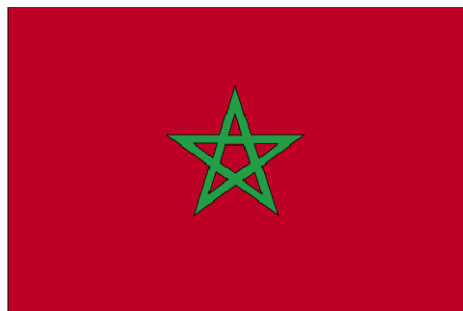




Saving the Lives of Mothers & Children

Rising to the Challenge

Morocco



I. Introduction

Morocco has a surface areas of about 710 850 km², extending from the Mediterranean Sea to the Atlantic ocean, from the Atlas mountain to the desert in the South. Morocco is composed of 16 Wilayas, subdivided into 82 provinces, covering 1547 rural and urban districts. The different administrative regions are characterized by vast heterogeneity in terms of geographic, economic and socio-cultural characteristics. Morocco has a population of 32 million¹, of which 58% live in urban areas and 42% in rural areas². The population of Morocco is composed of: Berbers, Arabs and Sahraouis.

Sociodemographic characteristics

Out of the 32 million population, 48 % are under the age of 25 years and 28% under the age 15 years and 9.5% are under-5 children.¹

Total estimated under-5 population (000) [2010] ¹	3022
Population growth rate [2010] ²	1.1%
Estimated number of births (000) [2010] ¹	613
Percentage of population that is urban ²	58.0%
Birth registration coverage ³	94.0%

¹Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2010 Revision*, <http://esa.un.org/unpd/wpp/index.htm> (accessed on 16 October 2012)

²WHO Regional Office for the Eastern Mediterranean, *Demographic, social and health indicators for countries of the Eastern Mediterranean, 2012*, based on country reports

³Demographic and Health Survey (DHS) Morocco 2011.

Morocco is ranked 130 out of 187 countries on the UNDP human development index³, with 2.5% of the population living below the international poverty line of \$US 1.25 (in purchasing power parity terms)³ a day.

The country ranks ninth among the countries in the Eastern Mediterranean Region in terms of total fertility rate⁴. It is also among the 10 countries in the Region with highest child and maternal mortality rates. With the efforts of the authorities, Morocco is on track to achieve the Millennium Development Goals (MDGs) 4 and 5 which the international community fixed for 2015.

This document is meant to provide an analysis of the current status of maternal, newborn and child health in the country to analyse the progress made in the country to achieve MDGs 4 and 5, and suggest possible solutions and the way forward to accelerate the progress to achieve MDGs and to further reduce maternal and child deaths.

II. Maternal and child health situation analysis

II-1 Health system

The coverage with primary health care services is regularly increasing in Morocco⁵. Currently, Morocco has 2552 basic health care facilities, i.e. a ratio of 1 facility per 11 700 population, compared to 1 per 29 500 in 1960. Despite this increase in basic infrastructure, access to care remains difficult, mainly for populations with low resources. 25% of the Moroccan population lives more than 10 km away from a basic health facility. Health care utilization in the public sector remains very limited, with a rate of use of curative service of 0.5 consultations per inhabitant per year, a figure that can be considered low in relation to the needs of the population. In terms of design, planning and monitoring, the network of basic

¹ Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2010 Revision*, <http://asa.un.org/unpd/wpp/index.htm> (accessed on 16 October 2012).

² WHO Regional office for the Eastern Mediterranean, *Demographic, social and health indicators for countries of the Eastern Mediterranean, 2012*, based on country reports

³ Human Development report, UNDP, 2011.

⁴ WHO Regional Office for the Eastern Mediterranean, *Demographic, social and health indicators for countries of the Eastern Mediterranean, 2012*, based on country reports

⁵ Country Cooperation Strategy for WHO and Morocco: 2008 - 2013

health care facilities does not include the private sector which has nearly 5800 physicians in general medical practice. This reflects a lack of complementarity between these two sectors.

