Middle East and North Africa

Working Paper Series

No. 31

March 2003

The World Bank

Produced by the Office of the Chief Economist

Summaries in Arabic and French

Yemen and the Millennium Development Goals

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The authors wish to thank for their inputs Alaa Mahmoud Hamed (Nutrition), Amir Al-Khafaji (Urban Water), Stefanie Brackmann (Environment), Sameh El-Saharty (Health), Peter Koenig (Rural Water), Carmen Niethammer (Gender), Keiichi Ogawa (Education), and Setareh Razmara (Poverty).

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Résumé

Le document examine la situation du Yémen par rapport aux indicateurs des Objectifs de développement pour le millénaire (ODM). L'analyse par indicateur se penche sur les tendances et perspectives pour atteindre les indicateurs cibles des ODM. Le document donne un aperçu des changements politiques et institutionnels requis pour décupler les chances d'atteindre ces cibles. Les conclusions indiquent que les cibles pour l'enseignement primaire sont celles qui auront le plus de chance d'être atteintes et que celles visant la réduction de la pauvreté seront vraisemblablement partiellement atteintes. Pour ce qui est des cibles fixées pour la santé maternelle et infantile et l'accès à l'eau potable en milieu rural, dans la situation actuelle, il est peu probable qu'elles se matérialisent. Même au niveau des indicateurs les plus prometteurs, tout progrès dans le sens d'une matérialisation des ODM impliquera d'importantes réformes institutionnelles et de politique de la part du Gouvernement et un soutien permanent et coordonné de la part des bailleurs de fonds. Un autre impératif pour atteindre les cibles fixées est celui de la stabilité politique et de la paix relative.

Summary

The paper examines the situation of Yemen vis-à-vis the Millennium Development Goal (MDG) indicators. The analysis by indicator looks at trends and prospects for reaching the MDG indicator targets. The paper provides a look at the policy and institutional changes required to increase the likelihood of meeting these targets. The conclusions suggest that primary education targets are the most likely targets to be met and that poverty reduction targets may be partially met. As for maternal and child health targets, at present they are unlikely to be met, as are targets for access to safe drinking water in rural areas. Even for the most promising indicators, any progress towards achieving the MDGs will require significant institutional and policy reforms by Government and continued, coordinated support from donors. Another necessity for achieving the targets is political stability and relative peace.

Yemen and the Millennium Development Goals

Overview

1. The objective of this paper is to assess: (a) Yemen's current position with regard to the Millennium Development Goals (MDGs); (b) the likelihood of Yemen attaining the MDG targets and, if not, to determine what is achievable; and (c) the policy and institutional reforms necessary to keep Yemen on track to achieving the MDG outcomes. The paper is expected to provide input to the World Bank strategy to help Yemen attain the MDG outcomes and of necessity focuses on the World Bank's areas of comparative advantage, such as sector reform issues, although other areas will be addressed where necessary. It is meant to complement the UNDP paper which is the official monitoring document. The paper begins with a background section on Yemen, followed by a section on the government's commitment to the MDGs and a goal-by-goal analysis. The goal-by-goal analysis will include a stock taking of the data, a judgment as to the likelihood of attaining the targets, and an assessment of the policy and institutional reforms necessary to reach the targets.

Introduction: The Country Context

2. Yemen is located in the southwest corner of the Arabian peninsula and strategically across from the Bab-el-Mandab (a channel connecting the Red Sea to the Indian Ocean) in the Horn of Africa. It consists of a coastal plain where it rains infrequently, but includes highland areas, reaching 3,000 meters, where it rains more often. The country thus has a wide variety of micro-climates and ecological zones. Today's Yemen consists of the former North and South Yemen, unified on May 22, 1990—the recent developments of which will have a major bearing on the country's ability to achieve the MDGs.

