthen health centers. The procurement will be done using the Bank's Standard Bidding Documents (SBD) for all ICB and National SBD agreed with or satisfactory to the Bank. To the extent practicable, contract shall be grouped into bid packages estimated to cost the equivalent of US$500,000 or more and would be procured through ICB procedures. For contract estimated to cost less than US$500,000 equivalent per contract, civil work procurement may be carried out through National Competitive Bidding (NCB) and contracts for small works, estimated to cost less than US$50,000, may be procured through quotations procedures. The bidding documents shall include a detailed description of the works, including basic specifications, the required completion date, basic forms of agreement acceptable to IDA and relevant drawings where applicable. Specific procedures details can be found in the Project Implementation Manual (PIM).

188. **Procurement of Goods:** Goods procured under this project would include, office furniture and equipment, vehicles, computer hardware and software, office equipment, mobile health centers, and goods to strengthen health center to deliver basic package of services including the provision of necessary drugs, equipment and testing facilities. The procurement will be done using the Bank's SBD for all ICB and National SBD agreed with or satisfactory to the Bank. To the extent practicable, contracts shall be grouped into bid packages estimated to cost the equivalent of US$250,000 or more and would be procured through ICB procedures. For contract estimated to cost less than US$250,000 equivalent per contract, procurement of goods may be carried out through NCB procedures and purchase of small furniture estimated to cost less than US$30,000 will be conducted through prudent shopping procedures.

189. **Direct Contracting** for works and goods may be used in exceptional cases, such as for the extension of an existing contract, standardization, proprietary items, spare parts for existing equipment, and urgent repairs and emergency situations, according to paragraphs 3.6 and 3.7 of the Guidelines. The items to be procured through Direct Contracting would be agreed on in the procurement plans.

190. **Procurement of non-consulting services:** Procurement from United Nations agencies for supplies carried out under their own procedures may include UNDP, UNICEF, WHO and/or the International Agency Procurement Services Organization. The standard form of contract with UN agencies will be used for such procurement. The items to be procured from UN agencies would be agreed on in the procurement plan if and when to be used. In addition, SALAMA services may be used as a procurement agent to purchase drugs and medical supplies in accordance with Article 3.10 of the Guidelines.

191. **Selection of Consultants:** The project will finance the contracting of consultancy services for technical assistance, financial and technical audits, and capacity building. Firms will be recruited on the basis of the Quality and Cost Based Selection (QCBS) method, using the Bank's Standard Request for Proposals. Selection based on consultant's qualifications (CQ) can be used for the recruitment of training institutions and for assignments that meet criteria set out in Para. 3.7 of the Consultant Guidelines. Single source selection can be used to contract firms or individuals for assignment that meet criteria set out in Para. 3.9 to 3.13 of the Consultant Guidelines and for contract which amount do not exceed US$100,000. Specialized advisory services would be procured through Individual Consultants Selection (ICS), based on the qualifications of individual consultants for the assignment in accordance with the provisions of paragraphs 5.1 through 5.3 of the Consultant Guidelines.

192. **Operating Costs** financed through the project would be procured using the implementing agency's administrative procedures, which were reviewed and found acceptable to the Bank. The procurement procedures and SBDs to be used for each procurement method, as well as model contracts for works and goods procured, are presented in the PIM.

193. **Review by the Bank of Procurement Decisions:** The thresholds for prior review by Bank are specified in the procurement plans. Table 1 shows (a) the proposed thresholds for the different procurement methods, and (b) the proposed initially-agreed thresholds for prior review by the Bank. The Bank will preview procurement arrangements proposed by the Borrower for the items specified in the procurement plans for their conformity with the Financing Agreement and the applicable Guidelines. Any procurement item not specified for prior review may be subjected to a post-review of the procurement process.

Table 1: Thresholds for Procurement Methods and Prior Review

Expenditure Category	Contract Value Threshold (US$)	Procurement Method	Contracts Subject to Prior Review (US$)
Works	500,000 or more 50,000 or more and less than 500,000 Less than 50,000	ICB NCB Quotation	All (none)
Goods	250,000 or more 30,000 or more and less than 250,000 Less than 30,000	ICB NCB Shopping	All (3.4 million)
Consultant Services - Firms	200,000 or more	QCBS CQS LCS SSS	All (to be defined) All (to be defined)
Consultant Services - Individuals	50,000 or more	ICS SSS	All (to be defined) All (to be defined)

B. ASSESSMENT OF THE AGENCY'S CAPACITY TO IMPLEMENT PROCUREMENT

194. As agreed with MOH, procurement activities will be carried out by the procurement unit of the on-going Second Madagascar Second Health Project (CRESAN 2). This unit will function as a MOH procurement unit in accordance with the provisions of Madagascar Procurement Code. The CRESAN procurement unit is currently duly staffed with two proficient procurement officers and an assistant.

195. A new assessment of the capacity of this unit within the CRESAN 2 project coordination unit to implement procurement actions for the project was undertaken by Sylvain Rambeloson (PS) and Lova Ravaoarimino (PA) in March 2007. The assessment reviewed the organizational structure for implementing the project and the interaction between the project's staff responsible for procurement and the Management's relevant central unit for administration and finance.

196. The key issues and risks concerning procurement for implementation of the project have been identified and include the phasing of activities to be undertaken and possible cases of emergency. The corrective measures which have been agreed are being followed up along with implementation of the agreed procurement plan and activity scheduling. A procurement action plan will be fine-tuned quarterly and the main procurement plan will be updated accordingly.

197. The overall project risk for procurement is average.

Table 2: Procurement Risk Assessment and Risk Mitigation

Designation	Concerns	Risk mitigation	Due date
Planning and budgeting	Lack of budget planning	Development of cost and contract management control	Before project implementation
Execution and monitoring	Lack of internal Audit		
Staffing	Competent but still new for 2004 Guidelines	Organization of procurement clinic to inform the staff on new features of 2004 Guidelines	Before project implementation
Competition among private sector	Lack of advertisement	Use of GPN at national level Use of Bank procedure for advertising	During project implementation
Project management	Lack of definition of responsibilities	Project implementation manual to be updated	By project effectiveness

C. PROCUREMENT PLAN

198. The Borrower, at appraisal, developed a procurement plan for project implementation which provides the basis for the procurement methods. This plan has been agreed between the Borrower and the Project Team on March 30, 2007 and is available at the CRESAN office. It will also be available in the project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

D. FREQUENCY OF PROCUREMENT SUPERVISION

199. In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended annual supervision missions to visit the field to carry out post review of procurement actions.

E. Details of the Procurement Arrangements Involving International Competition

1. Goods, Works, and Non Consulting Services

(a) List of contract packages to be procured following ICB and direct contracting:

1	2	3	4	5	6	7	8	9
Ref. No.	**Contract (Description)**	**Estimated Cost**	**Procurement Method**	**P-Q**	**Domestic Preference (yes/no)**	**Review by Bank (Prior / Post)**	**Expected Bid-Opening Date**	**Comments**
C1.2	Equipment for 47 primary and secondary health centers	1,200,000	ICB/NCB		No	Prior	Mar 2008	
C1. 2	Safe Delivery Kits for normal and complicated births	1,200,000	ICB/UN agencies		No	Prior	May 2008	
C.1.3	Drugs and medical supplies	1,500,000	ICB/SALAMA		No	Prior	May 2008	
C1.4	Maternal Kits	1,000,000	ICB/SALAMA		No	Prior	May 2008	

(b) ICB contracts estimated to cost above US$500,000 for works and US$250,000 for goods per contract and all direct contracting will be subject to prior review by the Bank.

2. Consulting Services

(a) List of consulting assignments with short-list of international firms.