The number of hospitals increased from 52 in 196 to 142 in 2010 (36 specialized and 106 general hospitals). The hospital network is being strengthened, with emphasis on the upgrading of technical capacity and equipment. The functional bed capacity has increased from 15 500 to over 22 146 beds for the same period.

Human resources have increased substantially over the past 40 years, with the density of human resources having increased by a factor of 6 (1 per 1775 population in 2007 compared with 1 per 12 000 in 1960), at a time when the density of paramedical staff grew from 1 nurse per 2700 population in 1960 to 1 per 1000 in 2007. Despite these efforts, Morocco is one of the 57 countries listed by WHO as suffering from an acute shortage of health personnel⁶. The density of trained birth attendants is below 2.28 per 1000 population, WHO's critical staffing threshold. This shortage is exacerbated by the lack of a proactive and consistent policy for the development of the health workforce.

II-2 Maternal neonatal and child health (MNCH) policies and strategies

Health of women and children is the key to progress on all development goals; investing more in their health will help building peaceful, productive societies and reduces poverty. With this vision, the country has adopted a number of policies and strategies in favour of maternal and child health including:

- costed strategic national plan of action for accelerating the reduction maternal and neonatal mortality 2012 – 2016.
- costed national comprehensive plan of action for child health 2012-2016 (developed at the level of the division not yet approved by the Ministry of Health officials)
- low osmolarity oral rehydration salts (ORS) and zinc for management of diarrhoea.
- introduction of rotavirus vaccine
- introduction of pneumococcal vaccine.
- notification of maternal deaths
- national strategy of reproductive health 2011–2019
- national nutrition strategy 2011-2019
- rural areas health plan to address inequities 2012–2016

Despite the adoption of these strategies and policies, they are not all fully implemented such as the partial development of a costed national implementation plan for MNCH. Other policies reported by the Countdown initiative have not been adopted by the country, namely: community case management. However, it is worth mentioning that this policy is not applicable to Morocco as the law does not permit community health workers to treat the population and distribute medicines.

