

## ETHIOPIA

### Italian Contribution to the Health Sector Development Programme, 2010-12

AID 9459



Primary Hospital - Zway - Oromia

**PROJECT AID 9459**

Italian contribution to the Health Sector Development Program (HSDP) 2011-2012

**EVALUATION SUMMARY REPORT**

This evaluation summary report resumes the outcomes of the project: *Italian contribution to the Health Sector Development Program* (HSDP) 2010-2012 - Aid 9459, financed by the Italian Ministry of Foreign Affairs and International Cooperation (MAECI), as a multi-donors contribution to the Millennium Development Goals Fund (MDGF) and as bilateral support to HSDP IV, with a free-grant-budget of € 8,200,000.00, from March 2011 to September 2014, implementing the primary rural health system in Oromia and in Tigray in the achievement of the 3 health Millennium Development Goals (MDG) 2015:

- G4: REDUCE CHILD MORTALITY (reduce 2/3 the under-five mortality rate),
  - G5: IMPROVE MATERNAL HEALTH (reduce 3/4 maternal mortality ratio),
  - G6: COMBAT HIV/AIDS, MALARIA (halting and reversing the Tb/HIV/Malaria incidence);
- to improve the quality of life in Ethiopia, especially in mother & child sector, supporting the health rural policy, the health staff upgrading, the Health Management Information System (HMIS) with procurement & equipment too.

The contract for the evaluation service, awarded to Ceseco International s.r.l, was signed on September 2015.

Dr. Gianluca de Vito and Dr. Carlo Resti (MDs) drew the Evaluation Health Report, with the assistance of Mr. Edao Simba.

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## 1. INTRODUCTION

The MDGs 2015 are still a priority for the Ethiopian Federal Ministry of Health (FMoH), sustained by International aid. At the same time, Ethiopia is an Italian government's (GoI) priority country, since the beginning of HSPD in 1998, to improve the rural health system, benefiting the mother and child sector to achieve the 3 health specific goals: G4 -2/3 infant mortality; G5 -3/4 mothers mortality rate; G6 stop incidence HIV/Malaria/Tb. Following these FMoH's rural health strategy the project Aid 9459, funded by the Italian Foreign Ministry (MAECI), with a free-grant-budget of € 8,200,000.00, has supported the MDGF and the realization of the HSPD IV in Oromia and Tigray. The Aid 9459 free-grant was divided in 3 channels:

Channels: (C1, C2 & C3).		
<b>C1</b>	<b>€ 2900,000.00</b>	MDGF (FMoH)
<b>C2</b>	<b>€ 3500,000.00</b>	HSDP IV (FMoH)
<b>C2a</b>	<b>€ 1150,000.00</b>	Oromia Health Bureau (OHB)
<b>C2b</b>	<b>€ 2350,000.00</b>	Tigray Health Bureau (THB)
<b>C3</b>	<b>€ 1800,000.00</b>	Expatriate Technical Assistance Fund
FGE	<b>€ 1200,000.00</b>	Expert Italian Fund
FGL	<b>€ 600,000.00</b>	TAMU office Fund
<b>Total</b>	<b>€ 8200,000.00</b>	

On 10th November 2010, the bilateral inter-governmental agreement in Addis Ababa started up the project Aid 9459 to strengthen, from 18/03/2011 to 16/09/2014, the primary health care rural system benefiting the mother & child sector and implementing the Health Management Information System (HMIS), following the objectives, the indicators and the expected results of the project Logical Framework.

## 2. GENERAL AND SPECIFIC OBJECTIVES, INDICATORS AND RESULTS

General objective: to improve the Health of the Ethiopian population in line with the G4, G5 and G6 of the MDGs 2015.

Specific objectives: i) to increase and to improve the promotion, prevention & care quality services to the rural population; ii) collecting and transmitting the statistic-epidemiological regionals information (HMIS) to upgrade the professional human health resources qualifying the accessibility of primary health care services in Oromia & Tigray regions.

Project Indicators:

- Per capita annual attendance of the basic health services pro capita (Base-value: Vb 0,3).
- Percentage of the catchment areas (x HP, HC&PH), increased.
- Percentage of Health institutions provided with standard compliant professional staff.