1	2	3	4	5	6	7
Ref. No.	**Description of Assignment**	**Estimated Cost**	**Selection Method**	**Review by Bank (Prior / Post)**	**Expected Proposals Submission Date**	**Comments**
Strengthening Delivery of Health Services						
C1.5	Review of essential drugs at the first and second referral health centers	200,000	ICS	Post	Mar 2008	
C1.6	Assessment of the institutional and organizational performance of hospitals	200,000	ICS	Prior	Oct 2008	

Development and Management of Human Resources						
C2.1	Development of protocols for improving the working conditions of medical personnel in rural areas	75,000	ICS	Prior	Jan 2008	Multiple Contracts
C2.2	Development and management of career plans and effective human resources management tools	75,000	QCBS	Post	Jan 2008	Multiple Contracts
C2.3	Development and implementation of new training strategies	750,000	CBS	Prior	Nov 2007	Multiple contracts
Innovations in Health Financing Management						
C3.1	Development of innovative resource mobilization mechanisms	200,000	QCBS CQS ICS	Prior	Feb 2008	Multiple contracts
C3.2	Development of tools to improve management of available public and private funds	200,000	QCBS CQS ICS	Prior	May 2008	Multiple contracts
C3.3	Development and testing of innovative provider payment mechanisms and contracts,	200,000	QCBS CQS ICS	Prior	May 2008	Multiple Contracts
Strengthening the Demand and Utilization of Health Services						
C4.1	Incentives for promoting safe delivery in health centers	500,000	CQS/ ICS	Prior	Jan 2008	Multiple contracts
C4.2	Strengthening community awareness through social mobilization in 6 communes	150,000	CQS	Prior	Mar 2008	Multiple contracts
C4.3	Implementation of « Commune mendrika » approach in 6 communes	150,000	QCBS	Post	May 2008	Multiple contracts
C4.4	Organization of integrated IEC campaigns at all levels	150,000	QCBS	Post	May 2008	Multiple contracts
C4.5	Pilot initiative to increase rate of tuberculosis cure	100,000	CQS	Prior	April 2008	
Institutional Strengthening						
C5.1	Strengthening supervisory and implementation capacity at district and regional levels	1,000,000	ICS	Prior	Dec 2007	Multiple contracts
C5.2	Strengthen national M&E system (MAP,PDSS, PGE)	100,000	QCBS/ ICS	Prior	Feb 2008	Multiple contracts
C5.3	Support to the National Health Information System (NHIS)	100,000	CQS/ ICS	Prior	Mar 2008	Multiple Contracts
C5.4	Establishment of a Center for Health Policy and Development	100,000	CQS/ ICS	Prior	April 2008	Multiple Contracts
C5.5	Support to the DHS for operating costs	400,000	-	-	Jan 2008	
C5.6	Financial and Technical Audits	100,000	QCBS/ ICS	Prior	Jan 2009	Two Contracts
C6.6	Project Operating Costs	350,000	-	-	-	

(b) Consultancy services estimated to cost above US$100,000 per contract and single source selection of consultants (firms) and of individual consultants assignments estimated to cost above US$50,000 will be subject to prior review by the Bank.

(c) Short lists composed entirely of national consultants: Short lists of consultants for services estimated to cost less than US$100,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

Annex 9: Economic and Financial Analysis

Madagascar Sustainable Health System Development Project

200. The underlying rationale for Madagascar SHSDP – the need for the government to improve budget sustainability by incrementally increasing public financing for the health sector, mitigating allocative and technical inefficiencies, improving targeting of resources for vulnerable groups and high priority health programs, and for reducing fragmentation in donor support and strengthening linkages with MAP and PDSS – is a valid one.

I. INTRODUCTION: MACROECONOMIC CONTEXT

201. With less than US$300 per capita and about 70 percent of its population living in poverty, Madagascar is one of the poorest countries in the world. After becoming independent in 1961 the country witnessed a long period of economic decline due to poor governance and protectionist and inward looking policies. Two liberalization episodes in the late 1980s and 1990s improved economic performance. After the second episode, the country experienced a period of growth powered by the dynamisms of the industries that benefited from preferential trade access. Between 1997 and 2001, GDP grew at about 4 percent per year, while inflation was kept under control. However, the political crisis in 2002 halted this trend as GDP dropped by about 13 percent.

202. After 2002 the new Government's sound macroeconomic management was able to consolidate the gains of previous liberalizations and, despite large external shocks (e.g., cyclones, high oil prices, and the elimination of the multifiber agreement), growth resumed and has continued at about 5 percent per year. Recent GDP growth has come largely from improvements in agriculture, increased tourism receipts, and public investments. Through a tight monetary policy, inflation was also brought under control after a 27 percent rate in 2004.

Table 1: Key Macroeconomic Indicators

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006 estimates
GDP growth	3.7	3.9	4.7	4.7	6	-12.7	9.8	5.3	4.6	4.7
Per capita GDP US$	250.7	256.9	248.3	250.3	284.6	278.1	323.9	251	281.8	298.3
Inflation rate CPI	4.8	6.4	10.1	9.9	4.8	13.9	-0.8	27.3	11.4	10.8
Total Revenue					10.1	8	10.3	12	10.9	11.4
Fiscal Revenue					9.6	7.5	9.8	10.9	10.1	10.7
Grants					3.9	2.2	5.1	8.2	5.7	47.4
Total Government Expenditure					18.4	15.7	19.5	25.1	21.2	21.5
Global balance including grants					-3.6	-5.5	-4.1	-4.8	-4.6	37.3
Poverty rate	73				70	81		72.1	68.9	
Poverty rate rural	76				77	86		77.3	73.5	
Poverty rate urban	63				44	62		53.7	52	

Source: Madagascar PER based on data from IMF and EMP surveys

203. Despite all this progress many challenges remain given the country's low socioeconomic indicators and the government's difficulties in mobilizing internal resources. Fiscal resources have never been above 11 percent of GDP while the country depends more and more on highly

unpredictable foreign funds. Nevertheless, the country has benefited from the HIPC initiative; in 2006 alone the country received US$2.3 billion in debt reduction, close to 43 percent of its GDP.

II. Economic Analysis I: Trends in Health Financing and Implications for Budget Sustainability[1]

204. The country spends very little on health, a situation that will worsen once donor financed projects close. This financing gap cannot be lessened in the short run with internal resources given the Government's macroeconomic constraints. Madagascar SHSDP aims at filling this gap while at the same time lessening some of the public expenditure management bottlenecks the Government confronts: volatility of donor funds and large transaction costs created by projects with different management and reporting mechanisms.

205. According to the National Health Accounts (NHA) 2003, Madagascar spent about US$12 per capita on health that year, corresponding to about 3.5 percent of GDP. As seen in Table 2, these numbers are below the median in the region and much below the US$30 to US$40 per person per year recommended by the WHO to finance a package of essential services (Commission for Health and Macroeconomics, WHO, 2002). At the current level of expenditures, the country will not be able to achieve the health related MDGs. MOH, with the support of UNICEF, calculated that an additional US$ 5.40 per capita would be needed in the next three years to achieve a 41 percent reduction in child mortality and a 35 percent reduction in neonatal and maternal mortality needed to sustain progress in achieving these MDGs.

Table 2: Comparison in health expenditure indicators between Madagascar and other countries in the region

	Health Expenditure as percentage of GDP (2002)	Health expenditure per capita ($US)	Public expenditure as percentage of total expenditure (2002)	Private expenditure as percentage of total expenditure (2002)
Madagascar (2003)	**3.5**	**11.9**	**60.0**[2]	**40.0**
Ethiopia	5.7	4.3	55.1	44.9
Kenya	4.9	19.2	56.0	44.0
Malawi	9.8	Not available	58.9	41.1
Mozambique	5.8	8.9	71.0	29.0
Rwanda	4.1	12.7	50.6	48.8
Tanzania	4.9	Not available	45.2	54.8
Uganda	7.4	Not available	72.1	27.9
Zambia	5.8	17.4	47.1	52.9
Sub-Saharan African countries median	6.0	12.9	57.1	42.9

Source: MOH. 2005. *Madagascar National Health Accounts 2003*

206. External assistance is the main source of financing in the sector, representing about 37 percent of total spending on health (NHA, 2003). This large percentage of total expenditure financed by foreign aid represents a challenge for MOH, which manages most of these resources.

[1] This section borrows heavily from the Madagascar PER Health Chapter.

[2] The expenditure of the rest of the world (5 percent) was added to that of the public sector (55 percent).

207. The high volatility and unpredictability of these funds and the complexity of managing projects with different procurement and monitoring mechanisms make budget planning and execution in the ministry difficult.