3. Yemen is among the poorest countries in the world, with a GDP per capita of US$460, and faces structural and policy constraints to achieving sustainable employment-generating growth and delivering the necessary public services to achieve the MDG targets. These constraints are compounded by high population growth (3 percent per year) and the resulting young age distribution (i.e. half of the population below age 15). Controlling the population growth rate will be a determining factor to the speed with which many of the MDG goals can be achieved. Nevertheless, some progress has been made, and Yemen is now above the average of the lowest-income countries in many areas, though there is a long way to go. Having restored and maintained macroeconomic stability, the government is now turning its attention to growth and poverty challenges, and to laying the foundation for long-term success, although the risk of over-dependence on oil revenues remains. The share of oil and gas in the economy has increased from 13 percent of GDP in 1995 to 34 percent in 2000, while the share of agriculture dropped from 24 percent to 15 percent during the same period. The oil dependency is even more pronounced in public finances with oil and gas accounting for almost 90 percent of total revenues, creating a boom-bust cycle in public finances affecting the government's ability to finance essential services and investments.

4. The decline in the share of the agriculture sector disguises a major increase in the production and consumption of *Qat,* which has displaced less water intensive crops and is becoming a leading crop. The problem with *Qat* production ranges from its consumption of and reliance on water in a water-scarce economy, to its social and economic effects on household behavior. The recent poverty update shows that *Qat* chewing contributes to increased poverty and is an important determinant of malnutrition, competing directly with the purchase of food.

Government Commitment to Millennium Development Goals

5. The government is committed to meeting the Millennium Development Goals. Early historical events beyond its control have delayed Yemen's development process, yet tremendous progress has been made since the late 1960s. The government has not set official MDG targets but many similar targets can be found in government policy documents, in which targets have been agreed to in principle with donors. The PRSP sets out the broadest set of targets, although not all MDGs are included in the PRSP. Other targets can be found in Yemen's current Five-Year Plan and in project agreements with donors. Poverty data and targets were agreed to during discussions of the recently completed Poverty Update. Detailed targets directly linked to the MDG are in primary education, where the government has committed to specific targets in its Country Proposal to the Education for All Fast Track Initiative (EFA FTI). Broad MDG goals and detailed targets officially recognized by the Government of Yemen are outlined in Table 1.

Table 1. The Millennium Development Goals compared to existing official targets in Yemen

Millennium Development Goals	Yemen Officially Recognized Goals
1. Eradicate Extreme Poverty and Hunger Halve, between 1990 and 2015, the proportion of people living on $1 a day and the proportion of people who suffer from hunger.	**Reduce the Percentage of Poor and Hungry Households** *Target 1*: Reduce overall poverty to decline from 42% in 1998 to 21% in 2015. *Target 2*: Reduce the number of people living under the food poverty line to decline from 18% in 1998 to 9% by 2015. *Target 3:* Reduce the number of people living below $1 a day from 11% in 1998 to 5% by 2015. *Target 4*: Reduce the prevalence of underweight children from 46% in 1997 to 35% by 2015.
2. Achieve Universal Primary Education Ensure all children, boys and girls alike, complete primary school (Grades 1-6).	**Universalize Education and Improve Education Quality** *Target 1:* Raise the net enrolment rate in primary education and increase the 6th grade completion rate to 100% by 2015 (EFA).
3. Promote Gender Equality and Empower Women Eliminate gender disparity in education.	**Ensure Gender Equality and Empower Women** *Target 1:* Eliminate the gender gap in primary education by 2015. *Target 2:* Raise female literacy from 48.2 in 2002 (EFA) *Target 3:* Increase the percentage of positions occupied by women in the economy from 22.7% in 2001 (no specific goal in PRSP).
4. Reduce Child Mortality Reduce the 1990 under-5 mortality rate by two thirds by 2015.	**Reduce Child Mortality and Child Malnutrition** *Target 1*: Reduce the infant mortality rate to 59.9 per 1000 live births by 2005 (PRSP) and 27.3 by 2015. *Target 2*: Reduce the under-5 mortality rate to 81.6 per 1,000 live births by 2005 (PRSP) and 36.5 by 2015.
5. Improve Maternal Health Reduce the 1990 maternal mortality by three quarters.	**Improve Maternal Health** *Target 1:* Reduce the maternal mortality rate to 212.5 per 100,000 live births by 2015 from about 850per 100,000.
6. Combat HIV/AIDs, Malaria and Other Diseases Halt and begin to reverse the spread of HIV/AIDs, malaria and other diseases.	**Reduce HIV/AIDS Infection and Eradicate Other Major Diseases** *Target 1:* Slow the increase in the spread of HIV/AIDs by 2005 and halve the rate of increase by 2010. *Target 2:* Increase the contraceptive prevalence rate from 20.8 in 1995 *Target 3:* Reduce the incidence of malaria
7. Ensure Environmental Sustainability Halve the proportion of people without safe drinking water.	**Ensure Environmental Sustainability** *Target 1:* Increase coverage of public water networks in urban areas to 100% in 2015 and increase rural access to drinking water from 25% to 50% by 2015. *Target 2:* Increase coverage from current 7.4% wastewater sanitation to about 60% by 2015.
8. Ensure Good Governance for Poverty Reduction Reducing vulnerability. Improve governance for poverty reduction. Ensure pro-poor infrastructure development.	**Ensure Good Governance for Poverty Reduction** *Target 1: :* Make available good governance and administration to reach optimal resource utilization to ensure participation of all society members in decision making. *Target 2*: Improve the quality of governance and security. *Target 3:* Increase coverage of a modern road network from only 9% paved roads and the proportion-to-land area from 11 km for every 1,000 sq. km.

