Italian Development Cooperation
Ministry of Foreign Affairs and International Cooperation

DGCS

Office IX Evaluation

ETHIOPIA

Italian Contribution to the Health Sector Development Programme, 2010–12

AID 9459

Primary Hospital – Zway - Oromia

2016 | Evaluation report

LIST OF CONTENTS

ACRONICS & ABBREVIATIONS

AA – Addis Ababa
AN- Anaesthesiologist Nursing
ANC – Ante Natal Care
ANC4+ - Antenatal care with 4 or + controls during pregnancy
AOSCF - *Azienda Ospedaliera S.Camillo Forlanini*
APR - Annual Performance Report
ARM - Annual Review Meeting
BB - Blood Bank
BSc - Bachelor in Science
C - Channel
CAR - Contraceptive Acceptance Rate
CCM - Country Coordination Mechanism
CPR - Contraceptive Prevalence Rate
CTU - *Central Technical Unit*
DGDC - Directorate General for Development Cooperation
ET: Evaluation team
ETB - Ethiopian Birr
EFY -Ethiopian Fiscal Year
EMT - Emergency Medical Technician (Ambulance)
ER - Expected result
FMoH - Federal Ministry of Health
G -Goal (MDG)
GH -General Hospital
GoE - Government of Ethiopia
GoI - Government of Italy
HC - Health Centre
HDA - Health Development Army
HDI - Human Development Index (UNDP)
HEP - Health Extension Program
HEW - Health Extension Worker
HHRI - Health & Health Related Indicators EFY 08
HM - Harmonisation Manual
HMIS Health Management Information System
HO - Health Officer/Operator
HP - Health Post
HPI-UNDP - Human Poverty Index
HQ - Head Quarter
HRB - Health Regional Bureau
HSC - Health Science College
HSDP - Health Sector Development Programme
HSTP - Health Sector Transformation Programme
HZB - Health Zone Bureau
IESO - Integrated Emergency Surgical Officer
IHP - International Health Partnership
IMR - Infant Mortality Rate
LLIN - Long Listing Insecticide Net
LF- Logical framework
LMF - Local Management Fund
LTU - *Local Technical Unit*
MoFA- Ministry of Foreign Affairs
MMR - Mother Mortality Rate
MoE - Ministry of Education

MoFED - Ministry of Finance and Economic Development
MDGF - Millennium Development Goals Fund
MDG- Millennium Development Goal
NHA - National Health Account
OHB - Oromia Health Bureau
OPD - Out Patient Department
PASDEP - Plans for Accelerated Sustainable Development and End of Poverty
PBME - Planning Budget and Monitoring Evaluation (OHB)
PFSA - Pharmaceutical Fund Supply Agency
PH - Primary Hospital
PNC - Post Natal Care
PPFDG-Policy Planning and Financing/General Directorate (FMoH)
RH - Referral Hospital
RHB - Regional Health Bureau (OHB e THB)
SAR – Semi-annual Report
SDG - Sustainable Development Goals 2030
SBA - Skilled Birth Attendance
SM- Short Mission
TAMU -Technical Assistance and Monitoring Unit
TH - Teaching Hospital
THB - Tigray Health Bureau
UFMR - Under 5Yrs. Mortality Rate
UNDP -United Nations Development Program
WBHSP - Woreda Basic Health Sector Planning
WDG - Women Development Group
WHO - World Health Organization
ZHB - Zone Health Bureau

SECTION "A"

BACKGROUND AND CONTEXT

A.1 - ETHIOPIA: THE LOCAL CONTEXT

Ethiopia is a landlocked 1.127.000 Km^2 country, with around 90 million people (76 habitants /$Km^{2)}$). In 1974 Haile Selassie was deposed by the Derg, a Marxist–Leninist military dictatorship led by Mengistu Haile Mariam who ruled the country until 1991 when the Federal Republic was established. Ethiopia is divided in 9 Regions (Afar*,* Amhara, Beneshangul-Gumuz, Gambela, Harari, Oromia, SNNPR, Somali e Tigray*)*, subdivided in 78 Zones, 809 Woreda and two Autonomous Metropolitan Administrations (Addis Ababa and Dire Dawa). The 64% of the population adheres to Christianity among which 45% are Orthodox, while Catholics and Protestants are 19%; the remaining 33% of the population is Islamic with a small percentage (3%) belonging to other Religions. The current Government has been engaged in important reforms identified in the *Plan for Accelerated and Sustained Development to End of Poverty - 2005-2010"* (PASDEP) and in the "*Growth and Transformation Plan 2011-2015" (GTP).* Such commitment made Ethiopia a reliable international partner and a priority recipient country for the Italian Cooperation. Despite registering a remarkable economic growth in its GDP (10%/year) and a significant decrease in poverty rate from 39% in 2005 to 26% in 2013, Ethiopia is still underdeveloped ranging 174/188 in the *Human Development Index* 2015 (HDI-UNDP)[1].

A.2 THE HEALTH CARE FRAMEWORK

The *Health Sector Development Programme* (HSDP) 1998-2015 represented the true turning point for improving the Ethiopian health conditions and showed to be instrumental in achieving all the Millennium Development Goals 2015 (MDG) with a particular focus on:

- G4: 2/3 reduction of the under 5 mortality rate
- G5: 3/4 reduction of the maternal mortality rate
- G6: stop and invert the HIV/AIDS, malaria and TB incidence

The HSDP (EFY/1991/2007- Greg.1998/2015) represents a four stages process which is split as follows:

- HSDP I -1998/2002
- HSDP II-2002/2005
- HSDP III-2006/2007
- HSDP IV- 2007/2015 [2]

[1] UNDP, *Accelerating Inclusive Growth for Sustainable Human Development Report,* 2015

[2] http://www.nationalplanningcycles.org/sites/default/files/country_docs/Ethiopia/ethiopia_hsdp_iv_final_draft_2010_-2015.pdf

From 2011 the last stage of the Program has been received the support of Aid 9459 targeting Oromia and the Tigray Region aiming at:

- strengthening the local health system at a district level by integrating the basic healthcare services devoted to care and prevention with the hospital based services;
- harmonising and coordinating the actions taken by the Ethiopian Government with the community of Donors according to the *Health Harmonisation Manual* (HHM) laying down the rules of the international aid and in line with the *International Health Partnership* (IHP) (2007 and 2008) which sets the guidelines to enter into bilateral and multilateral cooperation agreements;
- programming and monitoring health results according to the transparency rules (accountability and ownership);
- strengthening the government organisational leadership in order to achieve the expected health results, and;
- enhancing a performed-based involvement of local communities compared to planned targets; in this regard, a formalisation of the Health Development Army (HDA), officially recognised by the Government as a social movement for the improvement of rural health, is crucial to achieve this objective. Within such movement particularly worthy of notice is the *Women Development Group* (WDG) which acts as representative of the civil society to foster and protect maternal health.

In 2004 during the realisation of the second phase of the HSDP, the Government promoted the *Health Extension Package* that has led to an increase of health staff at all level with the recruitment of more than 32.000 trained health professionals; as a result of the reform a new professional figure has been introduced: the H*ealth Extension Worker (HEW)* who works closely with the Women Development Group as contact point for basic health care in rural areas. Most of the newly hired HEWs are young women who following a one-year training course are pairing assigned to rural Health Posts (+16.000). Based on the experience and on results obtained, HSDP IV emphasised 4 main principles to improve basic healthcare in rural areas: a) access and usability; b) quality and innovation, c) empowerment and community involvement; d) emergency management of maternal and child health. In order to achieve the planned objectives, HSDP have made use of the Millennium Development Goal Fund (MDGF) directly managed by the Ethiopian Government and enhanced by a specific aid component of the Aid 9459. Health has been the main sector supported by the international Donors with a special focus on the achievement of the G4, G5 e G6 in the most vulnerable rural areas. The most recent National Healthcare Account (5° NHA 2010-2011) amounted to 26.5 billion ETB (1.2 billion US dollars) of which 11.8% were assigned to Oromia Region with 33 million of inhabitants and 7.8% to the Tigray Region where live about 5.5 million people (APR/EFY/2007). Just the16% of the National Healthcare Account is composed by assets while the 34% came from patients own contribution, except as to child

and maternal health and HIV/AIDS; malaria and TB. The remaining 50% is provided by the international aid amounting to 600 million USD, 1.3% of which comes from the Italian contribution to the MDGF and to the HSDP IV in Tigray and Oromia.

The HSDP IV was concluded in June 2015 thanks to an additional contribution from the Italian Cooperation (Aid 1008 and Aid 10418). Recent dates issued in the Health & Health Related Indicator (HHRI-EFY/08) confirm that in 2015 the national healthcare expenditure was in line with the previous years and split as follows:

- 502 million USD from the Ethiopian Government;
- 379 million USD from international Donors;
- 251 million USD from the MDGF.

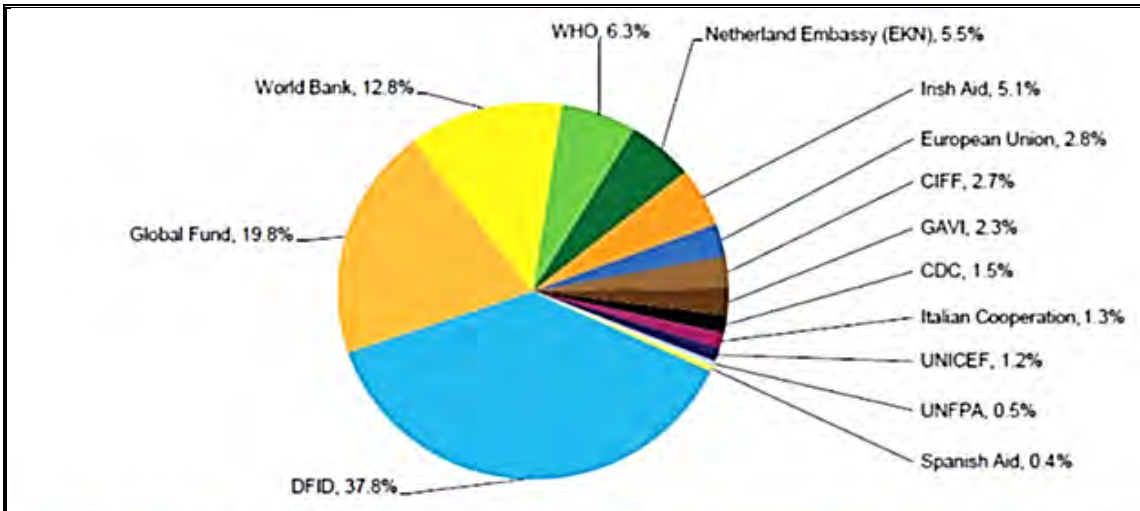
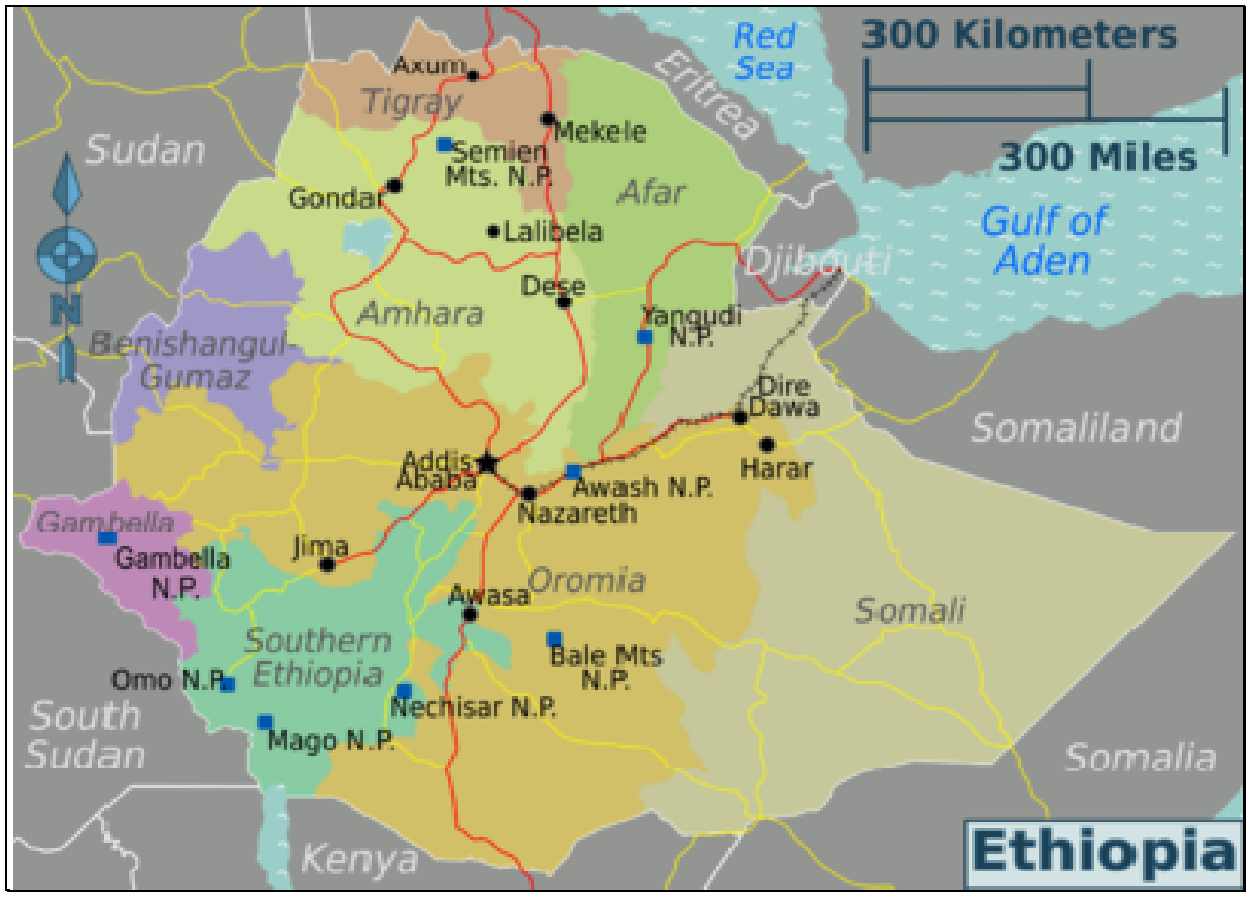


Figure 52: Percentage Distribution of Disbursement by Development Partner (Out of Total Disbursed) (EFY 2007)

At the moment 268 million USD in relation to the past years are not yet disbursed by the international donors. Furthermore in the total amount of the international aid contribution to Ethiopia some relevant projects funded by USAid (Channel 3) have not been harmonised (See Box 52-APR/EFY/2007). Despite between 2004 and 2011 there has been a 138% increase in expenditure on health, the health per capita expenditure (16.1 USD) is still far from the 60 USD average for bringing the public national health standards into the line with WHO norms (WHO 2015). At the moment without external aid the Ethiopian Federal Health System would not be able to maintain the current health standards; economic and the professional support from international Donors represent indispensable tools to enhance local capacity building towards the achievement of the three 2015 health MDG that should be better structured by the *Health Sector Transformation Program* (HSTP -EFY 2008/2012). Ultimately, in order to secure better health conditions for the Ethiopian population, economic sustainability will be delayed until the MDGs 2030 are achieved.



Ethiopian Regions

SECTION "B"

THE PROJECT AID 9459:
ITALIAN CONTRIBUTION
TO THE HEALTH CARE SECTOR DEVELOPING PROGRAM

B.1 Introduction

From the time of introduction of the Italian Aid Funds and later with the Law 49/87 on Development Cooperation, Ethiopia has always been declared a priority country for Italy; such policy remained unchanged even in times of crisis when targeted humanitarian actions and infrastructural interventions continued to reach the country. In the healthcare sector, in line with the Italian support provided to the Ethiopian 20 years- HSDP, the Intergovernmental Agreement, signed on 10 November 2010 in Addis Ababa between the Italian Ambassador and the Ethiopian Minister of Finance, has resulted in Aid 9459. Starting on 18 March 2011 and concluded in 16 September 2014, the Program contributed to the MDGF and supported the implementation of HSDP IV in the Oromia and Tigray Region. In order to ensure continuity to the development of the national health system the Italian Ministry of Foreign Affairs-General Directorate for Development Cooperation recently approved two Programs (Aid 10081-Resolution 121 19/ 09/ 2013 and Aid 10418 Resolution 140- 11/11/2014) that are currently on-going.

B.2 - Program formulation

The development of the Program has been carried out from January to April 2010 by the Central Technical Unit and Local Technical Unit (DGCS-MAECI) closely with Ethiopian counterparts; The program aimed to achieve the implementation of the health related MDGs 2015 paid a particular attention to reduce children under 5 mortality rate (UFMR), mothers mortality rate (MMR) and stop and reverse HIV/AIDS, Malaria and TB incidence. The attainment of those goals has been supported by strengthening the local health staff, recruiting additional health professionals to be distributed at the basic health services in Oromia and Tigray and by enhancing the health management information system (HMIS). With a budget of to € 8,2000.00, the program falls into the expenditure Chapter MFA 2182 as donation; € 7,000.00 of the financing package has been disbursed as untied aid while the remaining € 1,200.00 was tied. Aid 9459 splits into three channels, C1, C2, and C3, paid according to Art.15 of the Regulation of the Italian Law 49/87. € 6,400.00 aid donation falling into the Channels 1 and 2 was granted to the Federal Ministry of Health in order to support the MDGF and to the Oromia Health Bureau OHB) and to Tigray Health Bureau respectively to implement HSDP IV with a €1,800.00 specific financial contribution for the Local Management Fund and for the Expert Fund (Technical Assistance and Monitoring Unit).