Table 3: Total Budget and Expenditure of MOH 1997-2006

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total budget allocation (nominal in billion Ariary)	51.4	53.2	69.8	99	102.1	120.6	100.3	99.4	140.8	164.6
Total budget allocation (real in billion Ariary)	65.3	63.6	77.2	99	95.5	97	81.6	71	85.1	90.8
Total budget allocation as % of total Government budget	7.1%	6.2%	6.5%	7.6%	7.0%	7.6%	6.9%	5.9%	5.9%	5.9%
Total expenditure (nominal in billion Ariary)	40.2	50.8	59.1	58.4	71.2	44.6	86.8	142	86.9	ND
Total expenditure (real, in billion Ariary)	51.1	60.8	65.4	58.4	66.6	35.9	70.6	101.4	52.5	ND
Expenditure as % of total government expenditure	7.1%	6.5%	6.8%	5.6%	6.5%	6.4%	6.5%	7.6%	5.8%	
Total expenditure as % of GDP	1.1%	1.2%	1.3%	1.1%	1.2%	0.7%	1.3%	1.7%	0.9%	
Annual growth of total expenditure		19%	8%	-11%	14%	-46%	97%	44%	-48%	
Real expenditure per capita in Ariary	3783	4365	4556	3944	4365	2287	4378	6113	3081	
% variation of real expenditure per capita		15%	4%	-13%	11%	-48%	91%	40%	-50%	
Real expenditure per capita in US $	4	4	4	3	3	2	4	3	2	
Population (millions)	13.5	13.9	14.4	14.8	15.3	15.7	16.1	16.6	17.1	17.5
FMG/USD	1019.8	1088.3	1256.2	1357.4	1318.3	1318.5	1240.6	1871.8	2005.7	2180.3

Source: Madagascar PER Health Chapter based on data from the Ministry of Economics, Finance, and Budget

208. Public funds represent the next largest source (32 percent), followed by private, mainly out-of-pocket expenditure (31 percent). Even though foreign aid represents the principal source of financing in the sector, the public sector is the main financing agent, managing 55 percent of the funds. MOH manages the large majority of these funds, more than 80 percent of all public expenditure on health in the last decade. Public expenditure on health, more specifically MOH expenditure, has remained stable in the last years at about 6 to 7 percent of total Government expenditure. However, the budget allocation to the Ministry has actually decreased slightly as percentage of the total Government budget from almost 8 percent in 2000 to about 6 percent in 2006 (see Table 3). This decrease moves the country farther away from the Abuja consensus of allocating 15 percent of total Government expenditure to the health sector.

209. Not only have budget allocations to the sector decreased as percentage of total budget, the execution rate of the budget has remained low. Between 1997 and 2005 the execution rate of MOH has averaged 77 percent only, well below levels in other ministries. Factors that explain the limited absorptive capacity include: (i) late nomination of key functionaries in the expenditure chain; (ii) limited management capacity and lack of clear definition of responsibilities among the budget administrators; (iii) complex and numerous budget and procurement procedures; and (iv) difficulties in the coordination of donors.

210. The per capita real expenditure from MOH in dollar terms has remained below US$4 in the last decade, showing a marked decrease after 2003. In 2005 the country was spending only about US$2 per capita on health care, partly due to a marked devaluation of the local currency. The total health budget for MOH in 2006 fell short of the projections made in the Medium Term Expenditure Framework (MTEF) of the sector (2005). The MTEF document contains four scenarios of possible health expenditures from 2006 to 2014. Table 4 shows two of those scenarios. The first is the most conservative one, in that it assumes that the country will not achieve the Abuja consensus of having a health budget equal to 15 percent of the total

Government budget by the year 2014. The other three scenarios make this assumption but the increase in expenditure across the years follows different paths. The second scenario, also shown in Table 4, assumes a linear increase in the health budgets.

211. As can be seen in Table 4, even in the most conservative scenario the projected budget for 2006 is much larger than the actual budget; the difference is about MGA 28 billion. In the second scenario the difference is MGA 80 billion. Due to the low execution rate of the ministry, the difference with actual expenditure is much larger.

Table 4: Comparison between actual health budget and projections of the MTEF

	Actual			MTEF Projections		
	2004	2005	2006	2006	2007	2008
Scenario 1						
Health budget as % of total Government budget	7.60	5.80	5.90	6.59	6.97	7.35
Health budget (in billions of Ariary)	**141.96**	**86.93**	**164.61**	**192.39**	**235.75**	**279.11**
Health budget per capita/MGA	5779	7955	9094	10 600	12 673	14 640
Budget per capita/ US$	3.09	3.97	4.17	5.89	7.04	8.13
Health expenditure per capita/MGA	8554	5082				
Health expenditure per capita/US$	4.57	2.53				
Scenario 2						
Health budget as % of total Government budget	7.60	5.80	5.90	7.50	8.33	9.16
Health budget (in billions of Ariary)	**141.96**	**86.93**	**164.61**	**245.35**	**315.19**	**385.03**
Health budget per capita/MGA	5779	7955	9094	13 518	16 944	20 196
Budget per capita/ US$	3.09	3.97	4.17	7.51	9.41	11.22
Health expenditure per capita/MGA	8554	5082				
Health expenditure per capita/US$	4.57	2.53				

Source: MOH (2005) Cadre de Dépense à Moyen Terme du Secteur Santé, and Madagascar PER Health Chapter for the actual numbers.
Note: To make the numbers comparable to the MTEF projections the same population projections were used which are slightly different to those used in the PER.

212. The Government is unlikely to sustain even these low levels of expenditures on health, much less achieve the expenditure levels of MTEF, without additional financial aid from the donor community. The CRESAN 2 project which has financially supported the health sector since 1999 is expected to close in December 2007. This project alone increased the funding of the ministry by US$40 million. For instance, in 2004 this project financed close to 31 percent of all MOH expenditures classified as investments. This figure rose to 65 percent in 2005. Other projects that have also supported the sector are also approaching their closing dates, including the Multisectoral STI/HIV/AIDS Project (US$20 million), which will also close in December 2007, and the Community Development Fund (US$ 176m), which will be closing on December 2008.

213. Madagascar SHSDP intends to fill the financial gap for the sector, while at the same time lessen some of the distortions created by the fragmented foreign aid. Currently foreign support to the sector is mainly organized through projects, although the government has also benefited from general budget support from the World Bank and the EU. As mentioned above, the volatility of donor funds as well as the complex and different management and monitoring procedures for

each project has created large transaction costs for the ministry. As seen in Table 5, investment expenditure in the sector has experienced large variations, partly due to the volatility of donor funds which financed most of this expenditure and to a low execution rate of this expenditure. As in all programmatic approaches, all donors agree not only to support a health strategy with a corresponding MTEF but also to progressively harmonize their procedures to follow a unique monitoring and evaluation system. This coordination and harmonization between donors will lessen the volatility of donor support and will decrease the transaction costs of the ministry as it would not need to follow different procedures to manage different projects.

Table 5: Growth rate of investment expenditure of MOH

	1998	1999	2000	2001	2002	2003	2004	2005
Yearly change in investment expenditure	65	-3	26	8	-79	396	164	-82

Source: World Bank. PER Health Chapter

III. ECONOMIC ANALYSIS II: ADDRESSING EFFICIENCY AND EQUITY IN THE HEALTH SECTOR-JUSTIFICATION OF GOVERNMENT INTERVENTION AND EFFICIENCY BENEFITS FROM MADAGASCAR SHSDP

214. Government intervention in some of the activities financed by Madagascar SHSDP is justified as they are aimed at reducing market failures due to the presence of externalities or public goods. In addition, SHSDP will also finance activities aimed at reducing the inequalities in access and utilization of health services. Finally, some of these activities will also improve efficiency in the use of public resources.

Externalities

215. One of the common justifications for government intervention in markets is the presence of externalities, where economic agents can impose a cost or benefit to others without paying or charging for it. Without government intervention too much of the negative effect or too little of the benefit would be produced.

216. Infectious diseases, particularly malaria, are the major causes of mortality and morbidity in Madagascar, especially among children under five. When preventing or treating an infectious disease individuals do not necessarily take into account the effect of their action (or lack thereof) on others. Without government intervention the level of preventive and curative efforts will be lower than optimal. Madagascar SHSDP aims precisely at financing many activities aimed at prevention and treatment of many of these diseases such as: immunization for childhood illnesses, testing and treatment of sexually transmitted diseases, etc (see Tables 9-13 below).