Expected Results (ERs):

1. FMOH endowed with sufficient financial resources to implement the HSDP;
2. Capacity of collecting, organizing, processing information at all levels upgraded;
3. Decision makers and development partners better informed through APRs and Bulletins;
4. Promptness and completeness of the routine relations upgraded;
5. Health staff relationships bettered at all levels;
6. Proportion of standard staffed health care facilities centres increase;
7. Access, quality and use of mother and child health care services improved;
8. Access, quality and use of prevention services improved;
9. Access, quality and use of the care services improved;

Indicators for ER 1:

- Funds supplied according to the plans;
- Italian Experts part of the Health governmental policy & institutional required bodies.

Indicators for ER 2, 3 & 4:

- Percentage of prompt & complete official reports;
- Regular issuing of APRs and FMOH bulletins.

Indicators for ER 5 & 6:

- Health Staff percentage according to each category: Base-value (Vb: 1MD/36.158 people; 1 Nurse /3.870 people; 1 HEW/2544 people).

Indicators for ER 7, 8 and 9:

- Percentage of assisted deliveries by qualified staff (Vb 10%);
- Measles vaccine coverage (Vb 77%);
- Percentage of houses provided with insecticide infused mosquito-nets (Vb 66%);
- Success percentage of Tb treatments (Vb 84%);
- Number of Hiv/Aids infected people treated with retro-viral treatment protocol (Vb 152.472).

**3. THE PROJECT ACTIVITIES**

To strengthen the primary health care rural system, implementing HMIS in the two Regions, the project Aid 9459 has supported by C2 (well reported) integrated by C1 (not detailed) and monitored by C3, the realization of the main activities,;

in Oromia:

- A) Human resources development;
- B) Statistical system monitoring;
- C) Supply and equipment;

- D) Other health services;
- E) Headquarter HMIS in OHB;

in Tigray:

- F) Human resources development;
- G) Goods and services;
- H) Other HC services.

#### 4. THE EVALUATION REPORT

The Evaluation Report (ER), along the DGCS guidelines, is made of the following sections:

1. Section A: The framework and context;
  2. Section B: The Project;
  3. Section C: The Evaluation;
  4. Section D: The project analysis;
  5. Section E: Lessons learnt and recommendations.
1. **Section A** includes a short presentation of the intervention area, with the Ethiopian present situation, as well as the national health policy, described and listed along their date and time sequence.
  2. **Section B** includes the preliminary phases of the project identification, formulation and bilateral contractual agreements, presenting the framing and the financial resources assigned to the three budget lines. It lists the Goals, Indicators and Results, with the resume of the *procurements* and *tenders* project-design, monitoring the planned budget health allocations.
  3. **Section C** presents the evaluation project, starting with the implemented activities, describing the findings of the field surveys at the health care delivery sites, as well as the gender activities in the two selected Regions (Oromia & Tigray). It presents the interviews to the stakeholders and to local health staff/authority, analysing the composition and the management of the primary health care rural system with priority to the mother & child sector. On the basis of the interviews and HMIS publications, it compares the percentage of results achievements versus the objectives and the results indicators to G4/G5/G6 of the MDG 2015.
  4. **Section D** presents the project analysis along the OECD/DAC criteria: Relevance, Efficiency, Effectiveness, Impact and Sustainability of the health project.
  5. **Section E** presents the lessons learnt, validated on the basis of the field visits, meetings and interviews, and lists the recommendations for the implementation of similar health projects.

## 5. THE EVALUATION MISSION

The Health Evaluation agenda, authorized by *Ceseco International s.r.l.*, was realized in 4 Steps both in Rome and Ethiopia:

- Step 0 - Desk Analysis in Rome, from November 2015 to February 2016, several meetings conducted by the MDs Team with the Expert MD Responsible of the Technical Assistance Monitoring Unit (Tamu).
- Step 1 - in Addis Abeba (AA): from the 28 February to the 02 March and from the 10 to the 12 March, 2016: in total 20 evaluation meetings for the specific Channels, together with 12 Health local Authorities, Experts and Local Consultants Tamu, in the following sites:
  - FMoH-MDGF, Pharmaceutical Drugs Department (PFSAC) & Tamu (C1);
  - OHB, ABH-Univ. Services (C2a) & Tamu (C2a & C2b)
  - Tamu & UTL (C1,C2 e C3)
- Step 2 - in Oromia Region, from the 29 February to the 9 March 2016, a 1,350 Km long-trip carried out by car, through Addis Ababa , Adama, Bekoji, Asela, Shashamane, Ziway, Woliso, Ambo and back to Addis, regarding C2a integrated by C1. During the evaluation mission 23 health sites were visited with 27 health-staff interviewed.
- Step 3 - in Tigray Region, from the 2 to the 9 March, 2016, a 814 Km long-trip was carried out by car through Mekelle-Axum-Adigrat-Mekelle, regarding channels C2b integrated by C1: During the evaluation mission 18 health sites were visited with 36 health-staff interviewed.