The Program aims to:

- a 2/3 reduction of the under 5 mortality rate (U5MR);
- a 1/3 reduction of maternal mortality rate (MMR);
- reduction of HIV/AIDS, malaria and TB.

The Program implementation strategy planned to:

1. strengthening the regional healthcare system with a special emphasis on ante-natal and post-natal care;
2. upgrading local human resources for health while training and recruiting new health personnel;
3. promoting family planning and contraception;
4. extending children vaccination programs and further information campaigns on nutrition and against intestinal worms;
5. introducing an early detection system of poverty related diseases in line with G4, G5 and G6;
6. developing a national health information management system.

B.3 - The Intergovernmental Agreements (IA)

As stressed above, over the years the Italian Ministry of Foreign Affairs has always renewed its commitment to Ethiopia trough a set of Bilateral Agreements that in accordance with the principles of the Paris Declaration on Aid Effectiveness (2005) jointly drown up an action plan to develop the Ethiopian heath system so as to improve the local health conditions. In order to start up the Program four Agreements have recently been concluded:

- International Health partnership (IHP) Global compact (2007);
- Ethiopia IHP Country compact (2008);
- Annual Review Meeting (ARM) of the Ethio-Italian Country Programme (2009);
- Agreement-Aid 9459 - Italian contribution to the "Health Sector Development Programme" (HSDP IV) 2010.

The Agreement[3] - Aid 9459 was approved by the Resolution (n°65 of 17 June 2010) of the Italian Directorate General for Development Cooperation - Ministry of Foreign Affairs (DGCS/MAECI) and, as stressed above, focused on:

- improvement of access to and quality of prevention and treatment health services in Tigray and Oromia;
- improvement of maternal health;
- optimising the allocation of financial resources for health by developing an efficient health information system able to analyse relevant data at both federal and regional level.

[3] Diplomatic litigation (n° 310334 of 22 September 2010) Protocol n° 3787/2010

In order to ensure continuity with work already undertaken, after the end of the Aid 9459 (16 September 2014) two new Programmes were approved in 2013 and 2014 respectively (Aid 10081 and Aid 10418).

B.4 Programme channels and the budget lines

AID 9459 aimed both to finance the MDGF and support the implementation of HSDP IV in Oromia and Tigray; the financial contribution was divided into three different channels:

C1: 35% devolved to the MDGF;

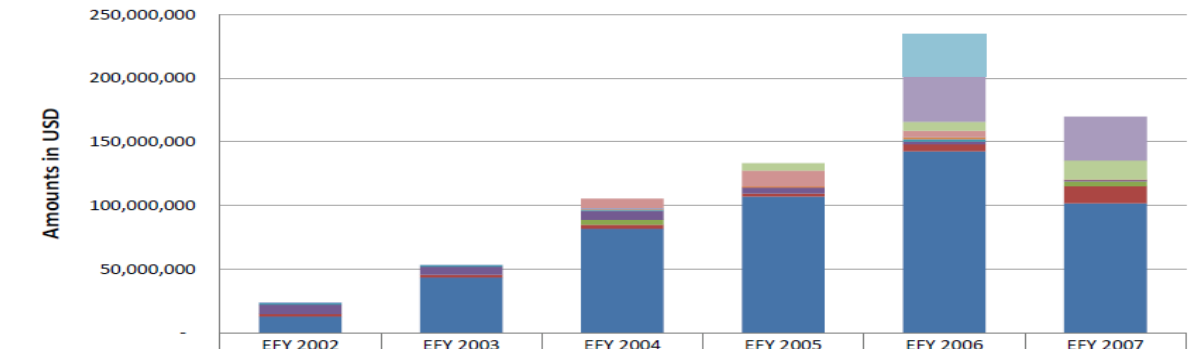
C2: 43% for implementing HSDP IV in Oromia and Tigray;

C3: 22% for financing technical assistance of local and expatriate consultants (Technical Assistance Monitoring Unit).

B.4.1 - Channel 1 (C1)

The contribution falling into the Channel 1 amounts to € 2.900.000,00 has been used to support the MDGF at national and regional level as both to reduce child and maternal mortality rate and stop poverty related diseases (malaria, HIV/AIDS and TB). Another relevant purpose of the MDGF was to develop a Health Monitoring Information System able to collect, analyse and disseminate from local to federal level. The MDGF, established in 2007, aimed at supporting and promoting the achievement of health related MDGs in 50 Developing Countries; Ethiopia was among the countries which benefited most from the Fund and the allocation of the Channel 1 marked a formal resumption of the Italian financial contributions to the Fund which was temporarily interrupted. The Channel 1, paid in one solution, was directly managed by the Federal Ministry of Health and partly integrated through the Channel 2 devoted to the training of new skilled health professionals (Health Extension Workers and Health Development Army) and supply of medicine in Oromia and Tigray.

Despite the MDGF amounted to 251 million USD to support the achievement of the heath-related Millennium Development Goals (G4, G5 and G6), according the operating procedures of the Fund the Federal Ministry of Health could not ask for details from the international Donors. The situation turned out to be better at regional level where the Channel 1 has taken forward targeted actions in both academic and training field, paying a special attention to the HEWs to be spread over local Health Posts. Furthermore confirming the strong commitment of the Federal Government to supply, storage and distribution of medicines, each regional administrative unit has got a Pharmacy with essential medicines which are free of charge for the maternal sector and for the prevention and treatment of poverty related diseases.



	EFY 2002	EFY 2003	EFY 2004	EFY 2005	EFY 2006	EFY 2007
GAVI					33,420,034	-
World Bank					35,393,073	34,521,883
Netherlands Embassy				5,714,275	7,142,827	14,862,788
AusAID			7,445,900	12,561,360	4,973,250	-
WHO	664,303	300,969	698,773	-	148,337	-
UNICEF			500,000	1,000,000	1,500,000	500,000
UNFPA	1,000,000	1,000,000	995,189	-	2,000,000	-
AECID/Spanish Aid	7,351,996	6,416,510	6,846,500	4,547,543	2,022,548	1,112,199
Italian Cooperation			3,793,853	-	-	3,544,798
Irish Aid	1,924,660	2,217,960	3,484,285	2,447,777	5,523,618	13,620,726
DFID	12,934,392	43,314,566	81,577,544	106,964,000	142,558,200	101,647,000

Figure 53: MDG Pooled Fund Disbursement (EFY 2002 - 2007)

B.4.2 - Channel 2 (C2)

The channel, amounting to € 3,500,000, has been disbursed to support the HSDP IV in Oromia and Tigray Regions; the contribution has been paid in two instalments per year (€ 1.750.000,00) to the Federal Ministry of Health who was itself responsible to pay the entire amount to the Oromia Health Bureau and to Tigray Health Bureau. Channel 2 is split into two sub-components: C2a and C2b as follows:

- C 2a (Oromia Region): the € 1,150,000 contribution had been paid in two tranches of € 500,000 and € 650,000 respectively; all amounts received have been paid by the Federal Health Ministry to the Oromia Health Bureau which took step to plan ETB 27,535,503[4] actions to achieve the G4, G5 and G6.
- C 2b (Tigray Region): the funding amounted to 2,350,000 and has been split into two tranches per year of € 1,250,000 and € 1,100,000 and utilised by the Tigray Health Bureau to reach the G4, G5, and G6 MDGs.

Channel 2 aimed to foster the regional implementation of HSDP IV through a set of targeted specific actions whose consolidated cost statements have been disseminated during the Meetings organised in Addis Ababa and Mekele on 6 February 2016 and on 19 February 2016 (see par. B6 and Box 3 and 4)

B.4.3 - Channel 3 (C3)

The Channel amounted to € 1,800,000 and was directly managed by Local Technical Unit of the Directorate General for Development Cooperation. The contribution, in this case too, was divided into 2 sub-components:

[4] ETB 55.845.811,00

- € 1,200,000 was allocated to the Expert Management Fund in order to employ external consultants who provided technical assistance to Ethiopia in the framework of short-term missions that totalled to 44 months of work.
- € 600,000 for the following logistic and functioning costs of the Tamu:
  (a) contracts of employment for expatriate experts;
  (b) contracts of employment for local consultants and current staff at the Technical Assistance Monitoring Unit (Tamu);
  (c) Tamu's office services and utilities;
  (d) car maintenance;
  (e) scientific publications and research.

The consolidated cost statement of the three channels is detailed in the box here below:

C1	€ **2,900,000.00**	MDGF
C2	€ **3,500,000.00**	HSDP IV
C2a	€ **1,150,000.00**	OHB
C2b	€ **2,350,000.00**	THB
C3	€ **1,800,000.00**	Expatriate Technical Assistance
FGE	€ **1,200,000.00**	Expert Italian missions
FGL	€ **600,000.00**	TAMU office
Total	€ **8,200,000.00**	

B.5 - Objectives, expected results and indicators

General objective: improve the health conditions of the Ethiopian population in line with the G4, G5 and G6 of the MDGs.

Specific objectives:

i) enhance and improve both regional coverage and quality of the prevention & treatment healthcare services;

ii) strengthen the Health Management Information System as to up-grading the current human resources for health and improving access to primary health care services in Oromia and Tigray regions.

Indicators:

- per capita annual attendance of the basic healthcare services;
- percentage of updated catchment areas relating both to local Districts and health care centres;
- percentage of healthcare facilities staffed with skilled personnel.

Expected results:

1. Federal Ministry of Health granted with sufficient financial resources to implement the HSDP;

2. capacity of collecting, organizing, processing health information at all levels enhanced;
3. information and awareness rising material (APRs and bulletins) better disseminated among development stakeholders and decision makers;
4. health and medical reports more timely and comprehensive;
5. health staff relationships bettered at all levels;
6. number of health professionals per health facility increased;
7. access to quality and use of mother and child health care services improved;
8. access to quality and use of prevention services improved;
9. access to quality and use of care services improved.

Result 1 – Indicators:

- funds supplied according to the plans;
- number of Italian Experts within the federal Health institutions.

Result 2, 3 and 4 –Indicators:

- percentage of timely and complete official health reports;
- regular issuing of the Annual Performance Reports and bulletins by the Federal Ministry of Health.

Results 5 and 6- Indicators:

- Health staff ratio to the resident population according the current national benchmark (medical doctors: 1/36,158; nurses: 1/3,870; Health Extension Workers (HEW): 1/2,544).

Results 7, 8 and 9- Indicators:

- percentage of deliveries assisted by skilled health staff (benchmark: 10%);
- measles immunisation coverage (benchmark: 77%);
- percentage of houses provided with insecticide-treated bed nets (benchmark 66%);
- success rate of Tb treatments (benchmark: 84%);
- number of Hiv/Aids infected people treated with antiretroviral drugs (benchmark: 152,472).

B.6 - Final financial statement and contracts

The Channel 1 merged in a single payment into the MDGF managed by the Federal Ministry of Health without the obligation of issuing a detailed reporting of the actions undertaken to each international Donor; the quarterly reporting by the Federal Ministry of Health merely confirmed the utilisation of the contribution during scheduled management meetings towards the achievement of G4, G5 and G6. A consistent part (64.4%) of the MDGF has been provided to technical equipment, while the 22% has been used to favour the strengthening of the health system. The remaining funding has been divided as follows:

- 1.4% maternal and child health;
- 1.3% human resources for health development;
- 2.4% prevention and control of communicable; and non-communicable diseases;
- 3.5% training of health extension workers.

In practice the MGDF mainly supported: a) regional medicine supply; b) medical and diagnostic equipment for obstetrics; c) development of the Health Management Information System to inform the annual planning of the health needs; d) training; e) increase in the health staff (health extension workers)

The Channel 2 was disbursed through 2 instalments each one targeting different topics:

C2a (Oromia Region)

A) human resources development

B) statistical system monitoring

C) supply and equipment

D) other healthcare services

E) HQ HMIS-OHB

C2b (Tigray Region)

F) human resources development

G) goods and services;

H) other healthcare services

The sub-Channel C2a and C2b amounted respectively to € 1,138,863.00 and € 2,318,537.40 respectively and, converted at the variable exchange rate of the ETB, produced a € 43,675.00 savings which has been allocated to the continuation of the actions listed above.

The Channel 3 was managed by the Directorate General for Development Cooperation and Local Health Unit /Italian Embassy in Addis Ababa, subdivided into the Expert management Fund (EMF) and Local Management Fund (LMF).

- The Expert Fund funded the technical assistance of 3 experts (one medical doctor and one administration officer) for a total amount of 44 months and 12 days of work. When the Aid 9459 expired in 16/09/14, the Expert Fund had still a € 385.441,81 residual cash flaw which shows that the average cost of an expert is about € 18.500,00 per month.
- The final balance of the Local Management Fund has been attached to the Programme Activity Report which provided a comprehensive analysis of the objectives achieved and has been detailed as follow:

Channel C3: Local Management Fund		
1	Purchase of equipment	0.00
2	**Management**	**566,746.11**
2.1	TAMU's offices rent (June 2011- August2014)	80,860.45
2.2	Utilities and taxes	17,681.95
2.3	Stationery and printed matter	12,126.20
2.4	Transfers and Transportation	30,354.43
2.5	Insurances	9,455.99
2.6	Maintenance	26,623.62
2.7	Local staff (8 employment contracts for Tamu's staff)	82,449.90
2.8	Overheads	307,193.58
3	**Activities**	**33,253.89**
3.1	Researches and studies	30,379.07
3.2	dissemination of result	2,874.82
	TOTAL 1+2+3	**600,000.00**

The expenditure item 2.7 "Local staff" includes 8 employment contracts of the TAMU 's staff: 1 accounting assistant, 1 secretary, 3 drivers, 2 guardians, 1 cleaner (See Attachment- Box 2: *List of local personnel*). The *2.8 - Overheads is* the largest item of expenditure including:

a) the salaries of 5 member staff entrusted with technical tasks during the periods laid down in the Box 2 (see Attachment: List of the local staff)

b) the salary of a consultant with a local contract (the deployment of such consultant was necessary to ensure the continuity of the Aid 9459 when the Expert Management Fund did not employ experts consecutively (*See Attachment - Short missions by experts*).

B.7 – Monitoring and Audit

Thanks to the contribution of the Channel 3, Tamu's Office was responsible to monitor the activities implemented in the framework of C1 and C2; monitoring actions have been carried out by 2 medical doctors and one administrative assistant with the support of 5 consultants and other experts all hired through a local contract. Despite the danger of interfering with the Federal health planning undermining the national ownership, Tamu's Office ensured that the level of operational functionality of the Programme was maintained over time by implementing actions that received particular praise at local level. Monitoring results have been regularly disseminated through Bulletins and Reports[5] by the

[5] Federal Ministry of Health, Annual Health Performance Report and Midyear Health Performance Report

Federal Ministry of Health documenting difficulties that arose during the implementation of the Programme such as the impossibility of improving the regional health performance that is still below the target levels, particularly as regard the maternal mortality rate (G5). The constant monitoring activity has been also instrumental to unable changes and modifications in line with the regional specific health needs. At the end of the programme two monitoring meeting have reported the activities implemented in Oromia and Tigray by detailing the expenditures statements (see Tab 3& Tab 4)

SECTION "C"

EVALUATION MISSION AND INTERVIEWS

On January 2016 following an in-depth desk analysis the evaluation team approached the Tamu's Office and the former Local Technical Unit to organise the evaluation of the Aid 9459; the mission timetable involved 4 different steps to be undertaken both in Italy and Ethiopia:

Step 0: Rome, Italy;

Step 1: Addis Ababa, Ethiopia;

Step 2: Oromia Region, Ethiopia;

Step 3: Tigray Region, Ethiopia.

Step 0: Rome, Italy

In February 2016 the evaluation team, composed by Mr. Gianluca de Vito MD and Mr. Carlo Vittorio Resti MD, made contact with Mr. Pasquale Farese MD, Head of the Tamu's Office who made available program's documentation while providing information on its operational conditions. During this preparatory phase the position of Mr. Edao Simba (Graduate in Public Health) as local Expert has been reconfirmed. After receiving an update from the Italian Embassy in Addis Ababa of organisational arrangements for the mission, the evaluation team moved to Ethiopia from 28 February to 13 March 2016. In order to better assess the activities undertaken in the framework of the HSDP IV, during the stay in Ethiopia 83 meetings with interviews and as so many visits on the field have been organised; furthermore 98 questionnaires have been submitted to local health staff, students and healthcare users.