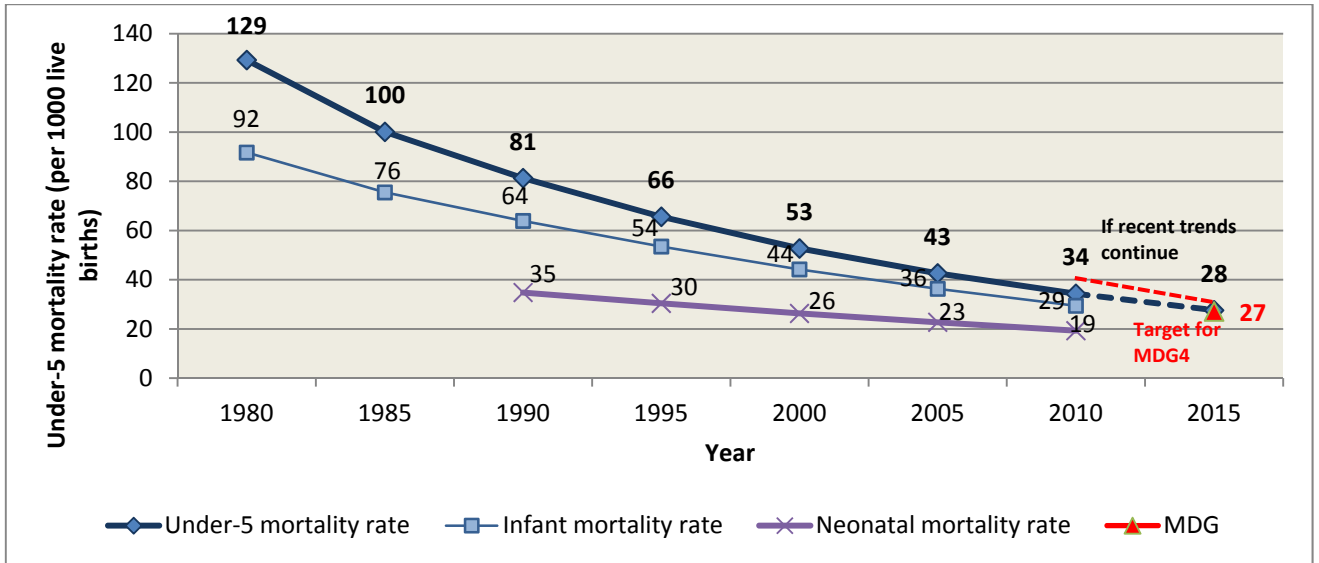
II-3 MNCH current status

II-3 .1 Maternal, newborn and child mortality

There has been a significant decrease in the under-5 mortality rate (U5MR) in Morocco over the years. U5MR declined by 60% between 1990 and 2011 and the neonatal mortality rate declined by 46% in the same period. While 56% of under-5 deaths occur in the neonatal period, there are still 44% of deaths in the post-neonatal period.

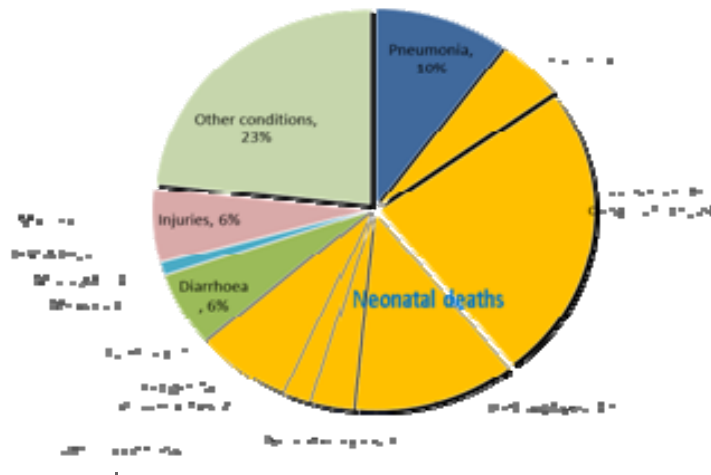
⁶ Country Cooperation Strategy for WHO and Morocco: 2008 - 2013

Trends in under-5 mortality 1990–2011 and extrapolation to 2015



Source: United Nations Inter-agency group for child mortality estimation (IGME)- *Levels and Trends in Child Mortality, Report 2012* - WHO / UNICEF / World Bank/ UNDP and independent experts. These figures are computed by the UN agencies and are not necessarily the official statistics of the Member State, which may use alternative methods of estimation of mortality. All Member States have undergone an official country consultation on these estimations.

Prematurity (pre-term births) is the leading cause of deaths in under-5 children in Morocco. Pneumonia (15%) and diarrhoea (6%) account for 21% of these deaths, while birth asphyxia is responsible for 12%.