Public Goods

217. In addition some of the interventions used to prevent infectious diseases can be characterized as public goods. Nobody can be excluded from benefiting from a public good and a person benefiting from it does not decrease the potential benefit to others. These characteristics render almost impossible the private provision of these goods. One example of public goods is vector control, such as indoor and outdoor spraying to control malaria; another example is the

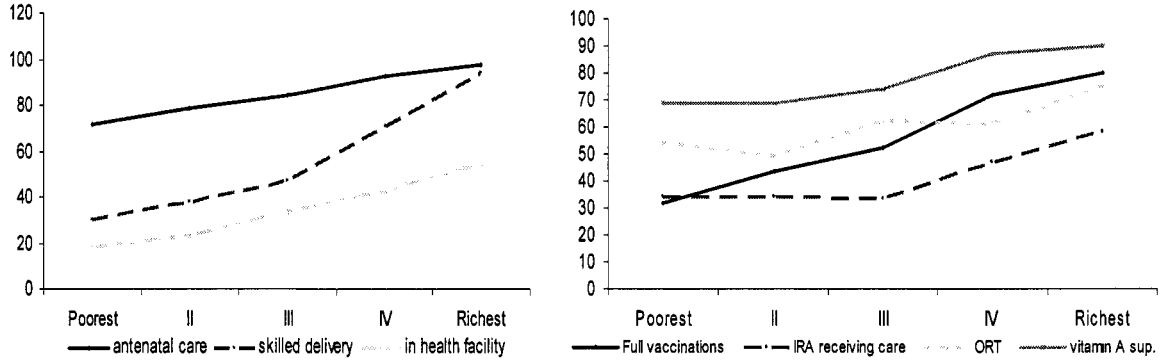
collection and dissemination of public information for the control of diseases and the supportive laboratories to monitor safe drugs, food, and water. SHSDP will finance such activities. In fact, the entire component 5 of the proposed project – which aims at the development of a monitoring and evaluation plan, development of a National Health Information System, and strengthening of the analytical capacity of the Government for monitoring and evaluation – can be justified by these same considerations.

218. Similarly, some information campaigns for activities without an associated marketable product will make private provision very difficult, justifying government intervention. Among the activities financed by Madagascar SHSDP that fit into that category are campaigns to sensitize families on behavior change, and campaigns to promote and widespread the WASH strategy.

Equity

219. There are large income inequalities in the utilization of health services in Madagascar, due partly to lower physical access to health services in rural isolated areas, and partly to financial and cultural barriers to access services. Government provision of services can also be justified on the basis of equity considerations, and many activities that will be financed by Madagascar SHSDP meet this criterion.

Table 6: Utilization of maternal and child health services across income quintiles



Source: Madagascar DHS 2003/2004

220. In general, a case can be made for the provision of health services that the poor consume more than the non-poor, where the income elasticity of consumption is low. People living in rural isolated areas are more likely to be poor than people living in urban areas. The poverty rate in urban areas is about 52 percent while in rural areas is about 74 percent. Therefore, services targeted to the latter are more likely to be used by the poor, which is the case for mobile clinics for isolated areas and areas with low density of population, financed by SHSDP. In addition, preventive and treatment services for infectious diseases can also benefit the poor more than the rich as they are more likely to suffer from these diseases. For instance, even though in general people in the upper end of the income distribution tend to report more illness cases than the non-poor, the last EPM household survey showed that the poor were more likely to report malaria and diarrhea than the non-poor (Table 7). The provision of services to treat and prevent these diseases will therefore benefit the poor more than the non-poor.

Table 7: Type of illness reported in the last two weeks across income quintiles

Illness	Poorest	II	III	IV	Richest	Total
Fever or suspicion of malaria	46,9	42,9	48,9	41,9	39,9	43,9
Diarrheal diseases	12,8	14,2	13,1	12,1	10,6	12,4

Source: EMP 2005

221. A similar case can be made for the financing of basic health services, especially in rural areas, as these services tend to be used more by the poor than by the rich who visit private services or higher level public facilities (Table 8). Madagascar SHSDP will finance the rehabilitation and equipment of basic health services in all the country, the contracting and redeployment of nurses and midwives to basic health centers, and efforts to improve maternal and child health. These latter efforts will be mainly done through community mobilization to ensure that the poor and vulnerable benefit from them.

222. As the private sector is almost not present in rural areas, improving the services provided by public service facilities does not risk the displacement of the private sector in these areas.

Table 8: Place of consultation across income quintiles and urban and rural areas

	CH*	CSB 1	CSB 2	Private clinic	Private doctor	Other	Total
Urban							
Poorest	20.1	18.6	38.8	3.1	3.2	16.2	100.0
II	14.9	11.3	31.6	5.9	24.3	12.1	100.0
III	20.4	14.7	25.4	16.3	13.2	10.0	100.0
IV	11.2	10.5	29.4	8.1	31.9	8.9	100.0
Richest	23.3	4.9	20.6	7.5	32.7	11.0	100.0
Total	19.0	9.5	26.2	8.3	26.0	11.0	100.0
Rural							
Poorest	5.1	25.5	58.0	0.9	6.2	4.1	100.0
II	4.9	19.0	53.9	2.1	7.0	13.0	100.0
III	3.5	12.9	56.9	3.0	12.6	11.3	100.0
IV	1.2	11.6	66.9	2.1	11.4	6.9	100.0
Richest	5.7	10.0	50.8	3.6	20.4	9.4	100.0
Total	4.0	15.1	57.3	2.5	12.2	9.1	100.0

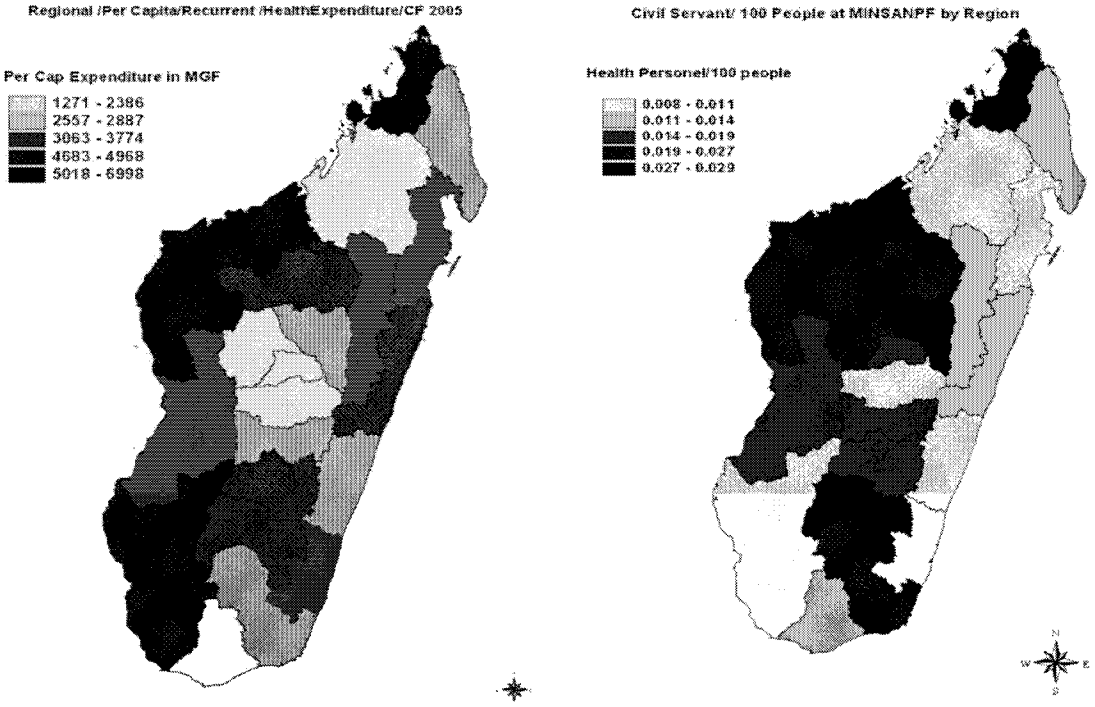
Source: EMP 2005

223. Madagascar SHSDP will also finance activities aimed at identifying and implementing innovative financing strategies to provide consistent quality services and to increase the use of these services by the poor, through mechanisms such as mutual insurance or social security. Currently, most private expenditure on health is out-of-pocket expenditure, which is extremely regressive and exposes families to the risk of impoverishment in case of illness. On average households spend about 1 percent of their total expenditure on health. However, not all households report expenditures on health in a given year, but for those that do this expenditure can represent a larger burden. For instance, the average cost of an outpatient consultation (as reported in EPM 2005) was about MGA 6,000 or about 2 percent of the yearly per capita expenditure in the country.