C.1 - Timetable of the mission to Ethiopia

Step 1: Addis Ababa, Ethiopia

The stay in Addis Ababa took 4 days (29 February-3 March 2016 and 10 -12 March 2016) and required the presence of the entire evaluation team:

- Mr Gianluca de Vito- Medical doctor (Referent for the evaluation in Tigray)
- Mr Carlo Vittorio Resti - Medical doctor (Referent for the evaluation in Oromia)
- Mr Edao Simba - Graduate in Public Health (Evaluation assistant)

12 relevant stakeholders for the three Channels have been reached during 20 technical and information sessions organised at the following duty stations[6]:

- C1: Federal Ministry of Health, Tamu's Office and Pharmaceutical Fund Supply Agency
- C2: Oromia Tigray Bureau, Addis Ababa Univ. Services (C2a) and Tamu's Office (C2a and C2 b)
- C3: Tamu's Office and Local Techical Unit

[6] For further details see Tab 5

Step 2: Oromia Region mission

The evaluation mission has been carried from 2-9 March 2016 by Mr Gianluca de Vito with the support of the evaluation local expert Mr Edao Simba and the health officer from the Oromia Health Bureau Mr. Girmai Alemayen. The ET carried-out 23 field visits that involved a 1.350. km drive to Adama, Bokogj, Asela, Sahashamane, Ziway, Woliso, Ambo and Addis Ababa (see the route in the figure below).

During such visits there have been intensive talks with 27 health directors who provided information on the steps undertaken both to improve child and maternal health and implement HSDP IV.

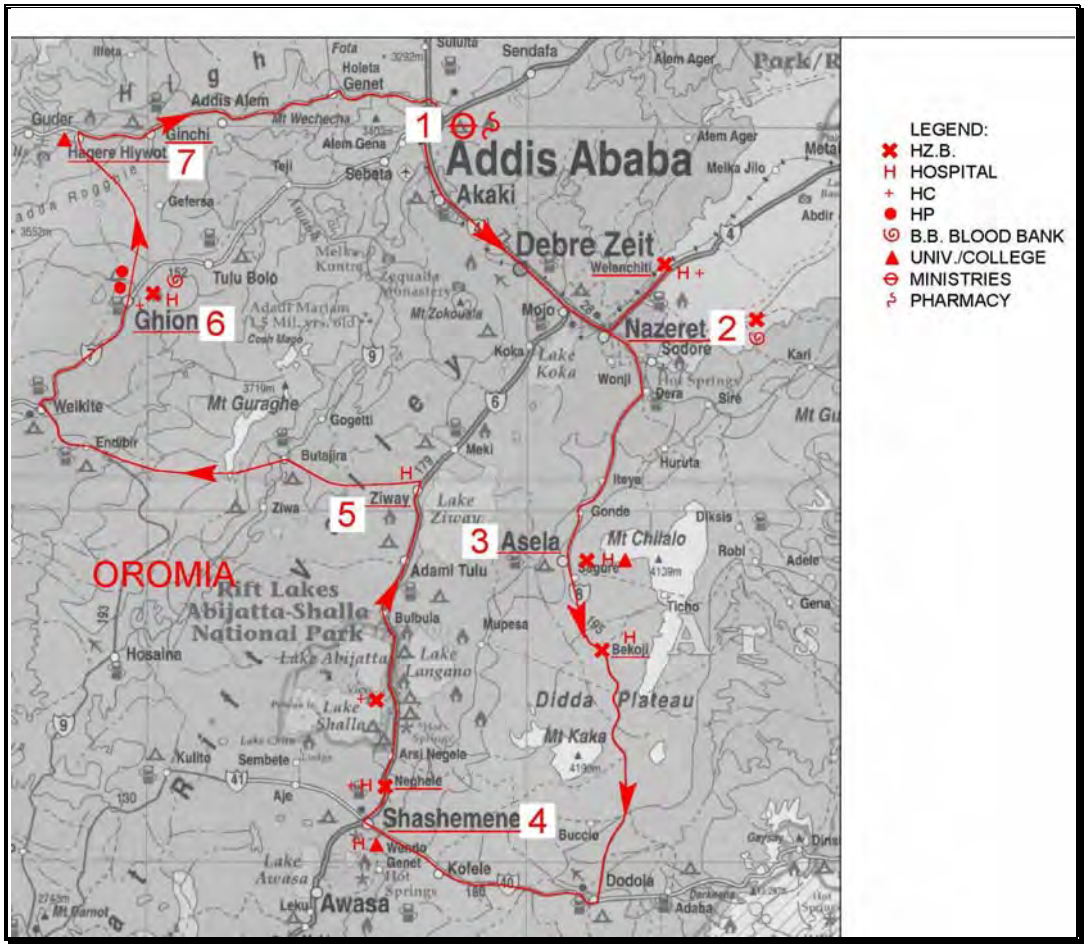


Figure: Map of the Oromia travel.

Field visits sorted by category:

- Health Zone Bureaux (Adana, Asela and Wolisso);
- 3 Universities and Health Science College (Ambo, Asela and Shashamane);
- 2 Health Management Information System (Adana and Asela);
- 2 Blood Banks (Adana and Woliso);
- 3 Referral Hospital (Asela,Woliso and Shasahmane);
- 4 Primary Hospital (Bokogi, Shashamane, Welenchiti and Ziway);
- 4 Health Centre (Dole, Neghele, Welenchiti and Wolisso);
- 2 Health Posts: (Wolisso Zone - Rural Communities & Mountain Zone).

The evaluation work focussed on:

- direct inquiry;
- photographic record;
- consultation of the official sources of information;
- interviews with health contact persons;
- interviews with health and academic focus groups;
- interviews with contact points for logistics and organisation.

Step 3: Tigray Region mission

The evaluation in Tigray took place from 2-9 March 2016 under the direction of Mr Carlo Vittorio Resti assisted by the Tamu's consultant Mr Million Admassie and supported both by Mr Ebrahim Hassan, Senior Adviser at the Tigray Health Bureau and by Mr Hailu G. Michael (Ngo CCM). In order to carry-out the planned field visits the evaluation team used a car rental service with an 814 km trip on the route between Mekele- Adigrat- Mekele (see map below).

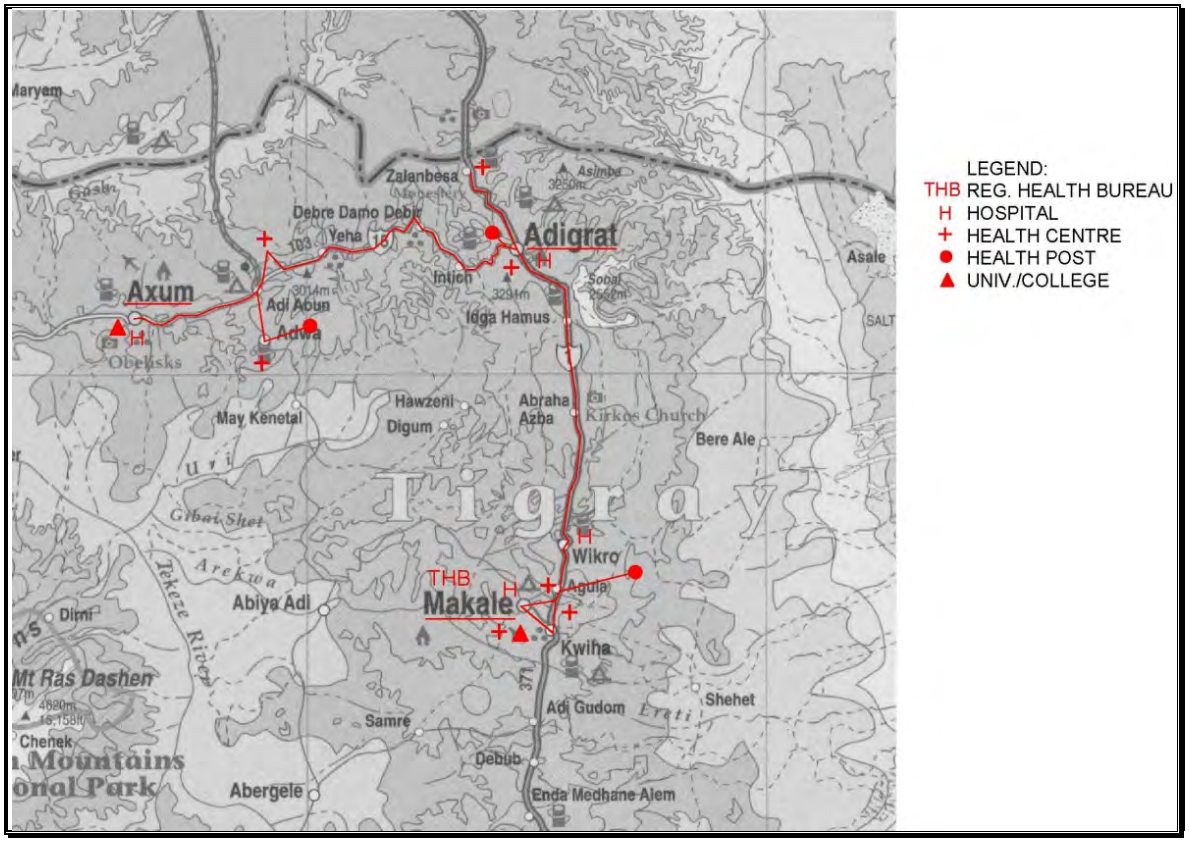


Figure: Map of the Tigray travel

Field visits sorted by category:

- 2 Health and Science College (Axum and Mekele);
- 1 WoHO (Gantafeshum);
- 1 T/Refferal Hospital (Mekele);
- 4 G/Primary Hospitals (Adigrat, Axum, Mekele and Wukro): n. 4;

- 4 Health Centres (Adwa, Agula, Mekeleand, Zalanbessa);
- 3 Health Posts (Adwa, Gola and Solodda).

The evaluation work focussed on:

- direct inquiry;
- photographic record,
- consultation of the official sources of information,
- interviews with health contact persons,
- interviews with health posts focus groups.

C.2 - The evaluation interviews

During the mission to Ethiopia the evaluation team visited 40 programme sites. In order to review expected results and achieved objectives 83 interviews have been done and 98 questionnaires submitted to health personnel, students and patients. Above a detailed list of interviews carried out:

In ADDIS ABABA

Meeting and interviews	Location	Interviewees
3 management meetings for introducing the programme and organisational issue	Italian Embassy Ex UTL	Mr.Giuseppe Mistretta, Italian Ambassador Mrs Ginevra Letizia, Head of the LTU
9 logistic, operational and evaluation meetings (C1, C2 and C3)	TAMU	Mr. Pasquale Farese MD, Programme manager Mr. Paolo Melilli - Administration officer Mr. Million Admassie - Local consultant Mr. Yilma Abdisa - Local consultant Mr. Solomon Hagos - Local consultant Mr. Tibebe Akalu - Local consultant
2 management meetings (C1)	PFSA FMoH	Mr. Meskele Lera - Head of Pharmaceutical Fund Supply Agency (PFSA) Mrs. Mekolen Enkossa MD (*Head* of MDGF)
3 management meetings (C2a)	OHB HMIS	Mr.Lemma Desu, Deputy Process Owner PBMB Mr.Serbesa Dereje, Health Officer HMIS Mr.Eyob Kifle*ABH* - University Services

In OROMIA

Meetings and interview	Location	Interviewees
6 managing meetings for information and review (C1 and C2a)	Zone Health Bureau	Mr. Teshone Hunde, *Head* - Adama Mr.Mebvotu Assefa, *Deputy Head* - Adama Mr. Abebe Shevanghizaw, *Zonal Coordinator* - Adama Mr Haji Abdela, *Deputy Head* - Asela Mr.Tefera Feysa, *Head* - Woliso Mr. Suitan Ebranim, *Planning Team Leader* - Woliso
2 managing meetings for information and review	Health Information Management System	Mr. Serbeza Dereje, Coor. *Residential Course* Adama Mr. Addisu Abebe,*Resp.* - Asela
2 managing meetings for information and review	Blood Bank	Mr. Gebru Gebre, *Head* - Adama Mr. Olana Badate, *Head* - Woliso

4 managing meetings for information and review	University Health Science College	Mr. Eyob Kifle, *Resp.* ABH *Services (Univ.Jimma)* Mr. Gabi Hussein, *Academic Affairs Officer* - Asela Mr. Kali Hussen, *Dean* HScS - Shashamane Mr. Hani Gruma, *Head Pharma Dept.* - Ambo
12 managing meetings for information and review	Primary Hospital	Mr. Gindo L. Gutama, *Chief Officer* PH - Welenchiti Mr. Bethelem Worku, *MD Director* PH - Welenchiti Mr. Teshome Yibru, IESO PH Welenchiti Mrs. Urgeessa Mirkessa, *Chief Nurse* HC - Welenchiti Mr. Wegene Tadesse, MD *Director* PH - Bekogi
	Health Centres	Mr. Infermiere di guardia HC - Neghelleù Mr. Infermiere di guardia HC - Dole Mr. Akililu Hailu MD *Director* PH - Ziway Mr.Stefano Contini MD *Director* RH Cuamm - Woliso Mr. Infermiere in servizio, HC - Woliso
	Health Posts	Health Extension Worker - Health Post - *pastoral area* Health Extension Worker - Health Post - *rural area*

In TIGRAY:

Meeting and interviews	Location	Interviewees
8 information and evaluation sessions	THB	Mr. Hagos Godefay, Head, Tigray RHB Mr. Goitom Gigar, D/y Head, Tigray Regional Health Bureau Mr. Ebrahim Hassan, Advisor to TRHB Head Mr. Tedros Tsehaye, Head PPD Mr. AmlaG/Mariam, Head of HRD Mr. Ataklti Taddese, acting Head Financial Department Mr. Solomon Negussie, HMIS Expert
	WoHO	Mr.Taeme G/Kirkos, Head Gantafeshum WoHO
8 information and evaluation sessions	GH PH	Mr Mehari Desalegn, MD Wukro Hospital Mrs.Astede Girmay, MatronWukroHospital Mr. Meskel Beyene, CEO Adigrat Hospital Mr. Tewodros Fesseha, MD AdigratHospital Mr. Habtom G/Hiwot, CEO Mekele Hospital Mr. Adeba Zewdie, PR, MekeleHospital Mr. Mical W/Gabriel, CEO, AxumHospital Mr. Tsegazeab Tsehaye, MD Gyn.AxumHospital
12 information and evaluation sessions	Health Centres	Mr. Meheret Girmaye, HEW Gola Genhanti HP Mr. Beriha G/Michael. MW Bizet HC Mr. Mariam Beyene, HIT, Bizet HC MrGedey Berhane, HEW, Soloda HP Mr. Berkti Abera, HEW, Soloda HP Mr.Sellassie Awetahegne, HO Adwa HC Mrs.Tsainesh Egsiabier, MW Adwa HC Mr. Mussie G/Giorgis, Head Agula HC
	Health Posts	Mr. Sintayehu Belay, HEW Level IV Mesanu HP Mr. Bezu Taddese, HEW Level IV Mesanu HP Mr. Hailu G Michael, PH Expert Adi Shum Dhun HC
3 information and evaluation sessions	University HScS	Mr. Tsegaye Kenfe, Tutor Mekele HcSC Mr. Dagnew W.Giorgis, Dean Mekele HScC Mr. Prof Dejen Yemane - Head, Ayder School

The list of interviewees clearly shows the lack of women in management roles while there is a high female representation in nursing and midwives sector. With the exception of few young women doctors

in position of responsibility (e.g. Health Directors of the new Primary Hospitals) the majority of female health staff is employed in the healthcare services. This is the case of the Health Extension Workers who following a one-year training course are often based at rural Health posts (75%) with the lowest salary in the healthcare waging setting framework. Despite women play a lesser role in the Ethiopian health System, the Government is largely in favour of their inclusion into the healthcare sector. During the mission the evaluation staff enjoyed a friendly and supportive work-environment where local counterparts provided all the information needed; also when moving to the planned field visits, they did not experienced unexpected problems, despite the recent tensions inside the Oromia region and a severe drought affecting the Tigray.