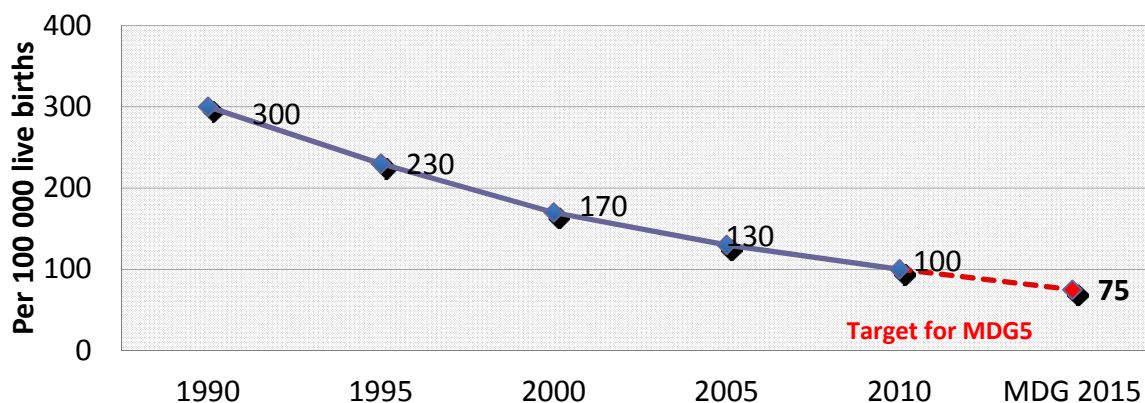


Causes of under-5 deaths

Source: WHO/CHERG 2012, 2010 data

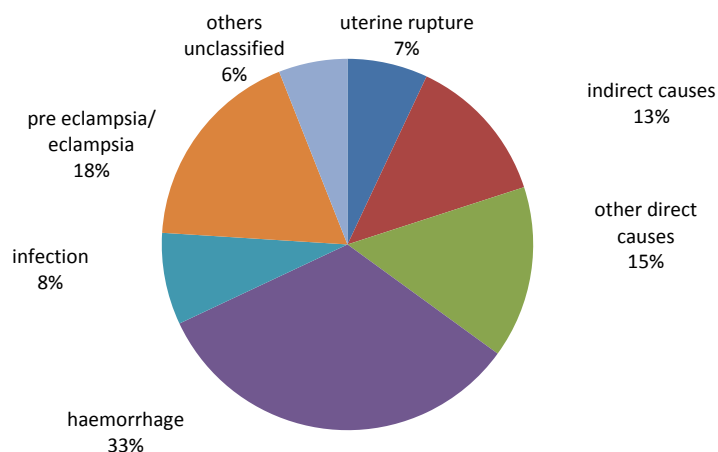
The country has also demonstrated steady and significant decrease in maternal mortality, from 300 to 100 maternal deaths per 100,000 live births, resulting in a 67% reduction between 1990 and 2010.

Trends in maternal mortality reduction between 1990– 2010 and extrapolation to 2015



Source: WHO, UNICEF, UNFPA and The World Bank estimates, Trends in maternal mortality: 1990 to 2010, published 2012.

The main causes of maternal death in Morocco are: haemorrhage (33%), followed by hypertensive disorders (18%), infection (8%) and uterine rupture (7%).



Causes of maternal death

Source: Ministry of Health 2010. National report of confidential audit of maternal mortality in Morocco

II-3.2 Maternal, newborn and child morbidity

15% of children under-5 are stunted in Morocco, with rates in rural areas being twice as high as in urban areas. Obesity appears as an important nutritional disorder affecting 11% of under-5 children. In addition, anaemia is a major health problem affecting 38% of pregnant women.

Maternal:		Nutritional status in children under 5 ⁴	
Anaemia in pregnant women ¹	38.0%	Stunting	15%
Newborn:		Wasting	2%
Low birth weight in newborns ²	---	Underweight	3%
Child:		Overweight	11%
Children under 5 with suspected pneumonia (2010) ³	8%		
Children under 5 with diarrhoea (2006) ³	16%		

¹WHO Regional Office for the Eastern Mediterranean: Regional Health Observatory. Website: [www.http://rho/rhodata/](http://rho/rhodata/) accessed on 27 January 2013

²WHO. *World Health Statistics 2012* (estimates for 2005–2010)