224. Currently, pre-payment mechanisms cover a very small percentage of the population. Madagascar SHSDP will finance the development of pre-payment mechanisms such as community health insurance and social insurance. Government intervention in this last activity can also be justified as an intervention intended to alleviate the lack of insurance markets.

225. The recurrent budget of the ministry of health is unequally distributed across regions, and in general, richer regions receive higher amounts of recurrent budget per capita than poorer regions. This partly reflects an unequal distribution of qualified medical personnel, which benefits richer urban areas, and partly the higher concentration of health facilities in better-off regions. Madagascar SHSDP will seek to lessen this unequal distribution of resources by financing services in underserved areas. In this regard, one of the activities to be financed by the project will be mobile health clinics to offer services to isolated populations and to areas with low population density. The project will also finance the re-deployment of medical personnel to these underserved areas.

Figure 1: Regional distribution of non-salary recurrent expenditure per capita and distribution of health personnel under the ministry payroll



Source: Madagascar PER, 2007, Health Chapter (forthcoming).

Allocative Efficiency

226. The 2003 NHA classified all health expenditure of MOH across different functions, and estimated that about 39 percent of all resources managed by MOH were spent on ambulatory services provided by CSBs and hospitals, 17 percent on preventive and public health services, and 7 percent on inpatient care. In general, the distribution of public resources in Madagascar health sector gives priority to the most cost effective interventions to ensure health

improvements as the largest percentage was used for both preventive and public health services and ambulatory care. However, there is room for improvement, as a fifth of all resources went to the central administration of the ministry and as many resources, about 0.5 percent of the entire budget of 2006, went to the construction of a medical complex in Antananarivo. Madagascar SHSDP project will further improve the allocative efficiency of public expenditure as it will finance preventive care, public health activities, and – in the case of hospital care – will only finance first referral hospitals for activities related to maternal health. More specifically, the focus of Madagascar SHSDP is on the most cost-effective interventions to prevent and treat the illnesses that represent the major burden of disease in Madagascar by emphasizing health interventions that can be provided by the households and communities themselves and for those that can be provided at primary health care facilities. This is reflected in the project's emphasis on information campaigns, strengthening of community participation on health care, and on improving the quality of the services provided by basic health centers. By improving coordination and harmonization among donors, Madagascar SHSDP will also improve allocative efficiency by diminishing transaction costs and thus diminishing administrative costs that MOH has when handling different donor supported projects.

IV. ECONOMIC ANALYSIS III: SYSTEMS AND PROCESS-RELATED BENEFITS

227. The benefits of Madagascar SHSDP can be determined in terms of: (i) systems- and process-related benefits, e.g., better planning, financing, organization and management of the health sector and other key actors; and (ii) household-oriented benefits, as exemplified by better access and utilization of health services and improved health status, especially of vulnerable groups living in rural areas, women and children.

228. Health care delivery reforms under PDSS and the activities supported by SHSDP aim to improve both the quality of services and access to the poor:

- *Access to good quality primary care services.* A key element of the PDSS is strengthening of access to basic health services in rural and remote areas, which are services used predominantly by poor, rural populations. Improved quality of care at the primary care level and improved access will have positive impacts on poverty reduction. The increased utilization of quality health services at the primary acre level is expected to reduce the need for hospitalization, protect poor households against financial shocks. The benefits of increased primary care funding will go disproportionately to the poorer households who currently receive no or poor quality of services.
- *Expansion of coverage for priority programs.* Improvements in mother and child health, prevention of the spread of HIV/AIDS, addressing communicable diseases, etc. have been identified as priority areas for coverage expansion under PDSS. All four are critical health issues for the poor, and to this extent the expansion of services will directly benefit the poor by reducing barriers to access to care
- *Improvement in implementation and monitoring capacity.* Even if Madagascar SHSDP and the government health strategy are technically sound and cost effective, the expected results will not be attained if the government does not have the capacity to implement them. MOH has not been able to execute its entire budget in recent years and has had difficulties in ensuring an equal or at least a progressive distribution of financial and human resources across the country, and therefore not been able to reach vulnerable and isolated pockets of the

population. Without removing these bottlenecks in the management of human and financial resources, the health system will not be able to fully reap the benefits of investments. Despite the government's strong commitment, improvements in service delivery will be limited without improvements in the capacity of the different levels of the ministry, particularly the district level which is in charge of service delivery. Madagascar SHSDP will finance many activities aimed at strengthening capacity at various levels in the health system, including at the district levels to manage primary health care services.

229. The Madagascar SHSDP supports the overall development and strengthening of health systems. The project will also provide technical assistance for capacity building, with the aim of strengthening institutions and promoting good governance. In contributing to sustainability, it will finance diagnostic and analytic work for evidence-based policy development, which will enhance the quality of domestic policy debates. It will facilitate the introduction of stronger incentives for results, and strengthen collaboration and consistency across sectors in order to promote development effectiveness. And finally, it will support the development of strategic partnerships with donor agencies and other actors with the aim of promoting harmonization and aid effectiveness. Activities financed and undertaken under Madagascar SHSDP are expected to result in significant improvements across a range of demand-side, supply-side and institutional aspects of the health system, especially in the production and delivery of quality services in rural and remote areas, in both public and private sectors. Visible results are expected in the deployment, effectiveness and morale of health teams at service delivery points, in particular in remote areas, accompanied by less obvious but important changes in the nature of support provided to them by district, regional and central level managers. In sum, all activities and interventions financed under Madagascar SHSDP are aimed at strengthening of the health system in order to scale-up the production and delivery of health programs, and improve overall access and utilization of health services, especially in rural and remote areas.

Annex 10: Safeguard Policy Issues

Madagascar Sustainable Health System Development Project

230. The objective of Madagascar SHSDP is to strengthen the health system and increase its capacity to provide the necessary production, financing, delivery and management support for delivery of key services, and as such, will mostly involve activities such as: policy and institutional reforms; financing reforms; strengthening human and institutional capacity; support to priority health programs to control major diseases or to address health issues; and community involvement in local health service management and support to community-based health activities. Civil works involved will be mostly rehabilitation of existing health facilities and the project will not support acquisition of land for the construction of health facilities. No negative environmental impact is envisaged in the proposed program. Thus the project is rated as category B and only triggers OP 4.01 with regards to arrangements for handling and disposal of medical waste. Although the project may finance malaria campaign activities as a lender of last resort if the Presidential Malaria Initiative is not able to sufficiently finance the malaria program, Madagascar ratified the Stockholm convention in 2005, and the Government does not plan to use any DDT in spraying during the Bank Project implementation period.

231. The handling, collection, disposal and management of health care waste and other infected materials is the most significant environmental issue associated with the national health program. The inappropriate handling of infected materials constitutes a risk not only for the staff in hospitals and in municipalities who are involved in health care waste handling and transportation, but also for families and street children who scavenge on dump sites, most which are inadequate. To mitigate this risk, a Medical Waste Management Plan (MWMP) should be available and be appropriately costed with clear institutional arrangements for its execution.

232. A MWMP was developed for the Multi-Sectoral HIV/AIDS Prevention Project (MSPP), and is under implementation. Prior to appraisal of the MSPP II, it was disclosed in-country and in the InfoShop. The existing MWMP includes proper disposal of hazardous bio-medical waste and a bio-safety training program for the staff of all hospital, health centers and community-based programs, including traditional midwifes and practitioners, who may be involved in HIV/AIDS testing and treatment.

233. Moreover, the National Policy on Medical Waste Management was adopted in September 2005 by an interdepartmental decree No 2006-680 of September 12, 2006. This policy primarily relates to solid waste with a summary description on the liquid waste, and contains the following elements: (i) global and specific objectives as regards management of medical waste; (ii) the legal framework and law; (iii) waste characteristics with the prescribed elimination modes; (iv) norms, safety standards and measures to be adopted as well as critical equipment; and (v) a description of the monitoring system and an action plan with impact and results indicators for a period of four years.