SECTION "D"

THE EVALUATION AND PROJECT ANALYSIS

D.1 - Project evaluation

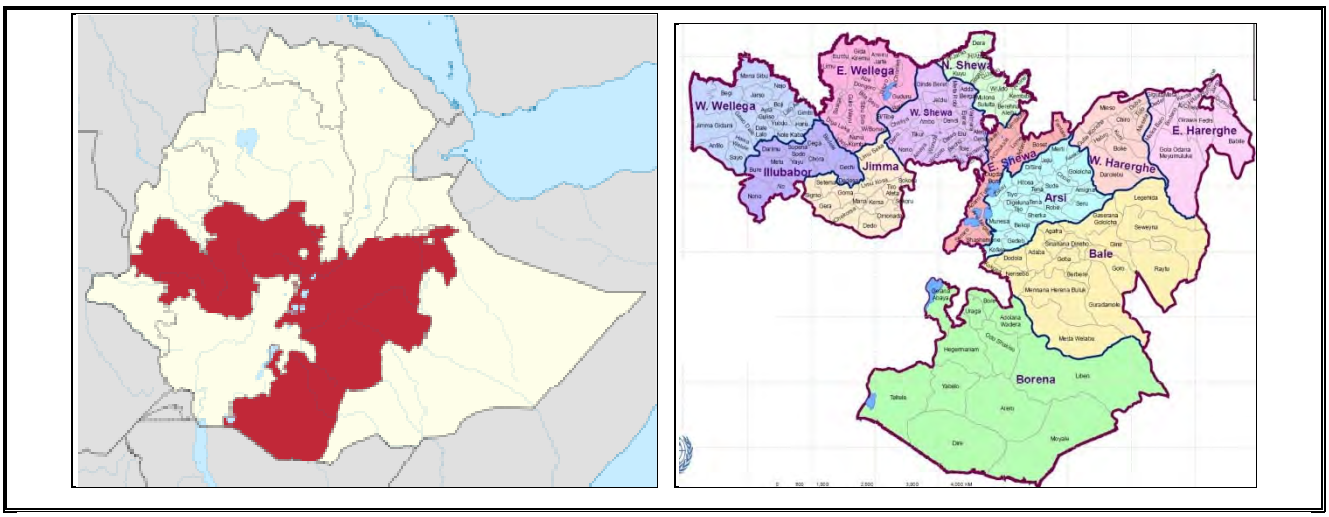
According to regional and national information gathered, Oromia and Tigray have done a long way and made quite considerable progress in improving basic healthcare. The 20-year-HSDP has considerably strengthened:

a) health buildings (new primary hospitals, health centres, health posts);
b) diagnostic equipment;
c) medicine supply;
d) academic, professional and specialist training;
e) human resources for health and local healthcare services;
f) prevention (immunisation, family planning and contraception);
g) health information management system.

The enhancement of the basic healthcare network has made possible the achievement of the health related MDGs; the evaluation work paid a particular attention to the under 5 mortality rate that showed a significant decrease, thus making it easier to reach the G6 (fight against malaria, HIV/AIDS and TB) especially in the child and maternal sector. The evaluation staff pointed-out the under performance of the maternal mortality rate with respect to the target set out in the G5 (1/3 decrease); in this regard there is a discrepancy between the data recorded by the World Health Organisation (WHO) and those by the Federal Ministry of Health. While the WHO reported a national maternal mortality ratio of 350 deaths/100,000, the Federal Ministry of Health confirmed 676 deaths/100,000.

D.1.1 - Oromia Region

Oromia reported results and health performance which are better than Tigray which has always benefited from international aid for the health sector. Considering that Oromia is the most populated (33.692.000) region with very poor health conditions, such results are even more significant.
Adama situated at 70 km from Addis Ababa is the Oromia capital where the Oromia Health Bureau is based. The city is easily accessible by the new motorway to Djibouti and very soon it will reachable by train thanks to the railway partly funded by the Chinese Government. Oromia is bordered by Beneshangul Gumuz, Amhara and Afar (north) Somalia (east), Gambela (west) and Kenya (south). It is politically split into 13 Districts with 2 Special Towns (urban areas); furthermore the region is also divided in Health Zones consisting of 310 Woredas and more than 7.000 Kebelas.



Maps of Oromia region and zones

Following the HSDO IV, the regional healthcare system is composed by:

- 5 Teaching Hospitals;
- 4 Referral Hospitals;
- 13 General Hospital (managed by the Oromia Health Bureau);
- 53 Primary Health, mostly built through HSDP III and IV;
- 1.325 Health Centres;
- 6.500 Health Posts located in remote areas.

The current net of health facilities has been enhanced in the framework of HSDP IV by realising new single floor health buildings which are reasonably equipped. The next step was to launch a recruitment plan and at same time upgrade the health personnel currently on-duty.

The professional categories enriching the Oromia health system were in details:

- 220 integrated emergency surgical officer who are newly graduated professionals working for the maternal emergency service within the Primary Hospitals
- 674 up-graded nurses specialised in the framework of the C2a (Level 3) in obstetrics, anaesthesia, pharmacy, radiology
- 480 up-graded operators with a specialisation (Level 4) at the Health & Science College who are in charge of contraception and family planning.

The ways through which such up-grading can be implemented provides a 3 months paid leave (summer months) for training for 4/6 consecutive years as to limiting the absences from work. At the University of Asela and Ambo there were 83 trainees (35 midwives and 48 pharmacy technicians) who graduated in June 2016; a forthcoming increase in healthcare workforce is expected at the end of academic year.

In order to manage the emergency in obstetric and neonatal care and to ensure the transportation of blood bags from the blood banks to hospitals, 40 new vehicles and 840 ambulances have been placed in all over the region. The improvement in emergency transportation has been positive influenced by a

better road network and by a car maintenance service provided by the Aid 9459 through the Channel 2a. An important result in the child and maternal care has been achieved by the enhanced coverage of ante-natal care services which registered a high involvement of pregnant women; 92% of the mothers to be accessed to the first obstetric visit while 72% continued to access to more than 4 obstetric follow-ups during pregnancy. In Oromia the average of deliveries attended by skilled health professionals reached the 70% compared with the national average of 72% and with the Tigray average of 100%.

The development of ante-natal services at the primary hospitals strongly contributed to reduce maternal mortality by preventing delivery complications and by providing women with echo graphic monitoring and emergency surgical services. The new figure of Integrated Emergency Surgical Officer (IESO) is an innovation within the primary hospitals at which is added a regular be-weekly blood supply from the Blood Banks. However blood transportation from the five regional blood banks to remote healthcare facilities is very difficult because of long distances and poor roads. It follows that transportation costs are very high and vehicles qualified for blood transportation often encounter a rapid wear. Unfortunately this situation is unlikely to be eliminated in the near future: the availability of vehicles coupled with a car maintenance service (Aid 9459) currently ensures that blood bags cover at least emergency cases albeit at high costs. The 5 regional Blood Banks - of which Adama acts as focal point, deal with blood collection, frozen storage and distribution - result to be closely related to the achievement of G4 and G5.

A part of the channel C2a has been utilised for delivering the following supplies:

- medicines, technical devices and hospital furniture distributed to 120 Health Posts and 32 Primary Hospitals;
- spare parts for vehicles and maintenance for 60 ambulances;
- computer equipment for developing the Health Information Management System;
- 5 electrical generators for the regional 5 Blood Banks.

The evaluation staff identified problems with regard to diagnostic devices provided by Chinese suppliers without a maintenance contract; despite many of these devices resulted unusable just at installation there is no obligation by suppliers to repair them.

This problem has been also identified with the 5 electronic generators for maintaining the cold chain in the event of power failure: they were found to be completely oversized in relation to the electrical power required by 2 chillies, 1 freezer and the normal lighting in the offices. What is telling about this is the case of the Woliso Blood Bank where a small portable generator was able to make-up the lack of electricity during a power failure whereas the maxi-generator after 10 months it has been purchased was not already in place because of difficult installation coupled with high energy consumption deriving from its excessive power.

Despite the difficulties that are identified, Oromia and Tigray are the best performing regions towards the achievement of G4 G5 and G6 objectives, particularly as regards access to and quality of maternal and child health services.

In summary the evaluation confirmed:

- proper involvement of the local population in rural and remote areas, especially women;
- regular supervision of the health extension workers entering the service into Health Posts;
- fair coverage of the rural healthcare network (Health Posts, Health Centres and Primary Hospital);
- central role of Health Centres in managing:
  - contraception and family planning
  - immunization campaign to be made at Health Posts
  - deliveries assisted and monitored (ante-natal care)
  - referral of urgent cases to Hospitals
  - epidemiological data storage at all levels in particular:

    a. each health post is endowed with a physical archive consisting of patient medical files hold by the household head and containing medical conditions and history of all family members;

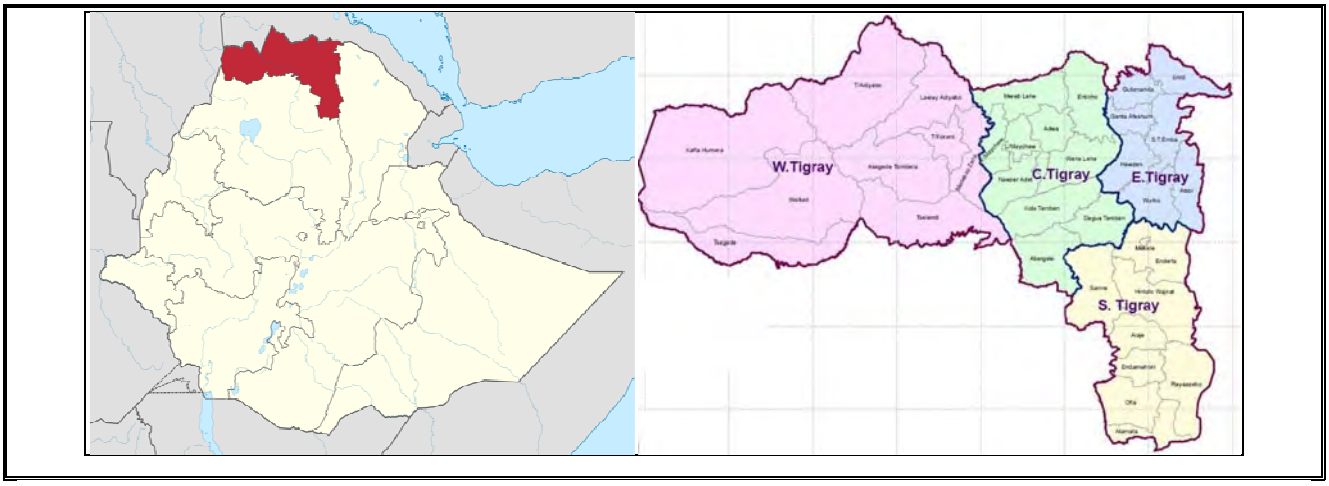
    b. health Posts and Health Centres record and detain epidemiological details by utilising 23 different types of registries;

    c. Health Zone Bureaux developed the digitisation and transmission of health data to the Oromia Health Bureau.

Performances Registers

D.1.2 Tigray Region

Tigray region is divided into 52 Districts (Woredas) and 792 villages (Kebelas). The resident population is 5.055 million people (H&HRI/EFY08) 23% of which are women of reproductive age. Because of severe droughts and water shortages agriculture is abandoned so fuelling an increasing urbanisation



Maps of Tigray region and zones

Following the HSDP IV the regional healthcare networks consists of:

- 1 Teaching Hospital - Ayder University in Mekele;
- 14 General and Primary Hospitals connected with:
  - 225 Health Centres
  - 668 Health Posts

During the evaluation mission 17 programme sites have been visited with 30 health directors interviewed as key informant persons on the achievement of G4, G5, and G6.

- *Hospitals*
  1. Wukro General Hospital, 45 Km N from Mekele;
  2. Adigrat General Hospital, 122 Km N from Mekele,
  3. Axum General Hospital, 196 Km NW from Mekele;
  4. Mekele General Hospital and Kwiha Centre;
  5. Adyer campus & Referral and Teaching Hospital, Mekele.
- *Health Centres*
  1. Bizet Health Centre, N from Adwa;
  2. Adwa Health Centre;
  3. Zalanbessa Health Centre (on the border with Eritrea);
  4. Agula Health Centre, East from Wukro;
  5. Adi Shun Duhm Health Centre, in Mekele.

- *Health Posts*
    1. Gola Genahti Health Post, Adigrat District;
    2. Solodda Health Post, Adwa District;
    3. Mesanu Health Post, East from Agula.
- *Woreda Health Office* (WoHO)
    1. Gantafeshum WoHO, just outside Adigrat Town.
- *Health Science College* (HScC)
    1. Mekele HScC;
    2. Axum HScC.

The evaluation mission identified a healthcare and prevention network which is in line with the federal standards with health posts, health centres and primary hospitals staying at the basis of the pyramid of the regional health system. In the framework of HSDP IV there has been an increase of health posts (+35%) each of which is staffed by 2 trained health extension workers. Health Posts represent the first contact of patients with the health system by providing basic healthcare services most of which are supplied free of charge (e.g. child and maternal care, immunization, contraception and family planning). Moreover it is important to stress the close cooperation between the Health Extension Workers and the WDG Leader who for several years have been actively working to support and promote reproductive health in rural areas. Health centres staffed with up-graded personnel, represent the first focal points for ante natal care; they are also qualified for treating urgent patients from Health Posts and, if necessary, refer them to Primary Hospitals which are able to rely on emergency surgical service mainly supplied by the Emergency Surgical Officers. Lastly, Specialist and Teaching Hospitals directly depending on the Federal Ministry of Health constitute the vertex of the health system pyramid. Funds for improving the existing healthcare service channelled into three relevant areas:

- human resources development
- supply of medicine, medical technical devices, goods and services
- development of the Health Information Management System

As demonstrated by the Tigray Health Bureau *Annual Profile 2007/EFY* the regional health system can be distinguished by a strong governance and leadership which have led already to an increase in the local community involvement. Through an in depth analysis of health data the Report reviewed both the achievement if G4 and progress made towards the G 5 and G6. All health facilities visited received funding from the Italian Cooperation (C1 and C2b), especially the Axum and Mekele Health and Science Colleges both to improve education and training of middle level personnel and up-grade Health Extension Workers currently on-duty. Moreover the supply of goods and services channelled through the Aid 9459 showed to be instrumental in improving the quality of health services in Tigray.

According a participated SWAT analysis carried-out through relevant focus groups, the strengths characterising the Tigray health system can be summarized as follows:

- formal and informal contacts with the local population in rural and remote areas;
- sound degree of involvement and ownership of the health facilities by local communities, including in kind contributions (cereals to prepare meals for mothers to be);
- respect for the traditions in rural areas which results in a strong civil cohesion and mobilisation;
- monthly monitoring by issuing performance reports;
- significant progress in the initiative "zero home delivery in all health facilities" in order to mitigate the 3 leading causes of delays leading to maternal deaths: 1) choice to ask for help, 2) choice of the health facility , 3) suitable treatment for the difficult delivery;
- Sound referral system for deliveries managed by skilled staff both at Health Posts and Health Centres according to the C*omprehensive Emergency Obstetric and Neonatal Care. Despite* Primary Hospitals usually do not have areas to accommodate women who have travelled long distances, they provides an assessment of the appropriateness of the more urgent cases;
- extended catchment areas able to treat patients from both neighbouring Eritrea and Afar Region;
- better data collection with a special focus on the registration by the Health Extension Workers of child and maternal details (e.g. expected date of delivery);
- development of an economic incentives system able to provide health staff with a formal recognition of achievements as regards both quality and management of healthcare services.

Weakness points relates to:

- poor health buildings; most of the visited health facilities are old buildings with insufficient maintenance;
- reception conditions are critical (paediatrics department at Axum Hospital);
- low ratio of health staff to the resident population despite improvements in education and training which resulted in a task shifting (simple malaria and pneumonia treated by the Heath Extension Workers);
- difficulties in the distribution of medicines and health equipment in the most remote areas despite considerable improvements of the regional supply chain;
- lack of periodic maintenance for medical devices: during the evaluation visits some medical equipment resulted underused and not suitably installed (e.g. radiant cradles for newborn);
- frequent power and water failures that put at risk the regular provision of health service;
- lack of an impact evaluation of the in-service and pre-service trainings including their suitability to meet local needs;

- monetary and in-kind contribution of local communities to the regional health system is not clearly identified; at the moment the National and Regional Health Account not include a specific funding component from the communities. In order to address the problem there are on-going pilot studies on the *Community Health Insurance.*

Opportunities for the Tigray Health System through the Italian Cooperation are:

- strong political leadership resulting in a consistent social participation;
- constant increases in health investments whereas they are very far from reaching the 15% of GDP as recommended in the Abuja Declaration (2015)
- sound economic support from the Federal Ministries and ability to attract investors and donors
- rapid development of Biomedical and Public Health Research Centres (Adi Shun Dhum centre);
- extensive information campaign on available healthcare services and an effective regional network dealing with gender and child and maternal related topics; over the last ten years after the introduction of the Health Extension Package a marked increasing in access to healthcare, immunisation and family planning services have been recorded. Over 5 years the average proportion of deliveries assisted by skilled staff has increased from 24% to 69% with a declining maternal mortality ratio;
- efficient community-based health services (Health Posts) where Health Extension Workers, also thanks to a better data collection system, have a direct knowledge of local community health conditions.

D.1.3 - Questionnaires analysis

In order to review the perceived results of HSDP, during the evaluation mission 94 questionnaires, sorted in 4 different formats, have been distributed to four target groups:

- Managers and consultants;
- Patients and their families;
- Courses attendants and students;
- Health staff.