³Demographic Health Survey (DHS), Morocco, 2011

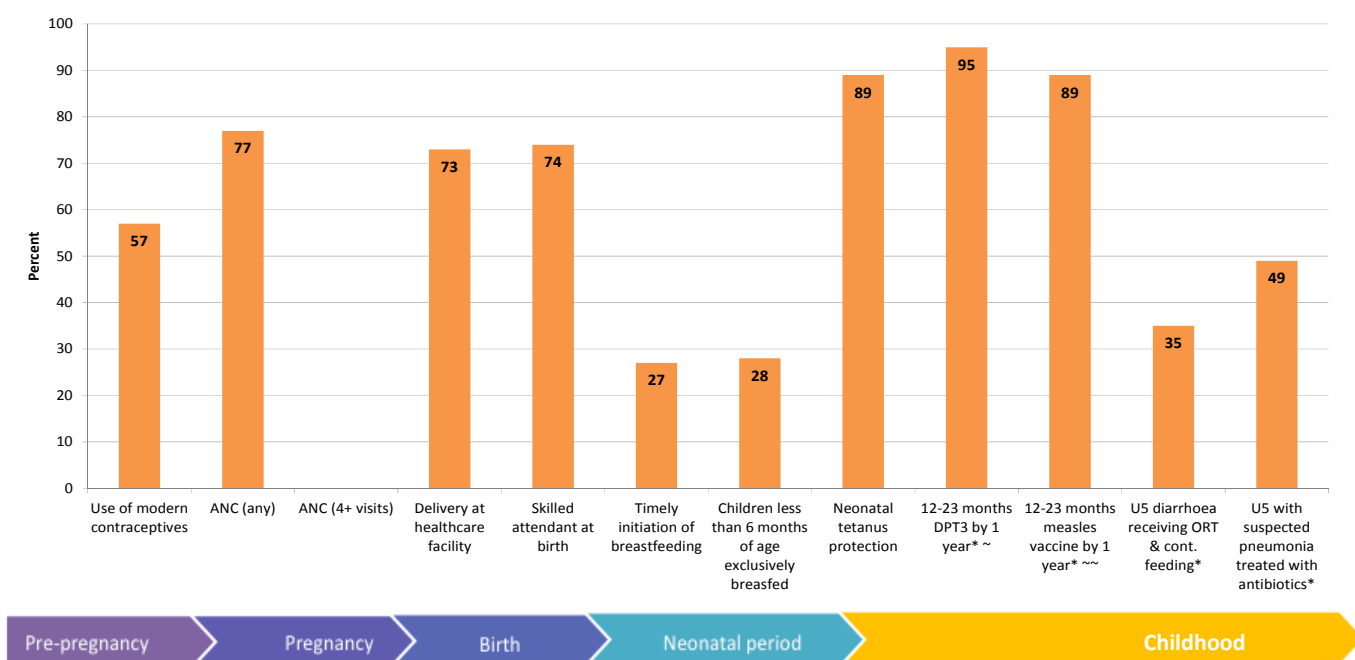
⁴WHO Global Database on Child Growth and Nutrition. WHO Child Growth Standards (www.who.int/nutgrowthdb/database/en: (accessed on 15 November 2012)

Fistula, reproductive tract infections and infertility are among the common morbidities in pregnant women.

II-3.3 Coverage indicators across the continuum of care

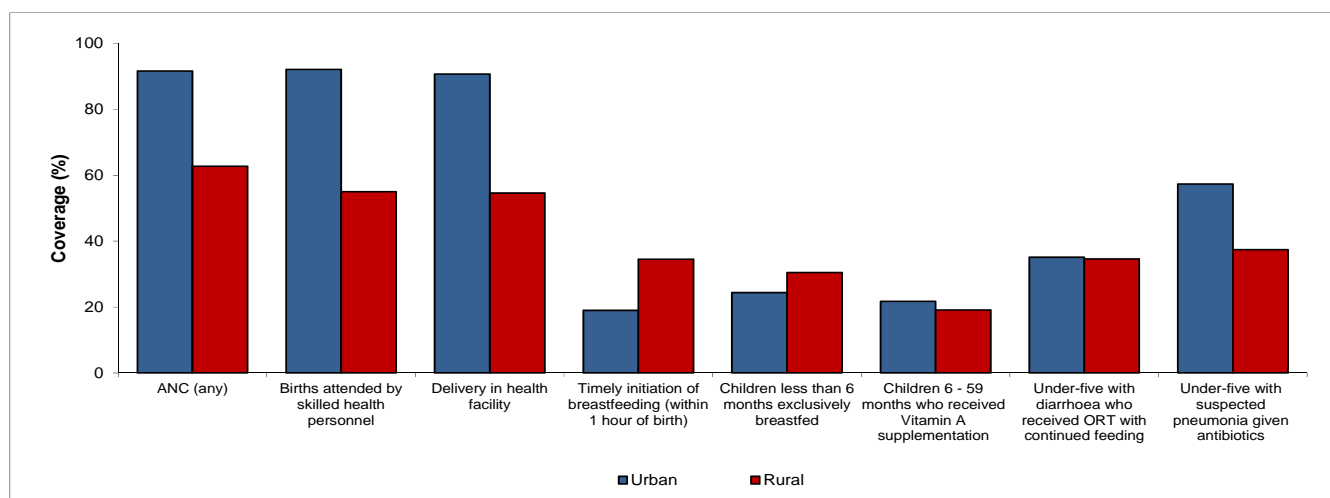
Based on the Demographic and Health Survey (DHS) 2011, coverage levels of key maternal and child health interventions in the continuum of care tended to be relatively high, except for interventions related to breastfeeding, for which it was less than 30%. In the MICS 2006-2007, coverage was less than 50% for interventions related to vitamin A supplementation.