The Millennium Development Goals—Prospects and Conditions for Reaching Targets in Yemen

➢ Goal One: Eradicate Extreme Poverty and Hunger

Targets 1 to 3: Reduce by half the percentage of people living in poverty

Current Situation

6. The most reliable and accurate poverty estimates are in the recently completed Yemen Poverty Update, which has been discussed and agreed to with the government. This report shows that 42 percent of the population (or 6.9 million people) lived below the poverty line in 1998. An estimated 18 percent of the population (about 3 million people) cannot even afford the cost of the minimum caloric requirement. In addition to those below the poverty lines, another 25 percent of the population is economically vulnerable and lives in the immediate neighborhood of the poverty line. Poverty is largely a rural phenomenon: in 1998 almost half of the population living in rural areas was classified as poor, as compared to less than one-third in urban areas. While 77 percent of the population lives in rural areas, 83 percent of the poor and 87 percent of the extreme poor (below food poverty line) live in rural areas. Poverty varies by governorate with half the poor being concentrated in four governorates.

7. During the first half of the 1990s Yemen experienced a series of shocks to its economy, which probably worsened the poverty situation but this cannot be verified in the absence of reliable and comparable indicators prior to 1998. Poverty in Yemen is unlikely to be reduced in the absence of sustained growth in per capita incomes, although growth alone will not be enough. During the first half of the 1990s, growth was led by capital intensive sectors, such as oil, and would probably have done little to reduce poverty; in the latter half of the 1990s, growth in agriculture probably helped reduce poverty. However, agriculture wages are low and insufficient for household needs. A major factor in poverty reduction in Yemen has been worker remittances with 21 percent of the poor (26 percent rural and 20 percent urban) living in households with substantial remittances. The number of female-headed households has increased to about 15 percent and this has increased the potential number of women at risk of falling into absolute poverty.

8. Public spending in social sectors has increased significantly from 24 percent of total expenditures in 1997 to 34 percent in 2001, driven largely by the increase in education and social welfare spending. Public health spending remains low and insufficient. The benefit incidence for education and health is mildly pro-poor but could be better if it were not for the pro-urban/pro-better-off design of some health and education programs.

9. The government targets the reduction of the poverty headcount to 36 percent in 2005 from 42 percent in 1998, which is the only reliable base year (there is also no target for 2015). For the purposes of this paper, the MDG targets have been calculated by reducing by half the number of people living under $1 per day in 1998—this would mean reducing the $1 poverty headcount from 11 percent in 1998 to 5 percent by 2015. The same target can be set to reduce the food poverty headcount from 18 percent in 1998 to 9 percent in 2015. Using the broader national poverty line, the target would be reduced from 42 percent in 1998 to 21 percent in 2015.

Prospects for attaining MDG poverty reduction targets

10. The strategy for reducing poverty in Yemen has four components: (i) economic growth, especially in the labor-intensive sectors; (ii) policies to reduce population growth; (iii) improved delivery and expansion of social services (education, health, and basic infrastructure, such as access to safe water, electricity, and roads) to underserved population; and (iv) improved efficiency and coverage of the safety net programs for preventing the vulnerable from falling into poverty and helping those who are temporarily or permanently unable to take advantage of income-earning opportunities. These are difficult challenges for Yemen and each is subject to significant risk.