The First questionnaire:

The 1st Questionnaire, distributed to 11 health managers and consultants, stresses once again the commitment of the FMoH in improving child and maternal health. Target G4 scored higher, followed by G6 and G5. All respondents except one rated good the information received, regarding the mother & child health activity carried out at federal and regional levels: they sure enough attended the numerous meetings that were held on the matter. The acknowledgement of the progress made by the public health care service since 2011 was unanimous in both regions and the suitability of the staff for

the meeting of targets G4, G5 and G6 was also recognized by all. The prevention, diagnosis and care activity was rated sufficient by 70% and was praised by 30%. The APR 07 data showed that the gender policies realized by the FMoH worked well too. The mothers and children's health improved and the family-planning, contraception and the vaccine services were appreciated by the population. It surfaced that in the mother & child sector the emergency management inefficiencies were mostly caused by: a) lack of diagnostic equipment; b) insufficient training of the newly employed staff; c) too limited human resources to keep the health rural needs running round the clock. The efficiency of the ambulance free-transport service in obstetric emergency, from HC to equipped primary hospitals (PH), was frequently compromised by the poor vehicle maintenance. In Tigray the ambulances are also few and the rural roads in poor conditions. Furthermore, the health care facilities' catchment areas were too wide and not in line with federal targets. According to the people interviewed an average of 50% of the population benefited from HSDP IV while 20% in Tigray and 30% in Oromia respectively were still outright excluded or did not benefit at all from the public health care services. The final satisfaction score for the training activity was 8/10 and 7/10 for the quality of the health care services provided.

The 2nd Questionnaire, given out to 14 patients/families (users) 50% women and 50% men, most of them farmers and housewives with families (20% with families bigger than 4 people), showed that the service overall improved during the implementation of HSDP IV. 50% lamented the distance of the HCs and the HPs, while 50% said they are close enough to be reached on foot. The mother (according to G5) and child (according to G4) mortality rate was deemed to be in general decreased in local villages. According to the people interviewed, the remaining cases of child mortality were not caused by the health care inefficiencies or shortcomings, but by extreme poverty, ignorance and distance from the health care centres. 90% said they trust the basic health care service. Overall, the mother & child free health care service was rated suitable. Regarding G6 all of the interviewed people knew the transmission mechanisms of Hiv/Tb. They all used mosquito malaria prevention nets at home and went with children U5 to the HPs and to the HCs to be tested with immediate disposable diagnosis kits. The final satisfaction score for the health care services was 7/10.

The 3rd Questionnaire given out to 20 MD students of Asela and Ambo Universities and to Nurses & Midwifes trainees at the Ziway Primary Hospital, particularly:

a Upgrading Midwifes (Asela University.) and Pharmacy Technicians (Ambo University.) with 5/10 years hospital experience (Lev.3) (C2a)
b Students enrolled in Medicine university courses.

They all belonged to 4 or more people families. The most relevant family cost is the health care one, followed by food and lastly by studies. Half of them were hospital trainees (MD students and Upgrading Health operators) and all confirmed an increase of HCs and HPs in their area during the implementation of HSDP IV, and rated the professional expertise of the hospital staff to be fair. The

majority of them thought the family-planning service should have to be strengthened in order to reach G4 and G5, also envisaging the involvement of women. They also stressed the necessity of an upgrade of the hospital diagnostic equipment, besides adequate training courses for the staff. They also pointed out that the outpatient ANC service at the HCs was very simple, envisaging just obstetrics inspections for mothers and HIV/AIDS and Malaria screenings, with eventually the transport of more complicated cases to equipped h/24 surgical primary hospitals. The pregnant women ultrasound-scan based diagnosis, deemed fundamental by all the interviewed, at present carried out just in hospitals (where often the instruments are out of order), should instead be available in the HCs, they suggested. Although doubts surfaced regarding the surgical expertise of the IESOs in the hospitals (PHs) they helped in reducing mortality rate in the complicated deliveries. It appears from the questionnaires that in order to reduce the mother & child mortality rates the upgrade of the equipment and the increase of the diagnosis services would be necessary together with the strengthening of the family planning and contraception action. The final satisfaction score for the training activities was 8/10 and for the quality of the health care services 7/10.

The 4th Questionnaire was given out to 52 HOs (Health Operators) provided with university diploma or degree (4-year course at least) and employed in PHs, HCs and HPs: 37 HOs questionnaires in Oromia and 15 HOs questionnaires in Tigray. Most of them came from 4 people or more families. They had been working for as long as 1 to 5 years, being adequately paid for their work. 2/3 of them were carrying out burdensome round the clock surveillance services making also for the staff deficiencies (75% complained about their demanding shifts at their workplace). They said their family cost were first of all directed toward the food purchase, then toward studies and lastly toward health care. They all shared the idea that the mother & child health care deserved the greatest attention from the HSDP IV. 80% rated the professional upgrade, the supply of upgraded equipment and the involvement of women to be the first tools in order to reach a decrease of the mother & children mortality (G4 e G5). They unanimously said that in their area the health care services provision improved. The health care staff is rated sufficient by most of them, while 10% instead rate them very good. The majority considered the ANC service to be efficient in the HCs although to be upgraded. They pointed out that the ultrasound system service for the population was poor: 65% of the service is provided by hospitals, the remaining 35% is provided by private urban centres because of the poor maintenance of the public health care facilities equipment. According to the interviews the EISOs made a good job: they reduced the mother & child mortality performing as surgeons in h/24 emergency service, although some of them were considered not up to the task, considering too short the triennial practical university courses and then mostly with any tutoring on the field. These were considered the top priorities in order to upgrade the child and mother sector: a) strengthening the ambulance service; b) upgrade the equipment and the medicine supply; c) implement family planning and contraception. Orthopaedic and Trauma surgery was considered among the health care priorities to be provided to the population for free. The

satisfaction score for the training activity was 7,5/10 and for the quality of the service provided to the population 7,6/10.

D.1.4 - Project evaluation

The Channel C2, subdivided into two sub-channels C2a for Oromia and C2b for Tigray, to finalize the activities as below described, was financially reported during two meetings called by the ET in Addis Ababa at Oromia Regional Bureau premises (OHB) on 06.02.2016 and in Mekellè at Tigray Regional Bureau (THB) on 19.02.2016.

Sub-channel C2a was utilized by the OHB for the following activities:

A. Human resources development: Aa) 119 graduated nurses; Ab) 146 graduated obstetricians and Ac) 124 pharmacists; Ad) 30 graduated health care environment technician; Ae) 47 graduated laboratory technicians; Af) 18 HOs in training at *ABH Service PLC* of Addis Ababa (*Jimma University*); Ag) 72 Hospital radiologists.
B. Monitoring of the Info-statistics System: Ba) support to the ZHBs and OHBs x HMIS; Bb) 150 HOs in training WBHSP at ZHBs and OHBs.
C. Supply and equipment: Ca) 120 HCs and 20 Hospital supplied with drugs; Cb) 5 Electricity Maxi-Generators for the 5 BBs; Cc) Inventories for 30 new Hospitals; Cd) 270 Metallic shelving supplied to 12 Hospitals and 90 HCs; Ce) Spare parts for services vehicles; Cf) 10 PC e 23 Laptops supplied to ZHOs and to OHBs x HMIS.
D. Other health care services: Da) 300 "*Urban*" HEW graduated; Db) 60 ambulances repairing; Dc) Publications.
E. HQ HMIS-OHB: Ea) Telephone/internet costs; Eb) Contract for an IT technician.

Sub-channel C2b was utilized by the THB for:

F. HRD - human resources development: Fa) 211 H.A. graduated nurses; Fb) 566 HEW *Clinic Nurses* graduated; Fc) 60 HOs + 20 *Sanitarians* in MPH; Fd) 40 Anaesthesiologists; Fe) 20 Pharmacists; Ff) 25 Laboratory technicians; Fg) 20 Radiologists; Fh) 15 Psychiatry nurses; Fi) 20 staff of THB; Fl) 20 staff of THB; Fm) project for a study: "*progress in achievement* MDGs"; Fn) 22 district *managers* enrolled to universities for an MPH; Fo) Goods and services p*rocurement* for THB; Fp) PC for HMIS *Procurement*; Fq) past graduation courses at Has Axum College; Fr) 40 *Clinic Nurse* for HOs; Fs) Different training sites: goods and services p*rocurement*.
G. Goods and services: Ga) Drugs and biomedical equipment for Hospitals and HCs; Gb) Drugs, equipment and consumer goods and tests disposable kits for HCs and HPs; Gc) Furniture for the PHC *Units* of the Region; Gd) Furniture, beds, cradles, hospital trolleys; Ge) 60 District staff supervising over activities and purchases; Gf) 24 G.I.S. experts coming from different districts for the 3-day workshop; Gg) 1200 bulletin issued and given out at the PHC *units*; Gh) Other equipment, beds, consumer goods.

H. Other health care services–HMIS *Capacity building*: Ha) 284 IT technicians trained; Hb) workshop for 142 health care operators about *family statistics*; Hc) employment of 1 technician for the processing of HMIS data; Hd) 6,304 copies of the health care profile issued and given out; He) 2,000 copies of the *Health Bulletin* printed and given out; Hf) 50 *laser printers* purchased and delivered; Hg) 9 *digital cameras* and telephone services for HMIS; Hi) 17 *jet printers* and stationery; Hl) IT HMIS equipment; Hm) spare parts for the services vehicles and motorbikes in the Districts; Hn) stationery and supply for the PHC *Unit*; Ho) data processing service; Hp) vehicles and ambulances maintenance; Hq) internet-web Telecom for HMIS.

During the implementation of the HSDP IV the improvement of basic out-patients health services has been monitored through performance indicators; in particular the sectors where such monitoring activity has been displayed focused on:

1. family planning and contraception;
2. ante-natal care provided by the HPs;
3. referral and treatment of obstetric urgencies;
4. post natal care provided by the HCs;
5. mandatory immunisation coverage coupled with de-worming treatments;
6. nutrition and micronutrients deficiencies treatments.

The enhancement of these key-sector resulted in an improvement of in the U5MR that in 1997 was 217 deaths/1000 live births to 88 deaths/1000 live births in 2011during the IV stage of the program supported by the Italian Cooperation. When in 2015 the program concluded the U5MR decreased yet again (80 deaths/1000 live births) exceeding the G4 target (75 deaths/1000 live births). More optimistic data issued by the United Nations report the outstanding result of 68 deaths/1000 live births. The neonatal mortal rate steady declined since 2000 and continued to remain stable over 5 years with 37 deaths/1000 live births. Such results have been possible thanks to a network of health services including immunisation coverage, family planning, obstetrics and paediatric controls and post natal care.

In particular prevention services revealed to be pivotal in addressing demographic growth and limiting teen age pregnancies also by sustaining the activities carried-out by the HHW who organised home visits and school group meetings with the support of the Women Development Groups (WDG). There are 195.864 groups in Oromia and 30.206 in Tigray each of which counts about 30 women who have build a network of 880.975 in Oromia and 151.095 in Tigray. The WDG has proved to be crucial in improving maternal health especially in rural settings.

The obstetric services provided a free of charge ante natal care service with 96.6% coverage; the service is provided by an increasing number of HCs staffed with skilled personnel and when needed, a free ambulance service to the Primary Hospitals is available.

Primary Hospital is staffed with IESOs who are qualified to surgically treat the most urgent cases.

Post natal care services and paediatric controls allowed to achieve the 90% of performance also thanks to the improved coverage of rural heath posts which acts as focal point for child health. Health posts are usually managed by the HHW who can provide prevention and primary healthcare services by utilising federal protocol for the treatment of the most common child diseases, referring to health centres the most complex cases. Health Posts located in remote setting usually host also immunisation campaign and de-worming treatment with the possibility of obtaining HIV/AIDS and malaria rapid screening. The improvement of the territorial healthcare services contributed to reduce drastically child deaths, child diseases (bronchopneumonia and gastroenteritis) and paediatric fevers.

The results that have been obtained document the commitment of the federal and regional Government to achieve the G 4 and G6; as regard the G5 because of the introduction of IESOs in the emergency management relevant data on obstetric urgencies still need to be analysed.

As reported in the project's Logical Framework, the analysis of the objectives, the result indicators and the expected results are the following:

General objective: improving the health of the Ethiopian population according to HSDP and in compliance with the health care MDGs (G4, G5 e G6).

- The bettering health conditions of the local population obtained by the increased rural health care net services, with adequate catchments areas, linked with the high registered performances (HMIS), is measured on the basis of the average life expectancy, from 45 years in 1990 (WB/2011) to the actual 63,7 years, (UNDP/2014).

Specific objectives: increase coverage and the quality of the prevention and care services by strengthening the health information system (HMIS), up-grading the human resources.

- The welfare coverage and the quality of the basic health care services have been greatly improved, with reference to the previous poor situation before the implementation of HSDP, from 1990 on, with the quality set-up of the clinic local services, supported by a regular and efficient statistics and epidemiological (HMIS) data collection, allowing a prompt evaluation of the population's health.

Evaluation of the 3 Indicators

1) Annual outpatient services attendance (OPD) per capita (benchmark **0,3**)

   The benchmark (Vb) of the out patients health services (OPD), thanks to the implemented rural health net, by passed the targets in mother & child sector. The OPD performances increased at national level at 4.8% (H&HRI/EFY/08). The Tigray Region has achieved the best result in pro capita OPD attendance to the population, up to 0.87%. Sufficient OPD result is reported in Oromia Region, with 0.37% performances pro capita reported. The total number of the OPD performances has registered 43.463.879 over a population of 90 million people. The Somali Region has reported the worst OPD result with only 0.05% health performances pro capita.

2) Percentage of Districts and HCs' catchment areas adequately upgraded

The development of the federal and regional health rural net, mostly realized during HSDP IV, envisaged the setup of standards for specific catchment areas as the rural target required in APR/EFY/04:

- 1 Health Post (HP) /3,000/5,000 people;
- 1 Health Centre (HC) /15,000/25,000 people;
- 1 Primary /General Hospital (PH+GH)/60,000/100,000 people.

The completion of HSDP IV in June 2006, left several gaps causing delays in the usability of the not yet finished health rural net, especially for the hospital services. The following chart shows that the catchment areas targets of HPs and HCs were met both in Oromia and Tigray; not so it was for the Hospital catchment areas that are still more than three time the standards:

Health facility	**OROMIA**				**TIGRAY**			
	Complete and working	Under constructio n	Total	People	Complete and working	Under constructio n	Total	People
HP	6,519	0	6.519	5,168	712	0	712	7,101
HC	1,320	93	1.413	25,524	202	0	202	25,030
PH	53	63	116	635,698(*)	15	0	15	337,067

(*) People and PHs - source: Bulletin Health and Health Related Indicator EFY/08 - (H&HRI/EFY/08)

On the below schema, published by the H&HRI/EFY/08, it should be considered that in Oromia Region more than 50% of PHs are still under construction, with a considerable actual limit of the specific standards catchment area. Moreover the 18 Referral/Teaching Hospitals, managed by the FMoH, located in the urban area, are not included in the primary hospital rural net. So the standard hospital catchment area is in progress, considering the total number of urban and under construction hospitals referred to al list 246.268 habitants each, soon.

3) Percentage of health care facilities staffed according to standards

In the rural HPs the greatest effort was put in order to adapt the health staff to standards. The total number of HEWs working in the HPs reached the remarkable figure of 42,336 at a national level spread among the 16,447 suburban HPs (2or 3 HEWs average for each HPs). Despite the strengthening of the hospital staffs the employment of a remarkable number of Laboratory technicians, Anaesthesiologists, Radiologists and Ultrasound technicians, Pharmacists, IESOs, several health-hospital facilities remain still understaffed.

Project Indicators Synthesis	Yes	%	Remarks
1. Annual outpatient services attendance per capita (benchmark **0,3**)	X	100%	National **0,48** % Oromia **0,37**% Tigray **0,87 %**
2. Percentage of Districts and HCs' *Catchment areas* informed	X	60%	Optimized in HCs & HPs; in PHs the catchment areas not yet optimized.
3. Percentage of health care facilities properly staffed according to the standards	X	60%	HPs up to the use; HCs suitable; not yet suitable PHs
Total score		**73%**	**H&HRI/EFY/08**

Evaluation of Expected Results:

1) FMoH provided with adequate financial resources for the realization of HSDP:

   To achieve the health MDGs (G4/G5/G6), during the period from 2004-2011 the Health National Account (HNA) increased 138%, amounting to 26,5 billion Ethiopian Birr /year, equivalent to USD 1,2 billion. However the 50% of which was provided by the international donors (1.3% by the Italian Cooperation) in bilateral and multilateral health aids. Considering the increased Health Federal Budget (HNA), it is possible to document enough resources to conclude HSDP IV, assuring an adequate health rural net at the population, documented by the high number of health performances.

2) Data processing capability improved at all levels:

   The HMIS, assisted by Tamu (C3), registered correctly statistics and epidemiological data both at regional and federal level, documented periodically and officially a relevant scientific vision of the national health situation, to spread better the health budget, according to the rural annual needs and priorities. The SAR, APR and Health Bulletins regularly published and discussed in specific meetings have confirmed this expected result.

3) Development partner and decision makers better informed through APRs and bulletins:

   The issue of detailed SARs, APRs and bulletins was regular. They also contained information regarding the top regional health care priorities provided in the following forms: *Mid-Term Review* (MTR), *Joint Review Missions* (JRM) and *Annual Review Meetings* (ARM) that also represented a shared institutional system of periodic monitoring with the support of Tamu MD experts and local consultants and the participation of all the decision makers and partners.