Coverage remained high or further increased between the 2003-2004 and 2011 DHS. An exception was coverage of interventions related to breastfeeding, which remained low or even showed a decrease.



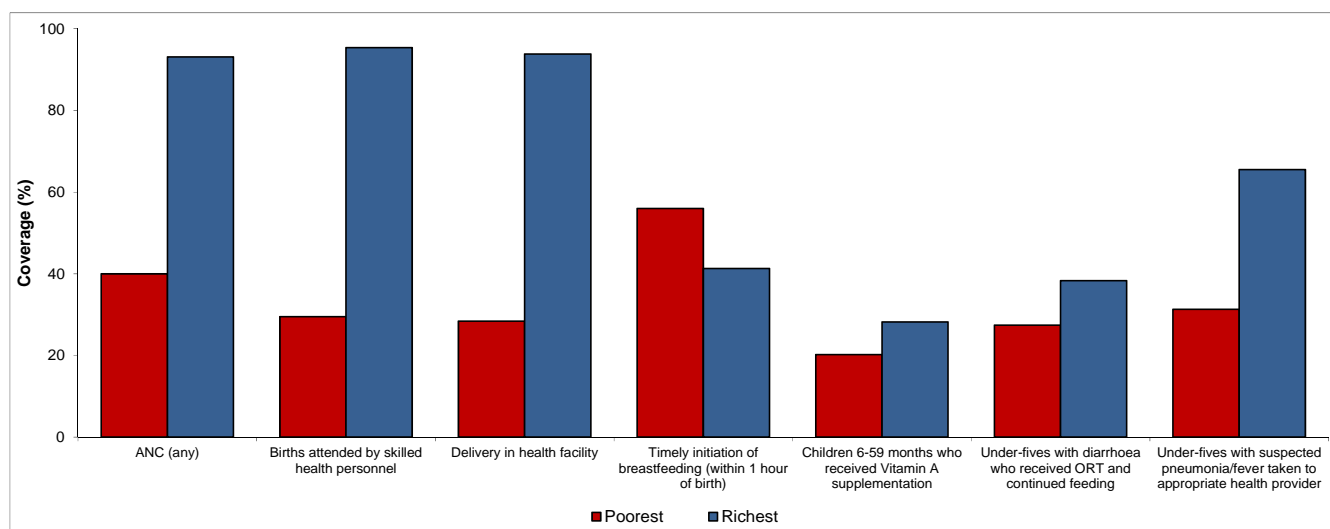
II-3.4 Inequities in coverage of indicators across the continuum of care

For the key maternal and child health indicators measured, coverage was in general higher in urban than rural areas, except for breastfeeding indicators and oral rehydration therapy (ORT) with continued feeding.



Based on the DHS 2003–2004, significant inequities in coverage of key maternal and child survival interventions during the continuum of care were seen in Morocco between households in the highest wealth quintile and those in the lowest quintile. There was a 3-fold difference in skilled attendance at birth, delivery at health facility and care-seeking for under-5s with suspected pneumonia, and a 2-fold difference for antenatal care (ANC). Inequities by wealth were also found in the MICS 2006-2007: for example, children with suspected pneumonia in the richest households were 2 times as likely to be treated with antibiotics as children in the poorest households.