234. The Government recently modified the plan and policy to include more details on the management of liquid waste from health facilities. The revised plan was approved and disclosed on March 23, 2007 in the Infoshop and disclosed in-country over the period March 20-26, 2007.

Two agencies are responsible, respectively, for: (i) implementation of the plan; and (ii) supervision of the implementation of the plan at the provincial and district levels.

235. ***Implementing the plan.*** MOH has been responsible for implementation of the MWMP, and has demonstrated capacity to properly implement the plan. Since May 2004, MOH has installed 200 small-scale burners to burn medical wastes in all health centers rehabilitated under the CRESAN II Project. Supervision missions determined that burners are being used at the CHD of Ankazobe, Antanifotsy and Faratsiho. The Plan also includes specific medical waste disposal and management actions, to be carried out in Madagascar's different types of health facilities. MOH has demonstrated the ability to plan for and prepare these activities.

236. ***Supervising implementation of the plan.*** The Office for the Environment of the Ministry of the Environment has been responsible for supervising its implementation at the provincial and district level. It has performed this role satisfactorily. Thus the Borrower has demonstrated the capacity to properly develop and implement a MWMP, which is the only safeguard-related study required for this project. MOH has demonstrated clear ownership of the problems related to management of medical waste. It has been an integral player in the development of this policy as well as IEC and training activities conducted at various levels.

Annex 11: Project Preparation and Supervision

Madagascar Sustainable Health System Development Project

	Planned	Actual
PCN review	2/12/2007	2/12/2007
Initial PID to PIC	2/12/2007	2/12/2007
Initial ISDS to PIC	2/12/2007	2/15/2007
Appraisal	3/22/2007	3/27/2007
Negotiations	4/10/2007	4/3/2007
Board/RVP approval	5/22/2007	
Planned date of effectiveness	8/29/2007	
Planned date of mid-term review	9/30/2008	
Planned closing date	12/31/2009	

Key institutions responsible for preparation of the project:

- in Government : Ministry of Health and Family Planning, CRESAN
- Donor partners included: African Development Bank, AFD, EU, French Cooperation, JICA, UNICEF, UNFPA, USAID, WHO

Bank staff and consultants who worked on the project included:

Name	Title	Unit
Mukesh Chawla	Lead Economist	AFTH3
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Anne-Claire Haye	Consultant	AFTH3
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Stefano Paternostro	Lead Economist	AFTH3
Gervais Rakotoarimanana	Sr. Financial Management Specialist	AFTFM
Sylvain Rambeloson	Sr. Procurement Specialist	AFTPC
Gilles Veuillot	Sr. Counsel	LEGAF
Wolfgang Chadab	Sr. Finance Officer	LOAG2
T. Jeffrey Ramin	Sr. Operations Officer	AFTQK
Norosoa Andrianaivo	Program Assistant	AFTH3
Herinjara Maria Ranohatra	Program Assistant	AFTH3
Pablo Gottret	Lead Economist Health & Peer Reviewer	HDNHE
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Julie McLaughlin	Lead Health Specialist & Peer Reviewer	AFTH1
Oscar Picazo	Sr. Economist & Peer Reviewer	AFTH1

Bank funds expended to date on project preparation:

1. Bank resources: $60,000
2. Trust funds: --
3. Total: $60,000

Estimated Approval and Supervision costs:

1. Remaining costs to approval: $ 10,000
2. Estimated annual supervision cost: $100,000

Annex 12: Documents in the Project File

Madagascar Sustainable Health System Development Project

The following documents are available in the project file:

A. Project Documents

Project Concept Note January 2007
Manuel de Procédures, CRESAN 2

Appraisal Mission Aide Memoire, April 2007
Quality Enhancement Review Report, March 2007
Identification Mission Aide Memoire, January 2007

B. Health Sector Documents

Ministère de la Santé et du Planning Familial. 2005. « Comptes Nationaux de la Santé 2003 ». Madagascar.

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Rapport de l'expertise de la fonctionnalité des CHD, CRESAN/MinsanPF, janvier 2004

Rapports techniques des phases 1 et 2 d'appui à la mise en oeuvre des plans de développement des districts sanitaires. 2004.

Services d'éducation et de santé à Madagascar : l'utilisation et les déterminants de la Demande, P.Glick, J. Razafindravona, juin 2000

The potential of community based insurance towards health finance in Madagascar, article, B. Minten, M. Over, M. Razakamanantsoa, May 2006.

Etude sur le secteur pharmaceutique, Tahina Andrianjafy, 2004

C. Policy Documents

Politique Nationale de Santé (juin 2005)
Feuille de route pour la réduction de la Mortalité Maternelle à Madagascar, 2005-2015
Madagascar, chaîne du froid 2004-2013
Plan de viabilité financière du programme élargi de vaccination
Plan Stratégique National IST/VIH/SIDA, révision 2007-2011
Politique Nationale contre la Bilharziose
Politique Nationale contre le Paludisme (2005)
Politique Nationale de contractualisation dans le secteur de la Santé à Madagascar (2004)
Politique nationale de gestion des déchets médicaux (SAGS 2005)
Politique Nationale de Santé de l'Enfant (2005)
Politique Nationale Nutrition (2004)
Proposition Malaria aux rounds 1-2-3-4-5-6 du Fonds Mondial
Proposition Tuberculose aux rounds 1-2-3-4-5-6 du Fonds Mondial
Proposition VIH aux rounds 1-2-3-4-5-6 du Fonds Mondial

Annex 13: Statement of Loans and Credits

Madagascar Sustainable Health System Development Project

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P095240	2007	MG -Pwr/Wtr Sect. Recovery and Restruct.	0.00	10.00	0.00	0.00	0.00	10.06	0.00	0.00
P074086	2007	MG-Irrigation & Watershed Project (FY07)	0.00	30.00	0.00	0.00	0.00	30.39	0.54	0.00
P090615	2006	MG-MultiSec STI/HIV/AIDS 2 (FY06)	0.00	30.00	0.00	0.00	0.00	28.21	8.42	0.00
P083351	2006	Integ Growth Poles	0.00	129.80	0.00	0.00	0.00	105.17	5.25	0.00
P074235	2004	MG-Env Prgm 3 (FY04)	0.00	0.00	0.00	0.00	0.00	23.46	6.22	0.00
P074236	2004	MG-GEF Env Prgm 3 (FY04)	0.00	0.00	0.00	9.00	0.00	5.27	4.67	0.00
P074448	2004	MG-Gov & Inst Dev TAL (FY04)	0.00	30.00	0.00	0.00	0.00	11.36	1.96	0.00
P082806	2004	MG-Transp Infrastr Invest Prj (FY04)	0.00	150.00	0.00	0.00	0.00	85.25	55.09	33.80
P076245	2003	MG-Mineral Res Gov SIL (FY03)	0.00	32.00	0.00	0.00	0.00	9.06	-4.67	0.00
P073689	2003	MG-Rural Transp APL 2 (FY03)	0.00	80.00	0.00	0.00	0.00	34.61	3.78	-6.31
P072160	2002	MG-Priv Sec Dev 2 (FY02)	0.00	23.80	0.00	0.00	0.00	7.40	3.13	-1.46
P072987	2002	MG-MultiSec STI/HIV/AIDS Prev APL (FY02)	0.00	20.00	0.00	0.00	0.00	2.95	0.07	0.00
P055166	2001	MG-Com Dev Fund SIL (FY01)	0.00	110.00	0.00	0.00	0.00	26.99	-59.28	-4.28
P051922	2001	MG-Rural Dev Supt SIL (FY01)	0.00	89.05	0.00	0.00	0.00	21.57	3.82	-1.42
P051741	2000	MG-Health Sec Prgm Supt 2 (FY00)	0.00	40.00	0.00	0.00	0.00	3.98	-15.02	1.77
P052186	1999	MG-Microfinance (FY99)	0.00	16.40	0.00	0.00	0.00	1.02	0.33	0.53
P001568	1998	MG-Community Nutrition 2 (FY98)	0.00	27.60	0.00	0.00	0.00	11.20	-9.68	0.00
		Total:	0.00	818.65	0.00	9.00	0.00	417.95	4.63	22.63