Table 2: Poverty Incidence in Yemen, 1998 and Projections for 2005 and 2015 (in percent)

Indicator	***1998***	***2005***	***2015***
National Poverty Line Headcount	41.8	35.9	21.3
Poverty Gap (National Poverty Line)	13.2	10.9	5.7
Poverty Line at US1$/day PPP Headcount	10.7	8.2	3.3
- Headcount Rural	12.4	11.1	
- Headcount Urban	5.2	4.1	
- Poverty Gap	2.4	1.8	0.7
Food Poverty Line	17.7	14.2	6.7

Source: World Bank estimates based on the 1998 Household Budget Survey of the Central Statistical Office (CSO). See: Poverty Update for Yemen, World Bank Report # 24422, June 2002.

11. Table 2 provides forecast simulations based on PRSP assumptions for 1998-2005 that non-oil growth of GDP will grow at 6.3 percent per year and population at 3 percent per year. Between 2006 and 2015, assumptions have been made that GDP will grow at 5 percent per year and population will grow at 3 percent per year. Even under these optimistic scenarios, the MDG target will be met for the absolute poor (those living below the $1 a day poverty line) but will not be met for those living under the overall national poverty line.

12. The economic growth targets implied above require significant improvements in policy to stimulate private non-oil investment. In addition, Yemen's reputation as a risky place to invest and poor governance will have to be improved. A single incident can cause major setbacks, making attainment of the economic growth targets difficult. Furthermore, without a significant improvement in gender equity, particularly in girls education, the population growth reduction target will be difficult to meet. On balance, the likelihood of attaining the MDG poverty reduction targets or the government's less ambitious targets is very low.

13. The agriculture sector represents the leading activity in the economy for poverty reduction purposes and its growth needs to rise to achieve poverty reduction. Agriculture growth is constrained by water use and it is unlikely that the situation will improve. Nevertheless, there is potential for increasing employment and income in agriculture by encouraging the growth of less water intensive crops where there is scope for expansion but this is unlikely without implementing proper water pricing. In addition, there is potential for growth in livestock and in programs to improve livestock production, which could significantly help women who are largely responsible for livestock production. Agriculture in Yemen is subject to overall high risks of drought and animal disease (such as Rift Valley fever) and a support network to reduce these risks needs to be designed.

14. Another source of poverty-reducing growth is small- and medium-scale enterprise—the growth of which has been constrained by the high cost of capital (due to large amounts of public sector borrowing) and a governance environment that is not conducive to small business. These issues need to be addressed before poverty-reducing growth can occur.

15. Finally, growth alone is not sufficient. Human development—both education and health—are needed to increase the capacity of the poor to share in the benefits of growth. Lastly, poverty programs are poorly targeted, such as the social welfare fund and the public works program, and the targeting should be improved. Better targeted programs, such as the social fund, still have room for improvement.

Target 4: Reduction of hunger and malnutrition

Current situation

16. Yemen is one of the few countries in the region where malnutrition is a problem and where underweight was estimated at 46 percent in 1997 (YDMCHS, 1997) and appears to be worsening.[1] International comparisons indicate that only nine countries have a higher rate of underweight. In terms of in-country differentials, underweight was 50 percent in rural compared to 36 percent in urban areas and the mountainous region was the worst (52 percent) compared to the plateau and desert region (43 percent). Figure 1 shows an increasing trend compared to the decline needed to reach the MDG target. This worsening situation can be explained by a combination of two factors: (i) inadequate caloric intake, and (ii) health conditions, such as Low Birth Weight (LBW); breastfeeding; and diarrheal diseases, malaria, and other endemic diseases.

17. The inadequate food (caloric) intake may be attributed to the decline in remittance income, following the expulsion of Yemeni workers and the effects of the civil war, and the resultant inflation. Another factor is Qat chewing, which is an important determinant of malnutrition since it competes directly with the purchase of food. An average Yemeni family spends about 28 percent of its income on Qat compared to 41 percent on food. Data from a Hodeidah survey reveal that when real incomes fell, the value of money spent on Qat did not fall —leading to lower expenditures on food and nutrition.