4) Promptness and completeness of the routine health reports and relations improved:

   The health data's elaboration, performed by the HMIS, collecting basic paper registrations in the community HPs and HCs, computerized in the PHs and in the Zone Health Bureaus, then transmitted to the regional and federal levels for the statistical analysis, has obtained an international accreditation, documenting periodically the local health situation in scientific form, as APRs and Health Bulletins regularly documented. In 2015, at the end of HSDP, a Special Bulletin 17° Annual

Review Meeting was published with the related Annual Performances Report/EFY/07, finally synthesized on the Health & Health Related Indicators EFY/08. With the technical assistance of Tamu' Office, the statistic and epidemiological FMoH publications should be considered a further demonstration of the periodic monitoring and information supply to fortify the rural health net.

5) Health care staff increased:

Part of the C1 (4,8%) and of the C2 were spent for: a) upgrade of the already employed health staff; b) health operators specialist training; c) staff increases was intended to strengthen the territorial health care network (HPs, HCs and PHs) each managed by their own ZHBs above which are the autonomous RHBs. The collected data confirm a remarkable increase in the staff number at all professional levels APR EFY/07& bulletins:

In Oromia

- 1,805 Health Officers (0.54/100,000 people);
- 3,324 BS graduated obstetricians (1 /10,000 people);
- 13,679 nurses (10.000 people).

In Tigray

- 620 Health Officers (1.23/10,000 people);
- 647 BS graduated midwifes (1.24/10,000 people);
- 3,797 nurses (7.5/ 10,000 people).

At a National level

- 6,933 Health Officers (0.77 / 10,000 people);
- - 7,922 BS graduated obstetricians (0.88/ 10,000 people);
- - 44,418 nurses (4.93/10,000 people).

6) Increased percentage of the health net with personnel in line with federal standards

In accordance to the Indicator 3, considering adequate the health staffs in HPs and HCs at national level, with maternal and child services improved, but still limited in the PHs, HSDP IV has realized remarkable health educated staff increases, compared to the pre-existent poor situation. Although the PHs still understaffed in 24/h duty especially can be ensured the emergency services through overtime-work by their current personnel. In June 2016, thanks to the C2, newly graduated specialist staff was employed in the primary hospital net.

7) Access to, quality and use of mother and child services:

According to the performance data APR/EFY/07 the access, usability and quality of the mother and child services improved at all levels outpatient care, pre and post natal.

- Antenatal Care (ANC): pregnant women with only 1 pre-natal visit were 97% at national level compared to 100% in Oromia and Tigray;

- ANC: pregnant women with 4 pre-natal visits were 68% at national level;
- Deliveries assisted by skilled staff were 61% at national level.

Normally the deliveries are assisted only in the HCs, transferring in ambulance the complicate pregnancy and the obstetric emergencies to the PHs, equipped by the 24/24 surgical service (EISO). However in rural vast catchments areas, the childbirths were performed by HEWs in HPs too, in order to avoid home-deliveries risky. Post-natal health under 5/yr. control performed 84% at a national level. The employment of IESOs who are qualified to surgically treat urgent cases (11% of the total deliveries) allowed reducing mother mortality rate, even if a careful assessment of their surgical skills is absolutely essential.

8) Access, quality and use of prevention services increased

The national immunisation and de-worming campaigns reached an almost full coverage with a special focus on measles (90.3%); this percentage reached 100% in Tigray while the *penta-valent*, PCV and Rotavirus vaccination are 98%, 93%, 90% respectively. The innovative family-planning and contraception services reached 70% of the women population nationwide while it was estimated that in 2002, 85% of the population were provided with LLIN infused anti-Malaria mosquito nets.

9) Access to, quality and use of the improved health care services

The access to the healthcare services, especially at the HPs and HCs showed to be improved, mainly thanks to regular supply of blood bags and basic drugs which are provided free of charge. Catchment areas are too extensive in comparison to national standards. As stressed by the per capita average number of provided healthcare services (0.48) HCs and HPs provide an efficient healthcare network easily accessible even in rural context and remote areas. In particular the HPs remarkably increased their health care services provision to rural population through therapeutic protocols implemented by HEWs who are qualified to treat the most common communicable diseases. Overall, both regional and federal basic health care system has greatly improved during HSDP IV: it is especially the mother and child sector that now can rely on round-the-clock usability, free of charge healthcare services and surgical treatments in case of urgency.

At a national level the healthcare net is composed of:

- 336 Hospitals (*Teaching*-TH, *General* and *Primary Hospitals* -PH). 147 are under construction; 189 Primary Hospitals are currently staffed with IESO and equipped with medical devices to provide a round-the-clock service. They are often well above the targets with an average of 476,593 patients.
- 3.547 HCs equipped with ANC service to address natural deliveries; the facilities have a free of charge ambulance service allowing them emergency transport to the nearest referral hospitals. Catchment areas with 25,395 people are in line with standards.

- 16.447 HPs provide basic health care services to rural communities by screening for HIV/AIDS and Malaria with disposable sets. Health posts are also qualified to assist natural deliveries without complication. With a 5,477 people catchment area HP's are in line with the standards.

Chart B.5 Expected Results (ER)	**Yes**	**%**	**Remarks**
1) FMoH endowed with enough financial resources for the HSDP	X	50	Increased 138%; HNA: 16% from the Government; 34% Householders; 50% International donors
2) Data processing and use of information improved at all levels	X	100	HMIS operative and running
3) Decision makers and development Partners better informed through APR sand bulletins	X	100	Regular and participated
4) Staff's relations increased according to their role	X	50	Updated according to HEP
5) Staff's relations increased according to their role	X	50	Considerably improved
6) Percentage of HC facilities staffed according to standards	X	60	Not enough was done at a hospital level yet
7) Access, quality and use of the child and mother services increased	X	80	High performance percentages(APR)
8) Access, quality and use of the preventive services increased	X	80	High performance percentages (APR)
9) Access, quality and use of the care services increased	X	80	Medium performance percentages(APR) (APR)
Total	**9**	**72%**	

Evaluation of the Expected results

Result 1 Indicators:

- Aid contributions paid as planned;
- Number of Italian experts in the federal and national health institutions.

Following the regular payments of aid contributions (C1 and C2,) 2 TAMU's medical doctors entered the Steering Committee of HSDP IV, both for Tigray and Oromia regions; moreover 1 Tamu's expert Office was required to take part of MDGF, as a no voting member. Unfortunately the Italian influence decreased as the aid funds were been temporary suspended before Aid 9459 starting.

Results 2 and 3 - Indicators:

- % of prompt and complete reports;
- regular issue of APRs and FMoH bulletins.

The indicators were measured by 100% statistical and epidemiological data worked-out by HMIS according a management and control pyramid (Kebelas, Woredas and Regional Health Bureau). All data processed and analysed has been promptly disseminated through the Annual Performance Report and

scientific Bulletins. The only fault was that the final publication of the National Health Account is issued by the MoFED one or two years away (EFY).

Results 5 and 6 - Indicators:

- Health staff ratio per inhabitants (benchmark: 1 physician/36,158; 1 Nurse/3,87; 1 HEW/2,544).

In order to improve the ratios recruitment and upgrading plan have been launched; in particular:

- 3,644 newly hired Health Extension Workers who have been trained at the HScC;
- 8,637 specialised permanent health operators who have been placed at 3547 health posts of which 1,444 are specialised in obstetrics;
- 220 nurses (Lev.3) who have been up graded as anaesthesia technicians and assigned to 189 hospital dealing with obstetrics and surgical emergency;
- 151 newly hired anaesthesia technicians while other 310 are going to complete their training;
- 479 newly hired IESO with a 3 years study in emergency obstetrics, while other 251 are completing their training at the Universities of Mekele, Jimma, Hawassa and Horomaya;
- 281 newly hired paramedical dealing with ambulance service;
- 1376 young graduates in medicine; there are currently 15.000 students enrolled in the 27 Federal Medical Schools who are expected to graduate within 3 years so increasing the number of doctors per inhabitants (1/100.000) in line with the standards recommended by WHO for developing countries.

Qualification	Benchmark (Vb)	H&HRI EFY 2008	Yes	%	Remarks
MD	1/36,158 people.	**1/17,160 people**.	X	147	Upward trend 1/10,000
Nurse	1/ 3,870 people.	**1/1,993 people.**	X	150	Upward trend
HEW	1/2,544 people.	**1/2,000 people**.	X	125	Suitable standards.

Results 7, 8 and 9 Indicators:

- % of skilled birth attendance - benchmark (Vb): 10%.

As stressed above, the skilled birth attendance (SBA), with free ambulance transport from the HCs to the PHs for the obstetric emergencies, registered a significant improvement with the 60.7% of deliveries attended by skilled personnel (HEWs, Midwives, and IESOs) increasing the 20%, compared with EFY 06 data. However the hygienic standard in the rural health facilities decreased of 3.9% during HSDP IV, probably for the consistent number of obstetric performances, with low attention at the cleaning services. This bad hygienic performance has been confirmed in the HPs' visits, but not in the HCs, mostly sufficient clean.

- Measles immunisation coverage (benchmark 77%).

Immunisation has always been a priority for the HSDP providing for 5 types of vaccines. a) pentavalent, b) Pneumacoccal Coniugate-PC, c) Rota virus, d) measles. According the HSDP IV the planned target for a complete immunisation (a+b+c+d) was 90%, but the performance indicator reached only 86.4%. A significant breakthrough was achieved as regard the measles immunisation coverage indicator which in the logical framework has been fixed 77%; despite it resulted to be lower than the ambitious target of 95%, the national average performance indicator reached 90.3%.

- Percentage of households with at least one insecticide-treated mosquito net – benchmark (Vb): 66%).

From 2002 to 2015 76 million of insecticide-treated mosquito nets have been distributed in areas affected by endemic malaria with an 85% coverage.

- Tb treatment success rate - % of new cases - benchmark (Vb): 84%.

The 94% target set in the logical framework has not been achieved with the regional and national performance indicators reaching 92% and 90% respectively. The G6 has been achieved in the reduction of TB incidence rate and treatment success rate among still infected patients.

- Number of persons living with HIV/AIDS receiving anti retroviral - ART treatment (benchmark: 152.472).

Ethiopia has always promoted low cost prevention policies to fight HIV/AIDS through free condom distribution; despite discrimination and stigmatisation of HIV infected persons are still a barrier for an effective ART treatment leading to under report the potential exposure to HIV, since 2002 there has been a 50% increase of people living with HIV/AIDS receiving anti retroviral treatment (from 473,772 to 871,334). In Oromia and Tigray are 135.000 and 50.000 respectively the persons living with HIV/AIDS under treatment.

Oromia and Tigray are the 2 best performing Regions in the child and maternal healthcare, in particular:

- SBA registered 70% in Oromia and 65% in Tigray that are both above the national average (60.7%);
- Mandatory Immunisation reached a coverage of 95% in Oromia and 85% in Tigray in line the national standards;
- Since 2009, 78 million of insecticide-treated mosquito net have been distributed to residential households, with 17 million distributed only in 2014/2015;
- The TB treatment success rate, Oromia reached 90% and Tigray 89% compared with the average national rate of 92.1%;
- For the HIV-related indicators, the 1.1% is the prevalence of Hiv/AIDS at national level, with the percentage incidence of 0.03%; 871,334 are the HIV diagnosed persons of which only 375,871 accessed the free antiretroviral treatment (ART). Oromia counts 135.000 HIV diagnosed persons receiving ART, while 50.000 are the treated patients in Tigray.

Despite significant results have been achieved in preventing and treating the most common communicable a non-communicable diseases, serious problems have been identified in Somali region where the number of teenage pregnancies is still high due to a widespread resistance to implement family planning policies. While Somali region recorded the worst result as regard contraception (5%), Tigray and Oromia reached 60% and 74%. In the Oromia case the target and performance indicators are identical, while Tigray over performed by reaching 74% compared with its targets.

<table>
<tr><th>RESULTS INDICATORS</th><th>Y</th><th>%</th><th>Remarks</th></tr>
<tr><td>RA1:
• Funds transfers occurred according to plans
• Italian Expert members of governing bodies</td><td>X

X</td><td>100

80</td><td>See Channel 3

Interruption of transfers to MDGF</td></tr>
<tr><td>RA 2, 3 and 4:
• % of prompt and complete reports issued
• Regular issuing of APRs and FMoH Bulletins</td><td>X

X</td><td>100

100</td><td>100%

Regular issuing</td></tr>
<tr><td>RA 5 and 6:
• Ratio: Qualified health care personnel/people: Basic value (Vb):
1 MD x 36,158 people;
1 Nurse x 3,870 people;
1 HEW x 2,544 people.</td><td>

X
X
X</td><td>

100
100
100</td><td>
<table>
<tr><th>National</th><th>Oromia</th><th>Tigray</th></tr>
<tr><td>MD x 17,160 people.</td><td>No data</td><td>No data</td></tr>
<tr><td>Nurse x 1.993 people.</td><td>2,117</td><td>1,333</td></tr>
<tr><td>HEW x 2,000 people.</td><td>No Data</td><td>No data</td></tr>
</table>
H&HRI/EFY/08
</td></tr>
</table>

RA 7, 8 and 9:			*National*	*Oromia*	*Tigray*
• % Skilled birth attendance (Vb 10%);	X	100	60.7%	70%	62%
• Measles vaccine coverage (Vb 77%)	X	100	95%	98%	82%
• % households provided at least with one LLIN net (Vb 66%)	X	100	85%	No data	No data
• % Success in Tb treatments (Vb 84%)	X	100	92.1%	88%	90%
• HIV/AIDS infected people in anti-retro-viral treatment (Vb 152,472)	X	100	871,334		
			APR/EFY/07		
Total		**100%**			

D. 2 - RELEVANCE OF THE OBJECTIVES

Since the HSDP was launched in 1997 in Ethiopia, child (U5MR) and mother (MMR) mortality were a national emergency. In a country that just emerged from the war, it seemed that the lack of resources for health, severe droughts, shortage of health personnel and healthcare facilities would slow-down the pace of the Development programme. The relevance of the objectives is the result of a close cooperation between Italy and Ethiopia which have agreed on taking action in favour of the Ethiopian health development. The Italian Local and Central Technical Unites supported the regional Health Bureaux to prepare a plan to achieve the health-related MDGs. The objective of the Aid 9459 are absolutely relevant in the lights of condition characterising the country where in 2011 the 71% of the rural population still lived under the poverty line with very poor healthcare services (Undp, HPI 2011). The precarious conditions characterising Ethiopia, broadly justify the signing of Bilateral Agreements to support the regional implementation of HSDP IV and MDGF in Oromia and Tigray.

D. 3 – THE ACHIEVEMENT OF OBJECTIVES

During the mission to Ethiopia the evaluation team was able to benefit from the local participation and support; this was made possible by the Italian experts and local consultants (Tamu'Office) who during the years were able to establish trust-based relationship with local counterparts. They have contributed to facilitate the evaluation tasks which have been guided by the programme logical framework defining the basic needs of the target population.

Fig.3-APR/EFY/2007 shows the trends of the national child mortality rate (U5MR) during the implementation of Aid 9459 supporting HSDP IV through human resources development, free

obstetric and out-patients services, immunisation campaigns, diagnosis and treatment of the communicable diseases.

Further parameters measuring the achievement of the objectives are displayed in Fig.6-APR/EFY/2007

The results of the main four health activities for reaching G4 and G5 are focused on:

a) women voluntary contraception (CPR) from 9% to 42%;
b) Antenatal care coverage at least four visits during the pregnancy (ANC4+) from 12% al 67%;
c) Skilled birth attendance (SBA) from 6% to 60%;
d) under five pre-natal care (PNC): from 5% to 90%.

A relevant result in the prevention of mother to child transmission (PMCT) from 1% to 69%: thanks to scientific progresses and cost reduction, the access to the detection and treatment of HIV/AIDS during pregnancy radically improved thus leading to the application of protocols to prevent HIV transmission to children.

It is also important to stress that all results achieved contributed to improve the Ethiopian health conditions resulting in the rise of life expectancy from 59.7 to 64 years (UNDP 2014).