MADAGASCAR
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
1997	AEF GHM	0.46	0.00	0.00	0.00	0.46	0.00	0.00	0.00
1995	AEF Karibotel	0.19	0.00	0.00	0.00	0.19	0.00	0.00	0.00
	BFV-SocGen	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991	BNI	0.00	2.09	0.00	0.00	0.00	2.09	0.00	0.00
2005	BNI	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	BOA-M	0.00	0.82	0.72	0.00	0.00	0.82	0.72	0.00
2004	BP Madagascar	0.00	3.51	0.00	0.00	0.00	0.00	0.00	0.00
	CREDIT LYONNAIS1	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total portfolio:	19.76	6.42	0.72	0.00	0.65	2.91	0.72	0.00

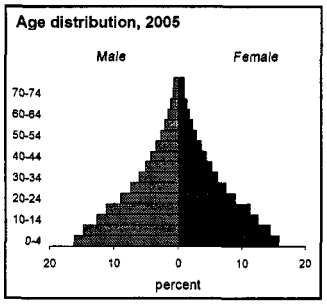
		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
2001	Besalampy	0.02	0.00	0.00	0.00
2006	IDA-IFC PCG	0.01	0.00	0.00	0.00
	Total pending commitment:	0.03	0.00	0.00	0.00

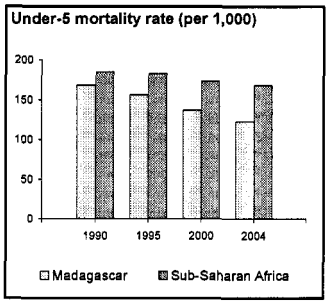
Annex 14: Country at a Glance

Madagascar at a glance

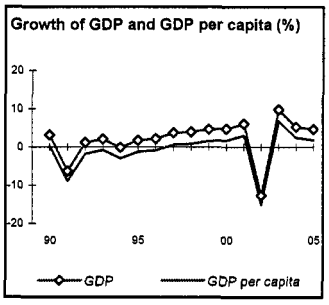
2/12/07

Key Development Indicators (2005)	Madagascar	Sub-Saharan Africa	Low income
Population, mid-year (millions)	18.6	741	2,353
Surface area (thousand sq. km)	587	24,265	29,265
Population growth (%)	2.7	2.1	1.8
Urban population (% of total population)	27	35	30
GNI (Atlas method, US$ billions)	5.4	552	1,364
GNI per capita (Atlas method, US$)	290	745	580
GNI per capita (PPP, international $)	880	1,981	2,486
GDP growth (%)	4.6	5.3	7.5
GDP per capita growth (%)	1.8	3.1	5.6
(most recent estimate, 2000–2005)			
Poverty headcount ratio at $1 a day (PPP, %)	61	44	..
Poverty headcount ratio at $2 a day (PPP, %)	85	75	..
Life expectancy at birth (years)	56	46	59
Infant mortality (per 1,000 live births)	76	100	80
Child malnutrition (% of children under 5)	42	29	39
Adult literacy, male (% of ages 15 and older)	77	..	73
Adult literacy, female (% of ages 15 and older)	65	..	50
Gross primary enrollment, male (% of age group)	136	99	110
Gross primary enrollment, female (% of age group)	131	87	99
Access to an improved water source (% of population)	46	56	75
Access to improved sanitation facilities (% of population)	32	37	38





Net Aid Flows	1980	1990	2000	2005 [a]
(US$ millions)				
Net ODA and official aid	230	398	322	1,236
Top 3 donors (in 2004):				
France	54	143	46	485
Italy	0	6	1	43
United States	*10*	22	32	41
Aid (% of GNI)	5.7	13.5	8.5	28.8
Aid per capita (US$)	25	33	20	68



Long-Term Economic Trends	1980–90	1990–2000	2000–05
	(average annual growth %)		
Consumer prices (annual % change)	18.2	11.8	10.7	18.4
GDP implicit deflator (annual % change)	15.0	11.5	7.2	18.4
Exchange rate (annual average, local per US$)	42.3	298.8	1,353.5	2,003.0
Terms of trade index (2000 = 100)	..	79	100	72
Population, mid-year (millions)	9.1	12.0	16.2	18.6	2.8	3.0	2.8
GDP (US$ millions)	4,042	3,081	3,878	5,041	1.1	2.0	2.0
		(% of GDP)					
Agriculture	30.1	28.6	29.2	28.1	2.5	1.8	1.7
Industry	16.1	12.8	14.2	15.5	0.9	2.4	1.0
Manufacturing	..	11.2	12.2	14.0	*2.1*	2.0	1.0
Services	53.9	58.6	56.6	56.4	0.3	2.3	1.6
Household final consumption expenditure	89.3	86.4	83.2	82.7	-0.7	2.2	2.8
General gov't final consumption expenditure	12.1	8.0	9.0	8.4	0.5	0.0	4.0
Gross capital formation	15.0	17.0	15.0	22.5	4.9	3.3	12.1
Exports of goods and services	13.3	16.6	30.7	26.5	-0.8	3.8	-3.7
Imports of goods and services	29.7	28.0	38.0	40.1	-5.7	4.1	8.7
Gross savings	-2.4	9.2	9.4	12.1	..	..	..

Note: Figures in italics are for years other than those specified. 2005 data are preliminary estimates. .. indicates data are not available.
a. Aid data are for 2004.

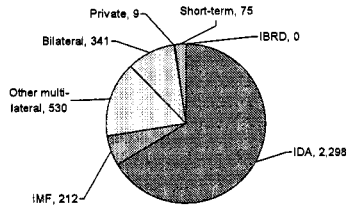
Development Economics, Development Data Group (DECDG).

Balance of Payments and Trade	2000	2005
(US$ millions)		
Total merchandise exports (fob)	829	837
Total merchandise imports (cif)	1,097	1,652
Net trade in goods and services	-283	-688
Workers' remittances and compensation of employees (receipts)	11	16
Current account balance	-218	-524
as a % of GDP	-5.6	-10.4
Reserves, including gold	288	498

Central Government Finance		
(% of GDP)		
Revenue	11.7	10.9
Tax revenue	11.3	10.1
Expense	15.9	21.3
Cash surplus/deficit	-3.5	-8.9
Highest marginal tax rate (%)		
Individual	35	30
Corporate	35	30

External Debt and Resource Flows		
(US$ millions)		
Total debt outstanding and disbursed	4,691	3,465
Total debt service	117	78
HIPC and MDRI debt relief (expected; flow)	1,900	..
Total debt (% of GDP)	121.0	68.7
Total debt service (% of exports)	9.7	5.7
Foreign direct investment (net inflows)	70	86
Portfolio equity (net inflows)	*0*	..

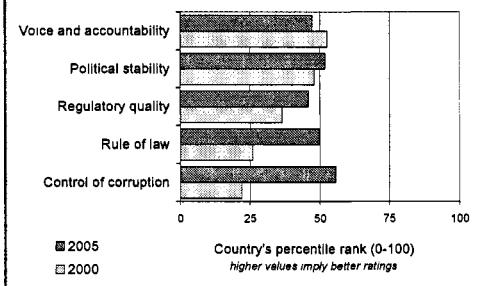
Composition of total external debt, 2005



US$ millions

Private Sector Development	2000	2006
Time required to start a business (days)	–	21
Cost to start a business (% of GNI per capita)	–	35.0
Time required to register property (days)	–	134
Ranked as a major constraint to business (% of managers surveyed who agreed)		
Cost of financing	..	*66.9*
Macroeconomic instability	..	*64.4*
Stock market capitalization (% of GDP)	..	..
Bank branches (per 100,000 people)	..	*0.7*

Governance indicators, 2000 and 2005



Source: Kaufmann-Kraay-Mastruzzi, World Bank

Technology and Infrastructure	2000	2004
Paved roads (% of total)	*11.6*	..
Fixed line and mobile phone subscribers (per 1,000 people)	7	*19*
High technology exports (% of manufactured exports)	1.0	0.8

Environment		
Agricultural land (% of land area)	47	*47*
Forest area (% of land area, 2000 and 2005)	22.4	22.1
Nationally protected areas (% of land area)	..	4.3
Freshwater resources per capita (cu. meters)	..	18,606
Freshwater withdrawal (% of internal resources)	..	*4.4*
CO2 emissions per capita (mt)	0.14	*0.13*
GDP per unit of energy use (2000 PPP $ per kg of oil equivalent)	..	..
Energy use per capita (kg of oil equivalent)	..	..