Further acceleration of reduction rates of mortality among children and mothers are unlikely to be achieved unless those inequities are addressed.



II-4 Towards the MDGs 4 and 5

Morocco has efforts to respond to the existing MNCH situation in the country. These include:

- a high level of political commitment to maternal and child health resulting in prioritizing maternal and child health within the government programme and the development of MNCH plans being included in the national health plans and costed;
- signatory to the MDGs;
- maternal and child health as the main components of the joint plans with United Nations organizations, mainly WHO, UNICEF and UNFPA.
- adoption and implementation of a package of interventions targeting the main causes of child and maternal deaths based on the global cost-effective and evidence-based interventions, delivered in an integrated way. Research has shown that these interventions have the highest impact on mortality.

II-4.1 Child health

A set of interventions targeting the main causes of under-5 mortality in Morocco has been packaged and implemented under the umbrella of the Integrated Management of Childhood Illness Strategy (IMCI). The three components of the IMCI strategy improve the quality of child health care services at primary health care level, the health system related elements and child health-related family and community practices.

Package of child health key cost effective interventions implemented at primary health care level

- Case management of neonatal sepsis, pneumonia, diarrhoea and jaundice.
- Resuscitation of newborns at primary health care delivery centres
- Child case management:
 - pneumonia case management and prevention
 - diarrhoea case management and prevention
 - malnutrition case management
- Early initiation of breastfeeding
- Promotion of exclusive breastfeeding
- Promotion of sound complementary feeding
- Improving care seeking
- Increasing immunization coverage
- Vitamin A supplementation.

IMCI strategy has been implemented in 35% of primary health care facilities in the country. The IMCI community component was also implemented through mainly awareness-raising activities on child health-related practices.

Recognizing the great impact of immunization on the reduction of under-5 child mortality, Morocco has ensured constant routine coverage of all antigens (DTP3/HepB3/MCV1) higher than 95% since 2004. Only 2% of the districts have coverage less than 80%. Through the government efforts and commitment, Morocco successfully introduced the Hib vaccine in early 2007 and rotavirus and pneumococcal vaccines in 2010. However, outbreaks of measles are still ongoing due to inequitable coverage of measles vaccination. To address this issue a national measles elimination campaign will be organized in 2013.

II-4.2 Maternal health

The package of interventions accorded to the maternal health and neonatal includes the following interventions:

- responding to the unmet needs in family planning
- antenatal care.
- prevention of mother to child transmission of HIV
- skilled attendance at birth
- improving care and quality of the free of charge services of obstetric and neonatal emergency.
- maternal and neonatal death audit and verbal autopsy
- strengthening of the referral system (obstetrical emergencies regulation in rural areas, free transportation)
- post-partum care.
- perinatal care programme.

This package has been implemented at primary health care (primary health care) facilities. This implementation is accompanied with activities for raising community awareness about life-saving practices.

It was reported in the year 2011 that skilled health personnel attended 77% of pregnant women and 73.6% of deliveries. Remarkable progress in family planning services has been achieved, as an essential element of safe motherhood, and the contraceptive prevalence reported at 67.4% and total fertility rate at 2.6 children per woman.

Achievements in safe motherhood were realized through two main strategies aimed at enhancing the quality of maternal and neonatal health services and raising public awareness towards safe motherhood issues.

II-4.3 Can Morocco reach the targets set for MDG4 and 5 by 2015?

The average annual rate of reduction (AARR) of under-5 mortality between 1990 and 2011 was 4.3%. Achieving MDG4 would require an AARR of 4.8% between 2011 and 2015, a little higher than the trend from 1990 to 2011. Therefore, it could be concluded that, with concerted efforts, Morocco is “on track” to achieve MDG4.

Average annual percentage change in maternal mortality was –5.1% between 1990 and 2010. With the current pace of reduction of maternal deaths, Morocco is “on track” to achieve MDG5.