The health regional site visits are listed in the box here below:

in Oromia (C2a & C1)	in Tigray (C2b & C1)
n. 3 Health Zones Bureaus (HZB): Adana, Asela & Wolisso	n. 1 HZB/WoHO: Gantafeshum
n. 3 Universities (Univ/HScC): Ambo, Asela & Shashamane	n. 2 Univ. HScCs: Axum & Mekelle
n. 2 HMIS offices : Adama & Asela:	n. 1 T RH: Mekelle
n. 2 Blood Banks (BB): Adana & Woliso	n. 4 PHs: Adigrat, Axum, Mekelle & Wukro
n. 3 Referral Hospitals (RH): Asela, Woliso, & Shashamane	n. 5 HCs: Adwa, Agula, Mekelle & Zalanbessa
n. 4 Primary Hospitals (HP): Bekoji, Shashamane, Wenchiti & Ziway	n. 3 HP: Adwa, Gola & Solodda:
n. 4 Health Centers (HC): Dole, Neghele, Wenchiti & Wolisso	
n. 2 Health Posts HP: Wolisso Rural Zones	

In total n. 48 health sites have been visited in Addis Ababa, Oromia and Tigray, meeting 83 health Authorities/Directors & Operators, distributing 98 questionnaires at 4 different categories of local stakeholders to evaluate the action of HSDP IV, sustained by Aid 9459 in the 2 Regions.

According to the APR/EFYs2004-2007 and the UNDP *Report/2011-2014*, the health regional system, has achieved important results in the mother & child sector, improving the quality and accessibility of the primary health services, benefiting the rural population in Oromia e Tigray, in reason to the poor health previous situation (HSDP/1998). The results are evaluated by the Basic Value Indicators (Vb) of the Logical Framework (LF) as shown in Tables below:

#### Evaluation of the 3 LF's Indicators.

<b>PROJECT Indicators</b>	<b>Results &amp; Remarks</b>
1. Annual outpatient services attendance per capita (Vb 0,3)	National <b>0,48 %</b> ; Oromia <b>0,37%</b> ; Tigray <b>0,87</b> (APR/EFY/07)
2. Percentage of the catchment areas increased.	Targets (APR/EFY/04) & Performances obtained (H&HRI/EFY/08): 1 <b>HP</b> every <b>5.000</b> people; 1 <b>HC</b> every <b>25.000</b> people. Only the hospital's catchment areas (with a target of 1 <b>PH</b> every <b>100.000</b> people) are still 3 times over the standard.
3. Percentage of health facilities properly staffed, according to the standards	Only the HPs have adequate Staff (Health Extension Workers), both HCs & PHs are not properly staffed, despite skilled health personnel reinforcement in progress. Anyway the increase of the health staff over population percentage has had a remarkable <b>plus 147%</b> (APR/EFY/07).

#### Evaluation of the Expected Results (ERs):

##### 1. FMoH endowed enough financial resources for the HSDP

During 2004-2011 the Health National Account (HNA) increased 138%, reaching 26,5 billion/year Eth.Birr (Usd 1,2 billion). The 50% is International Aid, with the 1,3% Italians. Despite the increases, the 16.1 Usd per capita is still below the World Health Organization's standard. Anyway the Ethiopian Primary Health System is a good rural low-cost example, as the MDG's Report 2015 reported.

##### 2. Data processing capability improved at all levels:

The HMIS, assisted by Tamu, registered statistics-epidemiological data at Federal and International levels, in order to spread the specific budget for the health regional priorities (C3).