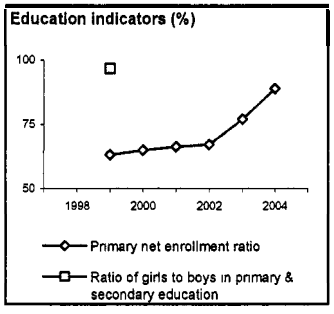
World Bank Group portfolio	2000	2005
(US$ millions)		
IBRD		
Total debt outstanding and disbursed	0	–
Disbursements	0	–
Principal repayments	0	–
Interest payments	0	–
IDA		
Total debt outstanding and disbursed	1,378	2,298
Disbursements	94	221
Total debt service	27	29
IFC *(fiscal year)*		
Total disbursed and outstanding portfolio	8	6
of which IFC own account	8	6
Disbursements for IFC own account	1	0
Portfolio sales, prepayments and repayments for IFC own account	2	1
MIGA		
Gross exposure	1	1
New guarantees	0	0

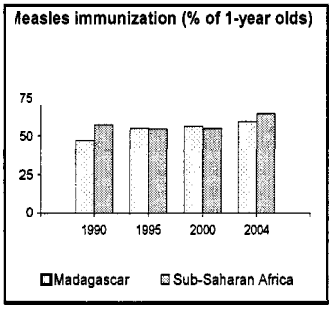
Note: Figures in italics are for years other than those specified. 2005 data are preliminary estimates. 2/12/07
.. indicates data are not available. – indicates observation is not applicable.

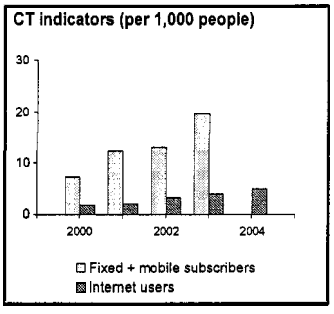
Development Economics, Development Data Group (DECDG).

With selected targets to achieve between 1990 and 2015
(estimate closest to date shown, +/- 2 years)

	Madagascar			
Goal 1: halve the rates for $1 a day poverty and malnutrition	**1990**	**1995**	**2000**	**2004**
Poverty headcount ratio at $1 a day (PPP, % of population)	..	*46.3*	*61.0*	..
Poverty headcount ratio at national poverty line (% of population)	..	*73.3*	*69.7*	68.7
Share of income or consumption to the poorest quintile (%)	..	..	*4.9*	..
Prevalence of malnutrition (% of children under 5)	*41*	34	..	42
Goal 2: ensure that children are able to complete primary schooling				
Primary school enrollment (net, %)	*64*	..	65	89
Primary completion rate (% of relevant age group)	35	28	36	47
Secondary school enrollment (gross, %)	*17*	..	*14*	..
Youth literacy rate (% of people ages 15-24)				70
Goal 3: eliminate gender disparity in education and empower women				
Ratio of girls to boys in primary and secondary education (%)	*98*	..	*97*	..
Women employed in the nonagricultural sector (% of nonagricultural employment)	**24**	..	..	..
Proportion of seats held by women in national parliament (%)	7	*4*	8	*7*
Goal 4: reduce under-5 mortality by two-thirds				
Under-5 mortality rate (per 1,000)	*163*	*159*	..	94
Infant mortality rate (per 1,000 live births)	*93*	*96*	..	58
Measles immunization (proportion of one-year olds immunized, %)	47	55	56	59
Goal 5: reduce maternal mortality by three-fourths				
Maternal mortality ratio (modeled estimate, per 100,000 live births)	*660*	*488*	..	469
Births attended by skilled health staff (% of total)	*57*	*47*	46	51
Goal 6: halt and begin to reverse the spread of HIV/AIDS and other major diseases				
Prevalence of HIV (% of population ages 15-49)	..	..	..	*0.5*
Contraceptive prevalence (% of women ages 15-49)	*17*	*19*	19	27
Incidence of tuberculosis (per 100,000 people)	192	..	..	218
Tuberculosis cases detected under DOTS (%)	..	51	*70*	74
Goal 7: halve the proportion of people without sustainable access to basic needs				
Access to an improved water source (% of population)	40	..	..	46
Access to improved sanitation facilities (% of population)	14	..	..	32
Forest area (% of total land area)	23.5	..	22.4	*22.1*
Nationally protected areas (% of total land area)	..	..	..	4.3
CO2 emissions (metric tons per capita)	0.1	0.1	0.1	*0.1*
GDP per unit of energy use (constant 2000 PPP $ per kg of oil equivalent)				
Goal 8: develop a global partnership for development				
Fixed line and mobile phone subscribers (per 1,000 people)	3	3	7	*19*
Internet users (per 1,000 people)	0	*0*	2	5
Personal computers (per 1,000 people)		*1*	2	5
Youth unemployment (% of total labor force ages 15-24)				







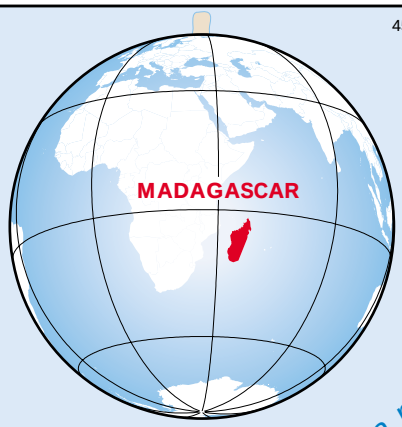
Note: Figures in italics are for years other than those specified. .. indicates data are not available. 2/12/07

Development Economics, Development Data Group (DECDG).

Annex 15: Map IBRD 33439

Madagascar Sustainable Health System Development Project

IBRD 33439



MADAGASCAR

Mozambique Channel

INDIAN OCEAN

Mayotte (France)

45°E

50°E

15°S

20°S

25°S

Antsiranana
Ambilobe
Vohimarina
Ambanja
ANTSIRANANA
Maromokotro (2,876 m)
Massif Tsaratanana
Sambava
Bealanana
Andapa
Antalaha
Antsohihy
Befandriana
Maroantsetra
Sofia
Mahajanga
Mandritsara
Mampikony
Soalala
Mananara
Beniarivo
Mahajamba
Besalampy
MAHAJANGA
Cliff of Bongolava
Maevatanana
Andilamena
Soanierana-Ivongo
Betsiboka
Manambaho
Kandreho
Andriamena
Lake Alaotra
Fenoarivo-Atsinanana
Cliff of Angavo
TOAMASINA
Maintirano
Mahavavy
Vohidiala
Ankazobe
Toamasina
Ambaravaranala
ANTANANARIVO
Antsalova
ANTANANARIVO
Moramanga
Soavinandriana
Tsiafajovona (2,642 m)
Vatomandry
Miandrivazo
Belo Tsiribihina
Antanifotsy
Mangoro
Tsiribihina
Ankaratra
Antsirabe
Mahanoro
Morondava
Malaimbandy
Mania
Ambatofinan-drahana
Ambositra
Varika
Mandabe
Ambohimahasoa
Manja
Fianarantsoa
Mananjary
Beroroha
Morombe
FIANARANTSOA
Mangoky
Manakara
Ankazoabo
Ihosy
Pic Boby (2,658 m)
TOLIARA
Farafangana
Sakaraha
Mananara
Fiherenana
Betroka
Toliara
Onilahy
Betioky
Midongy-Atsimo
Tsivory
Berakete
Mandrare
Ampanihy
Androy Plateau
Menarandra
Amboasary
Androka
Tolanaro
Ambovombe
Beloha

0 40 80 120 160 200 Kilometers
0 40 80 120 Miles

SELECTED CITIES AND TOWNS
PROVINCE (FARITANY) CAPITALS
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
PROVINCE (FARITANY) BOUNDARIES
INTERNATIONAL BOUNDARIES

NOVEMBER 2004