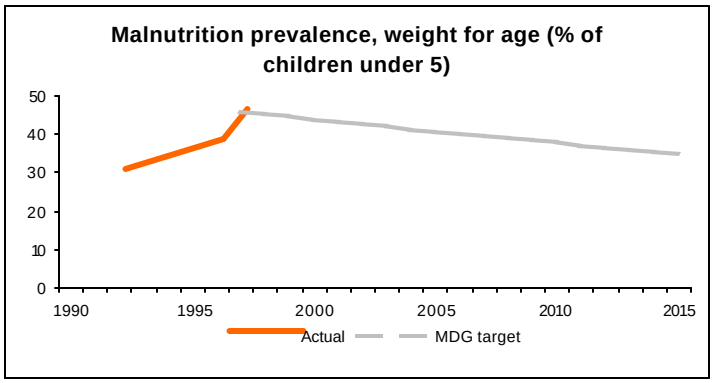
18. The LBW, another determinant of malnutrition, was estimated at 10 percent, the eleventh highest in the world. As for breastfeeding, only 7 percent of women provided exclusive breastfeeding for their infants in the first 4 to 5 months of life. The most important factor, however, is the infectious and diarrheal diseases, including malaria, which are highly prevalent in Yemen. Moreover, the quality of services provided by the health system has also deteriorated, reducing the ability to monitor and combat malnutrition.

Prospects for attaining MDG target for hunger

19. There is reason to be pessimistic about meeting the MDG target for malnutrition. A more realistic target for Yemen is to reduce the prevalence of malnutrition by 25 percent from 46 in 1997 to 35 percent by 2015 (see Figure 1). Improving the nutritional status is a challenging and complex task and will require intervening in different sectors and involving different institutions in a sustained manner. It will require reaching the most affected population who live in rural and mountainous areas.

[1] The Yemen Demographic and Maternal and Child Health Survey, 1997.

Figure 1: Prevalence of Underweight Children in Yemen



For example, this will require an increase in food intake as well as extensive nutrition and dietary education. The latter will depend on improvements in mothers' education which, even if the MDG target of 100 percent girls enrolment is met by 2015, will be too late for this generation, as most mothers would not have benefited due to their age. The accessibility to and quality of health system also needs to improve.

Conditions needed for achieving MDG target for hunger and malnutrition

20. Reducing malnutrition will require:

- Reducing poverty: the conditions for poverty reducing growth have been discussed earlier
- Improving girls (future mothers') education: the prospects for increasing girls education will be discussed later
- Reducing Qat consumption
- Reducing LBW and promoting breastfeeding particularly exclusive breastfeeding in the first four months of birth
- Improving the effectiveness of health services in combating diarrheal and communicable diseases and expanding the Integrated Management of Childhood Illnesses (IMCI)
- Improving access to basic health services for the population in rural and mountainous areas
- Conducting a rigorous program for Nutrition Health Education using Communication for Change (CBC) strategy
- Strengthening the institutional capacity of the MOH in Health Education
- Including growth monitoring as part of an Integrated Package of Maternal and Child health services.

➢ **Goal Two: Achieve Universal Access to Education**

Target 1: Attain 100 percent primary school enrolment by 2015

Current situation

21. Despite poverty and rapid growth of school-age population (3.7 percent per year), Yemen has been able to increase gross enrolment rates from 61 percent in 1997 to 67 percent in 2001. This has been achieved by strong public support, solid government commitment and extensive donor support. During the same period, the gender gap in enrolment has been slightly reduced though

disparities by gender and income group continue. Many girls in rural areas need to contribute to family income and drop out of school at an early age. There is a significant urban-rural gap and wide variation in enrolment across governorates which is driven primarily by the absence of teachers, particularly female teachers. Only 8 percent of teachers in rural areas are female, whereas 46 percent of urban teachers are female.

22. Quality is a problem and seems largely driven by the poor qualifications of teachers with 40 percent of primary school teachers having completed only basic education (grade 9). School curricula and text-books have been upgraded and in-service training is being improved. Nevertheless, problems continue with crowded classrooms in urban areas and lack of pedagogic materials and community involvement everywhere. Automatic promotion in grades 1 to 3 introduced since the mid-1990s has reduced the proportion of repeaters among primary students in the past three years, on the one hand, but the implications on quality need to be carefully assessed. Analysis of grades 4 to 6 student achievement in four subject areas—life skills, science, math, and, Arabic language—shows that the majority of pupils have difficulty: relating what they have learned in the classroom to what they observe in their environment; explaining and interpreting the meaning of phenomena due to the lack experimentation in school; in mental calculation to estimate the resolution of problems; and reading and interpreting tables and graphs. Since most students have limited reading and writing skills, they could not solve problems or answer questions on many of the tests.