##### 3. Development decision makers better informed through APRs and bulletins:

The *Annual Performance Reports* (APRs), *Bulletins*, *Mid-Term Review* (MTR), *Joint Review Missions* (JRM), *Annual Review Meetings* (ARM) & *Health & Health Related Indicator* (HHRI) were detailed and participated by the Tamu monitoring consultancy, feeding regular regional health data/information at the FMoH in line with United Nations health requirements.

#### 4. Promptness and completeness of routine relations improved:

At the conclusion of the HSDP IV & the MDG 2015, the *Special Bulletin 17<sup>o</sup> Annual Review Meeting*, the APR/EFY/07 and the HHRI EFY/08) are published, detailing the rural health results.

#### 5. Health staff increased:

	<b>Oromia</b>		<b>Tigray</b>		<b>National</b>		<b>H&amp;HRI/EFY/08</b>
<b>Professional</b>	<b>EFY/07 n.</b>	<b>n. x 10,000 people</b>	<b>EFY/07 n.</b>	<b>n. x 10,000 people</b>	<b>EFY/07 n.</b>	<b>n. x 10,000 people</b>	<b>n. x 10,000 people</b>
Health Off.	1,805	0,54	620	1,23	6,933	0,77	
Midwives	3,324	1,00	647	1,24	7,922	0,88	
Nurse	13,679	4,6	3,797	7.5	44,418	4,93	

#### 6. Percentage of the health facilities with standard based staff increases:

Health facilities increase in the HCs and HPs, since EFY/04. The PHs were still understaffed. In June 2016, newly graduated staff were employed, not yet registered in APR/07.

#### 7. Access, quality and use of mother and child sector improved services:

The improvement and participated health services are documented by the mother & child performances at national level (APR/EFY/07):

- The Ante Natal Care (ANC), with only one pre-natal visit is at 97% of the total births;
- The Ante Natal Care (ANC), with 4 pre-natal visits is at 68% of the total births;
- The Skilled Birth Attendance (SBA) is at 61% of total births;
- Post-natal Under 5/yrs. controls are performed at 84% of the infants.
- Emergency Surgical Obstetric 24h duty in the PHs, with free ambulance transport from HCs

#### 8. Access, quality and use of prevention services increased (at national level - APR/EFY/07)

- The vaccination measles prevention, reached 90.3% of the infant population
- The family-planning & contraception (Car) reached 70% of the young women.
- The 85% of the family houses were provided with LLIN infused anti-Malaria.

#### 9. Access, quality and use of the improved health care services: (H&HRI/EFY/08)

The implemented rural health net at a national level consists:

- 336 Hospitals: *Teaching (TH)*, *General (GH)* and *Primary (PH)*. In addition 147 are under construction;
- 3,547 HCs equipped for ANC and ready to manage deliveries;
- 16,447 HPs provide community health care and delivery service too

### Evaluation of the ER Indicators

#### ER 1 Indicators:

- Funds transfers occurred according to plans



- Italian experts in the governing bodies

The regular transfers of C1 and C2 allowed the insertion of 2 MDs Tamu in the governing bodies of HMIS & in the CCM of MDGF.

#### ER 2, 3 & 4 Indicators:

- % of prompt and complete reports
- Regular issue of APRs and FMoH bulletins

100% regular statistics & epidemiological data by HMIS, are published with the Tamu technical assistance. The regular health information reached the local & international authorities (APRs & bulletins).

#### ER 5 & 6 Indicators:

- Ratio Staff/people for each category: basic value (Vb): **1 MD/36,158** people; **1 Nurse/3,87** people; **1 HEW/2,544** people.

Professional	V.b. QL (HO x people)	V. EFY 2007	%	Remarks
<b>MD</b>	1x 36,158	<b>1 x 17,160</b>	147	Upward trend 1/10,000
<b>Nurse</b>	1x 3,870	<b>1 x 1,993</b>	150	Upward trend
<b>HEW</b>	1x 2,544	<b>1 x 2,000</b>	125	Suitable standard.