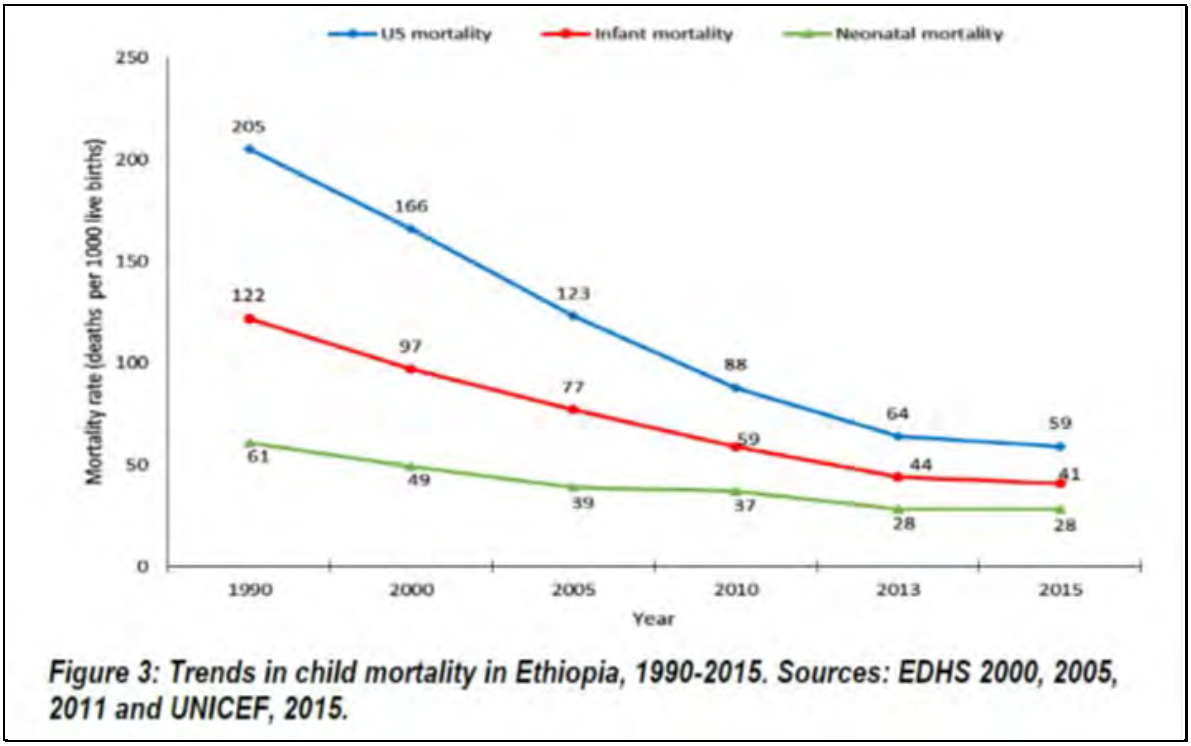


Figure 3: Trends in child mortality in Ethiopia, 1990-2015. Sources: EDHS 2000, 2005, 2011 and UNICEF, 2015.

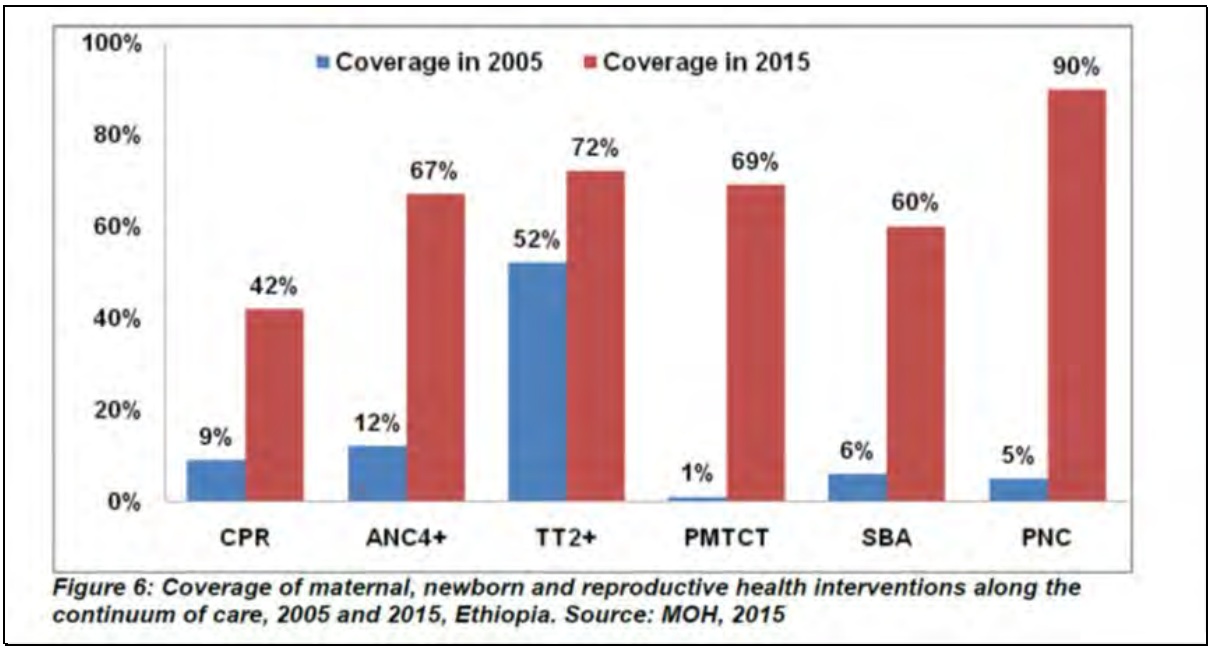


Figure 6: Coverage of maternal, newborn and reproductive health interventions along the continuum of care, 2005 and 2015, Ethiopia. Source: MOH, 2015

D. 4 –PROJECT ANALYSIS

The evaluation of the project is based on the four OECD/DAC criteria: relevance, efficiency, efficacy, impact and sustainability. The analysis takes into consideration the information gathered from the project paperwork, field visits and the interviews.

D.4.1 – Relevance

Project Aid 9459 showed to be relevant in supporting the Ethiopian health care policy in rural areas (HSDP) by achieving significant results in reducing child and mother mortality rate and preventing poverty related diseases (HIV, malaria and TB) after the expiry of 2015 MDGs. The C1, C2 and C3 contributed to achieve the G4, G5 and G6, both integrating MDGF (C1), and carrying out HSDP IV in Oromia and Tigray (C2). As stressed above, the main intervention areas were identified in the development of rural healthcare system by enforcing maternal health, improving local personnel and, last but not least, enhancing the management of health information for a better planning of economic resources for health. The implementation of the project and its monitoring activities (Tamu) were shared with the local partners through the programme Logical Framework containing the main health needs to be addressed. Such needs, which include a strong gender component, have been associated with indicators which have been remotely monitored to assess the improvement of regional health conditions. As mentioned above the rise in life expectancy from 49 (2000) to 64 (2014) provides an ample evidence of the general improvement of health conditions at national level. It is important to stress that also women benefited from such improvement reaching a life expectancy of 65 years. This positive result has been made possible by a combination of regional policies aimed to reduce maternal mortality; the enhancement of health facilities addressing maternal health allowed a decrease of

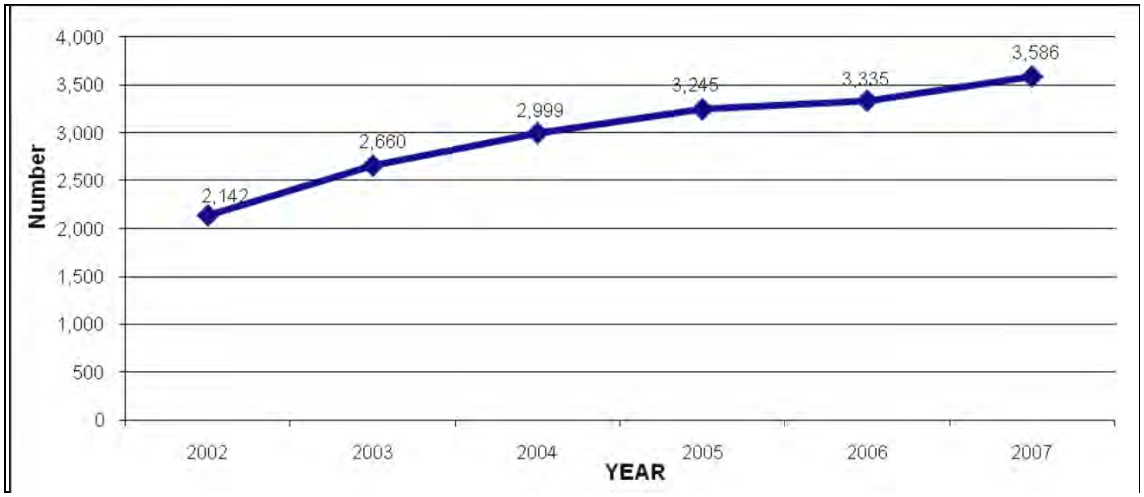
maternal mortality rate ranging from 990 maternal death/100.000 live births in 1995 to 676 maternal deaths/100.000 live births in 2011. Despite this improvement is associated with an increase in overall surgical performance as recorded by the HMIS, a further decline in maternal mortality rate has been forecasted for 2015.

In July 2014 the UN Statistic Division issued even better data registering 510 maternal health/100.000 live births in 2005 with a downward trend (378 maternal health/100.000 live births) during 2014 (World Bank Group 2015). During the evaluation mission the reduction of child mortality rate (U5MR) represented one of the most relevant topics to be assessed. In 1997 U5MR registered 217 deaths/1.000 live births, while in 2011 the deaths were 88/1000 live births. In 2015 at the conclusion of HSDP IV and with the deadline of MDGs, U5MR decreased to 80/1000 live births (APR/EFY/07). Sources from the UN Statistics Division reported more optimistic data with 68.3 deaths/1000 live births even if such data did not receive confirmation from the Federal Ministry of Health. The result assessment has shown the relevance of policies implemented by the Ethiopian Government both in maternal health sector and in family planning. Contraception awareness represented the core of the regional action plans for demographic control especially in poor rural areas where, despite the population growth is considered a problem, family planning and contraception still clash with local life style and traditional values. Moreover, the institutional commitment to the fight to reduce poverty-related diseases also represent a relevant step to restore the dignity of affected people who until recently experienced stigmatisation and discrimination. In this respect, the increase of the number of health staff per resident population (+147%) was a remarkable result that once again emphasizes the relevance of the Aid 9459 whose actions will continue in the framework of further two Italian interventions (Aid.10081/2013 and Aid 10418/2014).

D.4.2 - Efficiency

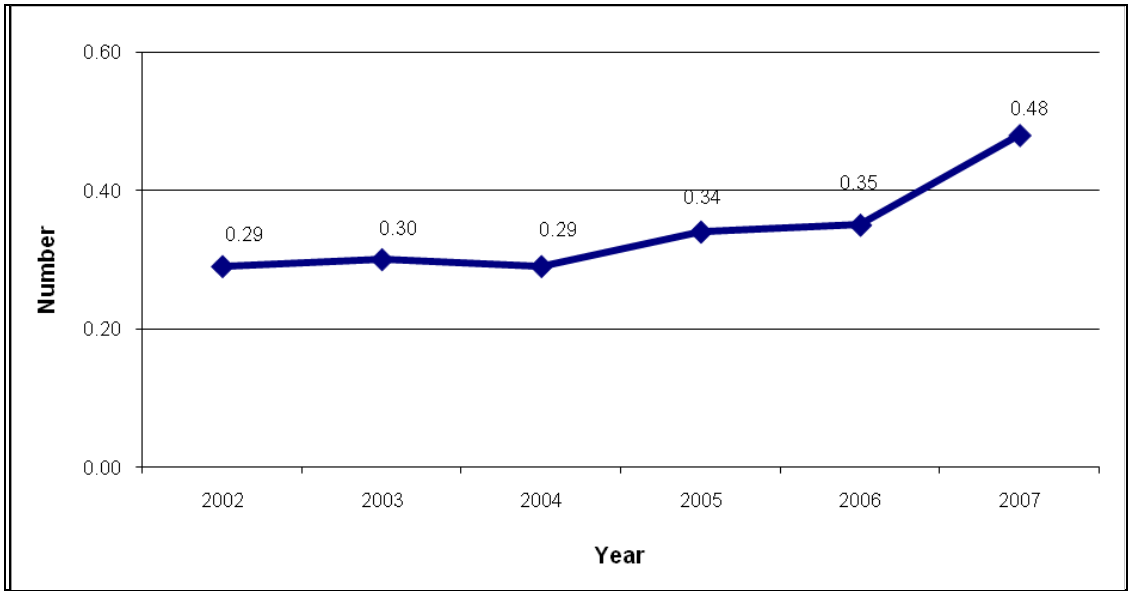
The willingness of the Ethiopian Government to accept international aids allowed promoting efficient and sound health policies benefiting the rural population particularly in the mother and child sector (G4 e G5) and in the fight against communicable diseases (G6). The very low standards of the Ethiopian health system required huge contributions from international Donors during the years; such contributions amounting to 50% of the National Health Account are have been managed by the Federal Ministry of Health and since 2007 the Ministry of Finance and Development has the task of harmonising the funds granted by the international community. The federal and national policies aimed at improving healthcare facilities focused on human resources development, improvement of ante-natal and post-natal care, enhancement of access to healthcare services in rural areas. In 2015 the number of Health Posts and Health centres registered a significant increase:

- Health posts: from 10.621 (2000) to 16,447 (2014);
- Health Centre: from 2,142 (2000) to 3,586 (2014).



The out-patients performance indicators, included in the logical framework, are almost doubled in the last five years from 0.29% per capita to 0.48 per capita confirming the efficiency of the recently activated rural referral system especially for the maternal health. The ante-natal service coverage (90%) has been reviewed as an efficiency indicator stressing the involvement of women in the maternal health services free of charge.

Despite the rural health care network has radically improved since the adoption of HSDP, inefficiencies have been identified in the hospital management system that, so far, has been unable to downsize the catchment areas which cover on average 350.000 resident people against the 100.000 residents recommended standard. This inefficiency is mainly caused by health staff shortages and delays concerning the construction and testing of new health facilities.



N° Hospitals			H&HRI/EFY/08
Regions	**Operative**	**Under construction**	**Total EFY 2008 (2016)**
Tigray	**15**	0	15
Afar	**6**	2	8
Amhara	**42**	36	78
Oromia	**53**	63	116
Somali	**9**	2	11
Benishangul Gumuz	**2**	4	6
SNNPR	**41**	36	77
Gambella	**1**	0	1
Harari	**7**	0	7
Addis Ababa	**2**	1	3
Dire Dawa	**11**	3	14
National	**189**	147	336

The evaluation work paid particular attention to the figure of IESO who following a three years training in surgery, deal with obstetrical emergencies by providing a round to clock surgical service representing the 11% of the total amount of deliveries. The evaluation showed how they can represent important resources for the maternal health care provided that their performance is carefully monitored; since IESOs are qualified to provide highly invasive surgical services without a supervision of medical doctors, their skills must be constantly assessed in order to avoid that they can pose a direct threat to the safety of patients. A further element of inefficiency is the delays in the transport of urgent patients; in a country where roads are usually in poor conditions and there are long distances to cover, the emergency management network still needs to be improved. Despite the inefficiencies identified, the *Ethiopian Reform Implementation Guidelines* (APR/EFY/07) shows a significant increase in the efficiency characterising basic health care services ranging from +76% in FEY/06 to +83% FEY/07.

D.4.3 – Effectiveness

Project Aid 9459 worked effectively in supporting mother and child health, especially considering the starting conditions of the Ethiopian health services in rural settings when the HSDP was launched in 1997. The decrease of child mortality (U5MR) and the improvement of MMR resulted in the implementation of effective policies ranging from prevention to family planning and contraception. In particular the national contraception rate reached a significant 70%, despite the 85% target has not been achieved; it interesting to note that at regional level, instead, the target of contraception rate was significantly exceeded in Oromia (75%) or, in the case of Tigray not achieved at all (60%) (APR/EFY/07). The extended coverage of ante-natal and post-natal care associated with immunisation campaigns have demonstrated the effectiveness of the action plans undertaken in the framework of the HSDP. The health development actions have often been accompanied by the involvement of local communities and especially of women. Remarkable achievements there have been also in immunisation coverage (see Box 14) and TB treatment (see Box 31) demonstrating the

effectiveness of the regional and federal policies in terms of prevention and care and good participation of population.