III. Feasibility analysis

- There is a high commitment and determination in the country to achieve maternal and child health goals.
- While there are donors and partners interested in making big investments in maternal health, fewer donors are investing in child health and such investments are small on a national scale.
- Morocco has achieved significant reduction in maternal and child mortality, however there are still inequities between urban and rural and mountainous areas, poor and rich population.
- The current low access to primary health care care (75%) requires huge investment in expanding the primary health care network, particularly for the deprived population. This is one of the challenges that face the Ministry of Health in expanding the primary health care services and scaling up interventions.
- The Ministry of Health is implementing the key interventions to address maternal and child health problems, although implementation coverage is still low; the issue is not only to scale up but also to ensure quality of the interventions and services delivered to mothers and children.
- Shortage of qualified human resources and inadequate density in relation to population is a major challenge as the health workforce is the backbone of the health system. There is a lack of physicians in particular in primary health care facilities in the rural areas. This represents an obstacle to scaling up and to providing quality services to save lives of mothers and children.
- The health system is well developed in the country. However, some health system elements still require further strengthening, in particular the health information system, the supportive supervision and drug management and availability. These are key elements to improve the quality of health services provided to children and mothers.
- The larger proportion of under-5 deaths occurs in the neonatal period; the country tends to focus on this period of life. This risks neglecting the post-neonatal period of life and losing the good achievements in this regards. Efforts should be made for both periods of life.
- Immunization coverage is key to the reduction of under-5 mortality; the quality of some campaigns requires strengthening, particularly for measles catch-up campaigns. This is evidenced by the occurrence of measles outbreaks.
- The in-service training of the health workforce (physicians and paramedics) is a burden on the Ministry of Health. Despite the efforts made in the pre-service education, medical and paramedical teaching institutions are not fully committed to teaching the public health approaches and Ministry of Health primary health care guidelines in a sustainable manner and to a good standard of quality, an issue that will impose a continued burden on and investments from the Ministry of Health.
- Community case management by community-based health providers is not permitted by the country’s laws, but could be a temporary solution to the low access to primary health care for the population most in need. .
- The estimated level of scaling up still requires considerable investments and supportive policies. Advocacy, strong collaboration and coordination among the different partners will ensure the flow of funds to the two areas of work, particularly to child health and those geographical areas and population groups most in need.

IV. Is it achievable?

If the current trends of reduction in mortality continue, with concerted efforts and sufficient funds and human resources allocated, Morocco is “on track” to achieve MDG4 and 5.

V. Conclusions: key drivers

With the concerted efforts of the Government and active support from the international community, the country will be able to achieve MDGs 4 and 5 and save lives of mothers and children.

This requires:

- Sustaining the high-level commitment to maternal and child health, considering them as major indicators for national development and mobilizing all partners and donors to make the required investments and work together to achieve MDGs 4 and 5.
- Putting the related policies and strategies into effect.
- Providing the required financial resources to implement the national MNCH plans.
- Strengthening partnerships and coordination among concerned stakeholders to contribute to one national plan for MNCH and to achieve the national related targets. Plans should be comprehensive, addressing equally the interventions of the continuum of care and aim at achieving the coverage targets set to achieve MDGs 4 and 5.
- Improving the quality of implementation of vaccination coverage in particular the measles catch-up campaign planned for 2013 targeting people aged 9 months-35 years as a key intervention to further reduce child mortality and as an indicator of MDG4.
- Focusing on populations most in need: geographic, economic and social.
- Moving towards universal access to primary health care services by expanding the network of primary health care facilities and adopting innovative approaches to accelerate the provision of MNCH services at community level.
- Building capacities to produce an adequate qualified workforce to meet the service needs of the population (in-service and basic education).
- Ensuring adequate numbers of qualified workforce.
- Strengthening the key health systems essential elements, such as the health information system and supervision.
- Providing high quality of health services to children and mothers.
- Increasing coverage of interventions impacting on neonatal health while continuing efforts to improve those addressing the post-neonatal period.
- Ensuring the continued supply and availability of medicines and vaccines as key elements to reduce mortality.
- Strengthening the monitoring and evaluation system.