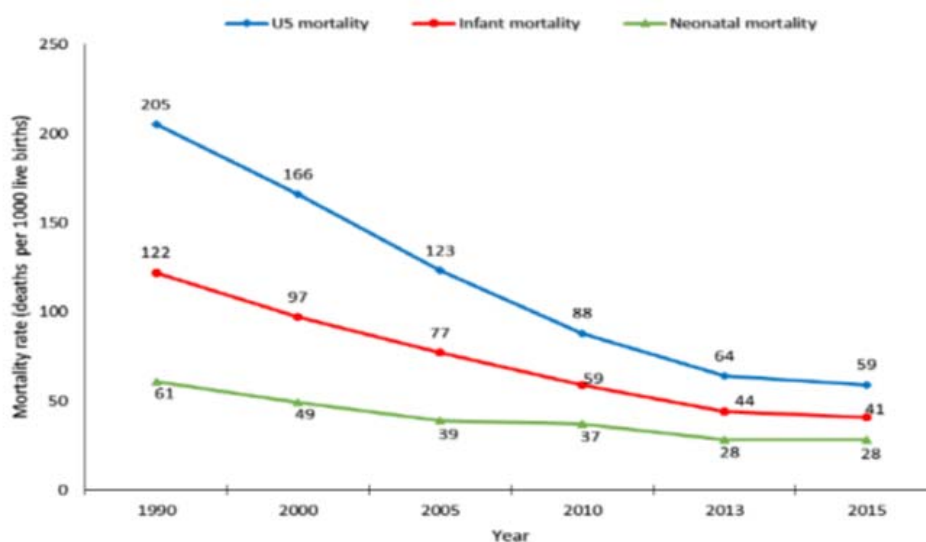
HHRI/EFY08

#### ER 7, 8 & 9 Indicators:

- Percentage of skilled birth attendance (Vb **10%**)
  - Skilled birth attendance (SBA) reached **60.7%** mothers in 2015 (APR/EFY/07).
- Measles vaccine covering (Vb **77%**)
  - Measles vaccine covering reached **90.3%** (APR/EFY/07).
- Percentage of households provided with LLIN infused anti-Malaria mosquito nets (Vb **66%**)
  - 76 m LLIN nets (Malaria) were given out, since HSPD II, to prevent the **85%** households.
- Percentage of success in Tb treatments (Vb **84%**)
  - The national average of successfully Tb treatments is **92%** (APR/EFY/07).
- Number of Hiv/AIDS affected people in anti-retro-viral treatments (Vb **152,472**)
  - **375,811** people are treated with ART (APR/EFY/07).
  - PMTCT: HIV retro-viral treatment (mother- child) reached **69%** from just **1%** before.

#### G4 final priority Evaluation:

Starting up HSDP in 1998, the child (U5MR) mortality, was an humanitarian emergency in Ethiopia. The Figure 3-APR/EFY/2007 shows at national level the child mortality decreasing (U5MR) during HSDP IV, with the strengthening of the health rural mother & child network.



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

#### General objective's Evaluation:

At national level, during HSDP IV, the life expectancy in Ethiopia increased from 45 yrs. in 1990 (World Bank/2011) to 64 yrs. in 2014, up to 65 for women (UNDP-2014).

## 6. THE PROJECT ANALYSIS

The project analysis is based on the 5 OECD/DAC parameters: relevance, efficiency, effectiveness, impact and sustainability.

**Relevance:** Project Aid 9459 has followed the FMoH rural health strategy, during HSDP IV, to achieve the MDGs 2015, reducing the mother & child mortality, contrasting Hiv/Malaria/Tb (G4/G5/G6). So the project targets were relevant to improve the population's health in Oromia & Tigray, considering the Ethiopian low development rates on the Health Development Index (HDI-UNDP) 2015. Relevant is the organization of the skilled birth attendance, decreasing mother-child recurrences & the domestic deliveries. At the same time the family-planning & contraception policies (CAR) is an innovative national strategy to contrast the early marriage, reducing birth in vulnerable conditions, both well accepted by the local civil society, with the institutionalization of the Women Development Groups (WDGs). Relevant is the increased young women health professionals (HEWs) in the HPs, as fundamental instrument to involve the isolated communities in the governmental rural welfare, with gender priority.

**Efficiency:** the 50% annual international aid, integrated at the National Health Account (NHA) to support HSDP IV, achieving the 3 health MDGs 2015, is an efficient governmental result, also meaning local credibility. The implemented rural health network, with: a) adequate catchment areas in the HPs and HCs, (not yet reached for the hospitals); b) emergency 24/hs. surgical duty in the PHs

(some in construction), with the free ambulance hospital transport from the HCs and blood transfusion regional service; c) rural pregnancy protection, gender contraception contrasting teenager early marriage and pregnancies, avoiding domestic delivery; d) skilled health professionals, as the IESOs in the 24/hs surgical duty in the all PHs; was an efficient low-cost health plan, emphasized by the MDG Report 2015 to improve health at the rural population.