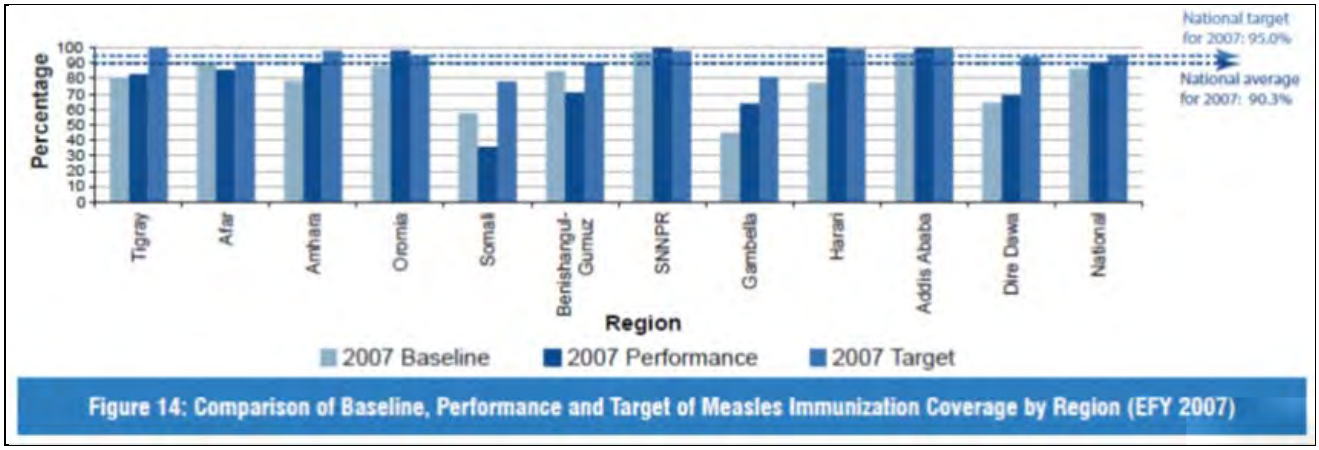


Figure 14: Comparison of Baseline, Performance and Target of Measles Immunization Coverage by Region (EFY 2007)

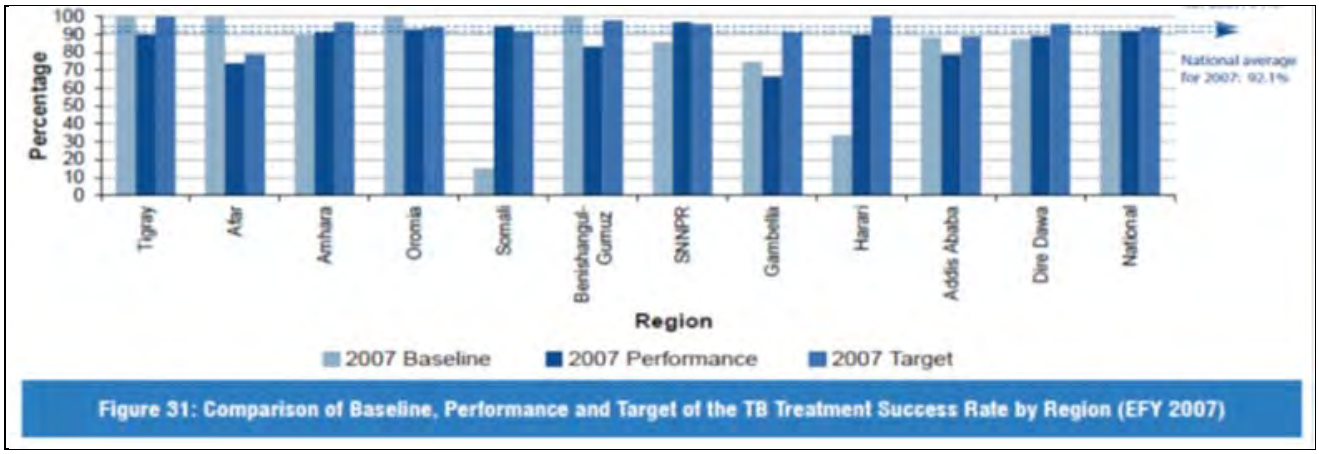


Figure 31: Comparison of Baseline, Performance and Target of the TB Treatment Success Rate by Region (EFY 2007)

However, there is still low local involvement in the diagnosis and treatment of communicable diseases, first of all HIV/AIDS, for which stigmatisation and mistrust are still widespread.

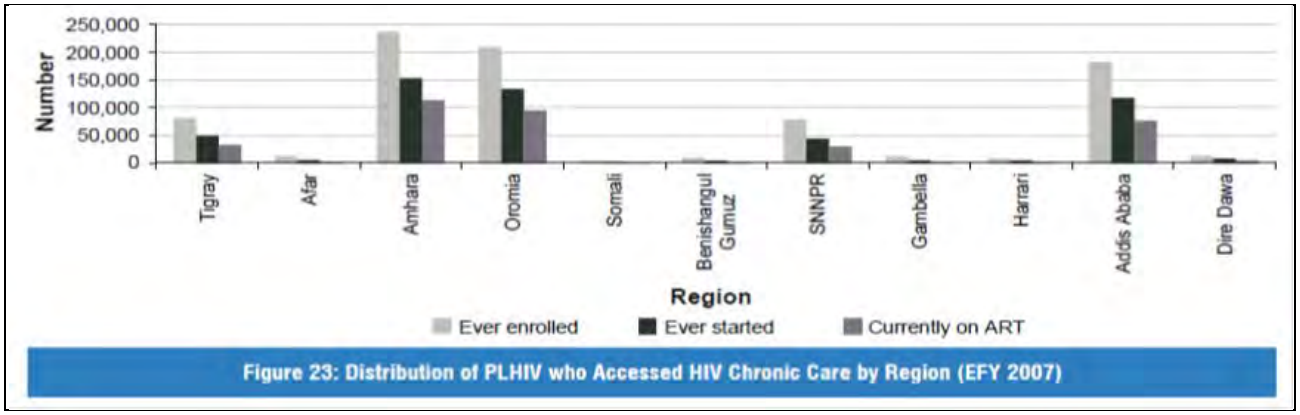


Figure 23: Distribution of PLHIV who Accessed HIV Chronic Care by Region (EFY 2007)

Despite in Ethiopia HIV/AIDS is not as rampant as in other Sub-Saharan countries thanks to prompt low-cost preventing actions which started in 1998, HIV/AIDS patients experience difficulties accessing diagnosis and treatment especially in the most remote Regions where HIV policies are limited or

completely lacking. The effectiveness of health actions undertaken by the Government are usually frustrated by the shortage of economic resources; despite Ethiopian health development Plan is usually offered as an example by international organisation, the average annual per capita health spending (16,1 USD) remains lower than the WHO recommended standards (60USD); notwithstanding the demographic growth increased the federal budget for health, the average annual per capita health spending has remained unchanged since 2010. However, the health system showed to be better at regional level where Oromia and Tigray have on average been performing better that those of the rest of Ethiopia: both the regions have improved the provision and use of maternal healthcare services; while noticeable results in the prevention and treatment of communicable diseases have been also tracked. As regard the training sector, the federal human resources development plan has introduced up-grading programmes for health personnel currently on-duty and meanwhile has started-up standard academic courses with the employment of young health operators. The evaluation has paid particular attention to the health extension workers, most of whom women, who currently staff health pots in rural settings. The human resources development was closely linked with the downsizing of HP and HC catchment areas with the aim of guaranteeing the actual 90% health care coverage for maternal health, prevention and treatment of communicable diseases (HIV/AIDS, malaria and TB).

D.4.4- Impact

The Aid 9459 contributed to support the national health policies in achieving the MDgs by providing access to a section of the population who was until now excluded from both health care and decision making process. Ante-natal e post-natal performance rates are an example of the high involvement of women in accessing health posts and health centres which are more numerous and better equipped than in the past. This has contributed to redefining heath catchment areas (16,447 for HPs and 35,869 for HCs) bringing them up to planned standards. The hospital networks, instead, is still characterised by catchment areas which are 3 times greater than standards, negatively impacting on the management of obstetric emergencies.

Hospitals usability is often hampered by the poorly functioning of medical and diagnostic equipment which, despite recently purchased, are currently utilised just to address emergencies. As obstetric ultrasound scan is something entirely new for patients, consistently utilised, it would promote the involvement of families.

The evaluation identified the WDG as strategic actors for the implementation of prevention and family planning policies; they play a crucial role in mobilising rural communities and supporting women empowerment. Aiming at a comprehensive response to maternal health, there is a growing awareness on the importance of pursuing family planning policies which are also needed to avoid teenage pregnancies. Last but not least, the life expectancy rate has increased more for women (64 years) than

for men as a result of the many women-centred actions undertaken by both federal and regional Government.

D.4.5 - Sustainability

The HSDP IV, supported by Aid 9459 in Oromia and Tigray, carried out many sustainable developing activities both quantitatively & qualitatively, especially in the mother & child sector by addressing the lack of skilled personnel in the emergencies management. The introduction of IESO, for example, acting as leading figures in obstetric surgical procedures makes it necessary for them to be granted with the high technician professional status. In addition to ensuring surgical services, IESOs play an indirect role in supporting rural households by avoiding the premature death of pregnant women. The ante-natal service played a crucial role in preventing and monitoring complications in pregnancies since the emergency cases, when needed, are transferred to the nearest primary hospitals.

The family-planning & contraception services (CAR) provided by the HPs and HCs act in an innovative manner on local traditional values so contributing to contain the population growth.

Despite the Ethiopian per capita annual health expenditure is well below (16 USD) the threshold of 60 USD; the *Health Low Cost Strategy* is generally considered a best practice for its operational capacity in rural settings. Therefore it appears that the concept of human development sustainability should be reviewed in the light of the significant benefits that have accrued from better health conditions. Despite such concept is not always economically sustainable there is no doubt that it can produce benefits in terms of a more widespread well-being especially in rural areas.

Despite the outstanding results achieved in basic health care and in human resources development the Ethiopian Health system is still dependent on international donors who provide funds amounting to the almost half of the National Health Account during the implementation of HDSP IV. Of 1.2 billion USD, 600.000 USD came from external aid of which 1.3 million from Italy. The currently debt position of Ethiopia should be considered as provisional as the federal Government, in agreement with the international Donors, postponed to 2030 the budgetary adjustments. The next national health programme will no longer be focused on development but on transformation with a particular attention to the measures aimed to foster economic sustainability through international aids for capacity building. Among the viable measures there is both the introduction of collective health insurances divided into professional categories or income groups and the collection of VAT already under way through the emission of receipt by dealers.

SECTION "E"

LESSONS LEARNED AND RECOMMENDATIONS

E.1 - Lessons learned

The lack of smoking is one of the health determinants in Ethiopia where the damage to health by smoking is generally recognised also without public awareness campaigns. On the contrary the environmental pollution, especially in big-city areas, is negatively affecting the health of residents. These are the extremes better representing the Ethiopian model of development which is characterised by national pride, interethnic coexistence and great tax compliance. The key word of the current Ethiopian health policy is *transformation;* as a second step, following the development of the national health system, the Ethiopian Government intends to ensure the economic sustainability of reform achievement. That intention may also be interpreted as an attempt of social liberation which can be perceived in the intensive urbanisation process.

In Oromia and Tigray the HSDP IV played a strategic role in implementing concrete and dynamic actions which showed to be instrumental in fully achieving G4 and G5 while G6 target has almost been reached.

During the mission to Ethiopia, the evaluation team identified some weaknesses resulting from the complexity and scale of the Programme; their identification allowed the evaluators to develop some lessons learned (LL) whose dissemination could prove a helpful model for future projects.

LL 1: Relation building: despite evaluation has become an integral part of the projects, is frequently seen as an unwanted meddling in the internal development policies causing initial diffidence in the local partners who sometimes wrongly supposed that it could undermine the principle of ownership. The allocation of Channel 2 did not sufficiently take into consideration the differences of territorial extension and population size between the 2 recipient regions: in particular the C2a assigned to Oromia was not suited to the health needs of a very large population, while Tigray, despite a much smaller population, was granted with more substantial funds. Furthermore the contribution for Oromia, instead of being injected into a specific priority area, has been parcelled-out into a multitude of cost centres (A/B/C/D/E/F/G/H). The local counterpart demonstrated appreciation for particular cost items such as: a) repair and maintenance service for ambulances; b) supply of metallic shelves for HP and HC's pharmacies; c) computer equipment for HIMS. Since C1 represented a direct contribution to MDGF no assessment could be made; as a multi-donor fund MDGF already owns a specialised control body (CCM) which, according the *Joint Financing Agreement* issues quarterly reports on progress updates in achieving MDGs.

LL 2: Health facility construction and rural primary health care: (HP-HC-PH): albeit the improved coverage of the rural primary health system in both Oromia and Tigray, health staff and medicine

supply are not already in line with the standards recommended by WHO for developing countries. Delays in health facility construction and testing partly hamper the access to maternal health care service, despite it is provided free of charge. The situation is different with regard to trauma, non-communicable and age-related diseases for which no tax exemption is allowed, leaving to patients the burden of care. During the field visits the evaluation staff found that many health care facilities due to cheap materials were in poor conditions, while electric and water installations have deteriorated because of cursory testing and lack of maintenance. Moreover heath facilities didn't have a waste management service; medical and ordinary wastes are burnt in external incinerator without any filters and close to the patient wards.

LL3 - Biomedical equipment: The health facilities are equipped with low quality medical devices that are supplied without warranty of any kind. This problem impacts negatively not only on the provision of health care service but also on the health staff that has been properly trained to use such devices. The many faults experienced by Hospital diagnostic services lead many pregnant women to drop controls after the fourth visit, so undermining the prevention and identification of complications. The recently installed RX ray film devices, in addition to producing high polluting RX developer liquids that are being dispersed into the environment, resulted underutilised or out of order. Moreover no radio-protection protocol for patients and health staff is currently followed.

LL4 - Non medical staff training: In the framework of the Health Extension Package more than 32.000 health operators have been hired; professional differentiations of non-medical professionals have been carefully set up: RX, Laboratory and Anaesthesia technicians, health operators for ambulance service, health managers and technical officer dealing with HIMS. The difficulties characterising the non-medical training in Oromia and in Tigray are outlined below;

A) over-utilisation of free up-grading programmes for the health staff on-duty. If on one hand such programmes showed to be very useful to provide health personnel with new skills and at the same time support generational turn-over, on the other hand newly graduated students did not enjoy any facilitation during the HSDP IV and they have not been offered a job after graduating. It is also worth noting the difficulty in assessing both up-grading and standard academic programmes even if newly gradated students could complete their studies with a on-the job-training modules under the supervision of staff on-duty.
B) The management of obstetric surgical urgencies, amounting to 11% of the total deliveries should be carefully monitored. At this regard IESOs represent the new figure in charge with surgical services at health centres. As they are qualified to provide highly invasive surgical services without a supervision of medical doctors, their skills must be constantly assessed in order to avoid that they can pose a direct threat to the safety of patients.

C) The quality of up-grading training courses is considered unsatisfactory; moreover during the 3 months residential courses the trainees leave understaffed health facilities producing inefficiencies and disorganisation.

D) Field visits provided evidence that a repairing and maintenance service for vehicles, installations and health buildings is absolutely essential; frequent malfunctioning undermines the quality of health care delivery and threatens to frustrate the development of the national health system.

E.2 - Recommendations

R1 Health facility construction and equipment:

- It is recommended to identify some middle level health facilities (e.g. primary hospitals) which will be followed during the construction and equipment in order to provide the bases for construction, management and maintenance especially for complex diagnostic and surgical services by establishing a regulatory framework applicable in the hospital network
- Purchase easy to use medical equipment, provided with warranties and maintenance service. Many suppliers of medical devices offer *tropical version* of the their products (this is the case of ecographs); an investment in the purchase of such devices coupled with the training of personnel who is able to utilise them could support a better coverage of ante-natal care service with greater involvement of women and their families
- support and sustain repairing and maintenance service for vehicles, installations and health building as frequent malfunctioning undermines the quality of health care delivery and threatens to hamper the development of the national health system. According targeted questionnaires to pregnant women, they would be more willing to undergo more than 4 visits if the diagnostic service was always available.

R2 Upgrading training

A. Up-grading programmes should avoid that health personnel leave unattended their post especially when the health facility is staffed with health operators in their first job. Health professionals playing key-roles should be involved in rolling up-grading programme but without producing an excessive workload for the personnel who remains in service. The up-grading should also be targeted on one priority sector (e.g.: maternal health) instead of parcelling it into many specialisations. In this regard a component of the C3 could be allocated for the technical assistance of Italian consultants able to implement the transformation pursued by the Federal Government. The quality assessment of training should be improved by giving out questionnaires or by organising interviews with students with the support of Tamu's Office.

B. Within the limits of the budget available, training activities should focus on some key-roles in order to enhance their skills. This is the case of obstetric urgencies that should be addressed by setting up a strict intervention protocol ranging from ambulance service to the surgery practices to put in place. Therefore it urgent the training of IESO, who are often the first to concern about the sensitivity of their role; they should be involved in refresher courses where experienced expatriate health professionals supervise and guide their surgical activities.

Acknowledgements

Gianluca de Vito, Carlo V. Resti and Edao Simba would like to express their gratitude to the Office IX-Directorate General for Development Cooperation, Mr Ambassador Giuseppe Mistretta, the Head of Italian Agency for Development Cooperation in Addis Ababa Mrs G. Letizia, the experts Mr Pasquale Farese and Mr Sandro Accorsi, the administrative officer Paolo Melilli, Tamu's Office consultants, the Director General of THB Hagos Godefay, the executive Mr Lemma Desu and Mr Girmai Alemhayen from OHB.

Rome, 18/11/2016
Rev. 23/12/2016

Gianluca de Vito MD
gianluca.devito@virgilio.it
Carlo Vittorio Resti MD
carlo.resti@virgilio.it
Edao Simba

PAGE REMOVED FOR PRESENCE OF SENSITIVE DATA

PAGE REMOVED FOR PRESENCE OF SENSITIVE DATA

PAGE REMOVED FOR PRESENCE OF SENSITIVE DATA

PAGE REMOVED FOR PRESENCE OF SENSITIVE DATA

PAGE REMOVED FOR PRESENCE OF SENSITIVE DATA

PAGE REMOVED FOR PRESENCE OF SENSITIVE DATA

PAGE REMOVED FOR PRESENCE OF SENSITIVE DATA

PAGE REMOVED FOR PRESENCE OF SENSITIVE DATA

PAGE REMOVED FOR PRESENCE OF SENSITIVE DATA