**Effectiveness:** the infant under 5yrs. mortality (U5MR) with 217 deaths x 1000 new-born in 1997, is decreased at 80 infant deaths during HSDP IV, approximately the target of 75 in Sub-Saharan Countries, with the achievement of the G4 (APR/EFY/07). The Mother Mortality Rate (MMR) from 990 pregnant deaths x 100,000 new-born in 1990, decreased at 676 mother deaths in 2011. However no actual MMR has been reported on the latter APR/07, as a result still in progress to G5. Anyway the mothers & children participation at the pre/post natal and at the family-planning/CAR services, confirms preventive & care effective action, documented by the preventive and curative high performances. The percentage health-Staff/people ratio was also increased at 147%, during HSDP IV, improving the health accessibility of the population, almost doubling the OPD performances per capita (0,48) from 2002 and also in comparison with the specific Vb 0,3 project's indicator (APR/EFY/07). The complex organization of the 24/hs. surgical hospital duty in the PHs allows to treat correctly the obstetric emergencies, almost the 11% of the total deliveries. Particularly the increased number of the HPs (16,447) and the HCs (3,586) has reached the standard catchment areas, but not so for the hospitals (PHs), many of them still being in construction (HHRI/FY/08). The HMIS monitors constantly the federal health situation to the local & international authorities, *to reach the level of a middle-income economy*. (MoFED/2010). A remarkable result of efficacy documents: 64 yrs. of life-expectancy of the Ethiopian population and 65 yrs. for the females (UNDP 2014).

**Impact:** during AID 9459, the community participation in the pre/post-natal, preventive & curative rural services, had a remarkable gender impact in the government's health policies, involving a huge numbers of WDGs, as the civil-society protection to the mother & child sector, achieving G4 & G5. The G6 results are still in progress, impacting a considerable numbers of vulnerable patients, mostly Hiv/Tb, previously excluded from any kind of health assistance. The MDGs 2015 guidelines, in fact, envisaging free health in the mother & child sector, reversing the incidence of Hiv/Malaria/Tb too, has achieved higher performances than the targets preview (APR/EFY/07). The gender impact was massive in family-planning & contraception policies (CAR), to prevent teenager early marriage and pregnancy (APR/EFY/07). During HSDP IV the doubled percentage of OPD (0,48 per capita) in EFY/07, over the Vb 0,3 project Indicator, has implemented health accessibility with a successful rural impact. The HMIS also, publishing regular health dates, was an important scientific instrument to emphasize the primary health rural low-costs plan (MDG Report 2015).

**Sustainability:** the HSDP IV, supported by Aid 9459, realized many sustainable health developing activities both quantitatively & qualitatively in the mother & child sector, comparison the poor previous health situation, geared toward the meeting (G4/G5/G6) of the MDGs 2015. The complex management of the 24/hrs. surgical duty in the PHs, with graduated technical staff (IESOs and Anesthesiologists), appears sustainable in the short term addressing the previous inadequate emergency assistance at the 11% obstetric recurrences, over the total birth; becoming effective in long term, once completed the primary hospital's rural network, granting health support at the communities involved in their productive familiar activities. Monitoring the pregnancies, the ANC services, with HMIS registration, allows a sustainable management of the obstetric complications and emergencies. And so did, family-planning & contraception (CAR) provided in all the HPs, HCs & HPs, mostly serving an adequate catchment areas. Such preventive gender services are sustainable decreasing the demographic rise & reducing early marriage and pregnancy. In conclusion the action carried out by HSDP has therefore been sustainable both from professional & managerial point of view, taking into consideration the Ethiopian life expectancy increase up to 64 yrs. for men, to 65 yrs. for women (UNDP 2014). However it must be again pointed out that: a) the low federal annual budget per capita (Usd 16,1) is under the WHO standard and still limits the rural health assistance. At the same time the Ethiopian primary rural health system is an example of low-cost rural health plan (MDG Report 2015); b) the international contribution, up to 50% of the NHA, has permitted to realize correctly HSDP IV to achieve the G4/G5/G6. Hopefully, the unsustainable budgetary situation should change during the SDGs 2030. Such modifications will be the next governmental priority, beginning with the new *Health Sector Transformation Program* (HSTP), focused on the economic sustainability of the rural health system. Among the foreseeable measures, adopted by the government, collective health insurances and the imposing VAT to increase the governmental NHA own percentage. Up to now, the federal health system in accordance with the international donors, depending on the 50% of international contribution, doesn't have yet a sustainable own domestic economy.

## 7. SECTION E: LESSONS LEARNED AND RECOMMENDATIONS.

### Lessons learned

**L 1 - Relationship:** the evaluation, as mandatory part of the project cycle management, is frequently seen as an unwanted meddling, causing initial diffidence in the local partners, especially if part of the resources (C1) is a multi-donor contribution (to MDGF) and a bilateral low contribution, (as example the C2a to Oromia), compared to the annual regional health budget. Such contribution (C2) for the 2 regions, instead of being employed into specific health sectors, was parcelled out into too many issues. However the local counterpart much appreciated the repairing of ambulances, their maintenance and health essential supplies procurements.

**L 2 - The primary health rural network (HP-HC-PH):** albeit the remarkable widening of the basic rural primary health system in Oromia & Tigray, the staff harmonization to the standards are still in progress, especially in hospitals (PHs) with the actual too large catchment areas. It was also noted that many new health-buildings, realized in elemental constructions, were poor quality and already need of renovation and maintenance interventions.

The hospital waste disposal is not regulated. The waste is simply burnt in external incinerators, without filters and close to the wards.

**L 3 - Biomedical equipment:** the new biomedical equipments, mostly in the PHs, are frequently poor quality and not provided with the necessary maintenance and repairing guarantees (Ultrasound & Radiology). The diagnostic instruments suffer from such limits, reducing the quality and the hospital appeals, together with the confidence of the newly trained technical staff. Particularly, the ultrasound instruments are frequently out of order, damaging the ANC service and the early diagnosis of the obstetrical complications and their referral planning as well.

The film Radiology equipment, (especially for trauma), producing lots of chemicals polluted liquids in the environment, is frequently out of order, lacking of qualified maintenance and films.

The X-rays protection is also insufficient both for the patients and the operators.

**L 4 - Health staff training:**

A) Too frequent use of (free) upgrading of the employed staff. The newly health students, on the other hand, did not enjoy any facilitation. They also were not sure to be employed after graduating. It was also difficult to evaluate the training quality.

B) The treatment of obstetric surgical urgencies, about 11% of the total deliveries, should be monitoring. Such surgical invasive activity, when not properly broached, due to lack of diagnostics (see L2) and/or surgery expertise limits (L3), deeply affects the targets G4 and G5, causing the major damages. The IESOs are working without having any tutoring and/or surgical monitoring on the job. Much more attention should be given so, to the education of such innovative professionals IESOs, at the top of primary health rural network, instead too much upgrading and/or many different specialisations. In both educational cases, it was impossible to check the quality of the upgrading courses or the level of preparation of the staff that was being upgraded.

## **Recommendations**

**R1 for L2 and L3: HC net buildings & equipment (HPs-HCs-PHs):**

A) Choose the specific health facilities, to be renovated or built, from scratch and the technological upgrades in advance.

- B) Purchase easy handle and strong medical equipment, provided with warranties and including maintenance services.
- C) Implement ordinary and extraordinary maintenance of the structures and ambulances.

**R2** for L4: Health operators staff training:

- D) Share the upgrading plan for the employed staff, and relate it to the maintenance of the basic health services provision. Carry out staff turn-over only after letting the newly employed and the old one work together for a while. Fund specific training activity in just one sector at time, thus avoiding the too high fragmentation to cause poor training results. Altogether C3 could be used also for the specialist local training, supported by clinical consultants (locals & expatriates).
- E) Upgrade the evaluation of the training quality by giving out questionnaires or interviews, with the assistance of the Tamu. Part of C3 could support external clinic-consultants in educational monitoring.
- F) Within the limits of the earmarked for the training funds, pinpoint essential professional roles and/or single training issues, such as the hospital obstetric emergencies, to follow the improving of care action (as examples: pre-natal ultrasound service and/or the Obstetric BEmOC and CEmOC).

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