23. Low access, internal inefficiency, and inadequate quality of primary education may be explained by demand and/or supply side factors. Children from better-off families tend to have greater access to school, particularly in urban areas, and for secondary education, the gap between the poor and the rich is not as large as it is for basic school-aged children but it is still significant. Based on the 1998 Household Budget Survey, 53 percent of children aged 6 to 11 in the poorest income decile were enrolled in schools compared to 66 percent in the richest decile.

24. On the supply side, the following factors have contributed to the poor quality and access of primary education:

- Difficulties with deployment of teachers, especially female teachers, to rural areas
- Lack of in-service teacher training
- Costly provision of textbooks and shortage of instructional materials
- Inadequate proportion of female teachers and administrators
- Incomplete schools (schools do not offer grades 1 to 6) [2]
- Lack of schools with latrines for girls.

25. On the demand side, while public primary education is free in Yemen, households are required to pay community participation and school activity fees.[3] In the 1999 National Poverty Monitoring Survey, households cited "difficulty in paying school expenses" as a main reason for either never sending children to school or withdrawing them early. The main impediments to low enrolment for rural girls are: poverty, lack of physical access to school (particularly long walking distances to school) and family attitude toward girls' schooling. Even for younger girls (aged 6 to 11), family attitude was a constraint, especially in rural areas. Appropriate incentive schemes for poor children in rural areas to reduce education costs are needed.

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[2] In 2001, 10 percent of the basic education schools (grades 1-9) are incomplete and 6 percent of the basic education students are enrolled in such schools.

[3] The community participation fee is YR150 a year. In 1998, MOE exempted poor girls from this fee but implementation of this policy varies and depends on the school administrator.

Table 3: Yemen's EFA Targets for Universal Primary Education Inputs and Outputs

	1997 (Historical)	2001 (Baseline)	2015 (Target)
Primary Gross Enrolment Ratio (Grade 1-6)			
Total	61.1%	66.9%	103%
Male	78.3%	81.2%	103%
Female	42.9%	51.6%	103%
Primary Net Enrolment Ratio (Grade 1-6)			
Total	49.5%	51.4%	100%
Male	62.7%	61.3%	100%
Female	35.5%	41.1%	100%
Intake Rate in Grade 1			
Total	n.a.	73%	100%
Male	n.a.	82%	100%
Female	n.a.	63%	100%
Completion rate in Grade 6			
Total	n.a.	51%	100%
Male	n.a.	68%	100%
Female	n.a.	33%	100%
Number of Primary School Students	1,378,000	2,644,000	6,777,000
Number of Teachers (in government schools)	n.a.	104,000	183,000
Student/Teacher Ratio (in government schools)	n.a.	25	35
Number of classrooms (in government schools)	n.a.	65,000	153,000
Education Spending as % of GDP	5.1%	6.7%	9.0%
Primary Spending as % of Education Spending	43%	48%	50%
Teacher Salaries as Multiple of GDP per capita	n.a.	3.2	3.4

26. ***Public Expenditure on Primary Education.*** The share of GDP and budget expenditure allocated to education in Yemen is high compared to most developing countries. Efficiency is low as enrolment and completion rates are lower than in comparable countries. The share of education expenditure as a percentage of GDP has increased from 5 percent in 1996 to nearly 7 percent in 2002. This trend reflects the rise in teachers' salaries and increased investment expenditure. However, within the education sector, the proportion of primary education has declined from 46 percent in 1996 to 44 percent in 2000. A similar trend is observed in the upper grades of basic education and in secondary education (grades 7-12) whose share has also decreased from 42 percent to 40 percent during the same period. Conversely, the share of tertiary education has increased 4 percentage points, demonstrating an increased demand for tertiary education.

Prospects for attaining MDG targets for universal primary enrolment

27. The strong commitment of the Yemeni government and civil society increases the likelihood of Yemen attaining the MDG targets for primary education on time. But this will require that major preconditions be met: policy and intuitional reforms discussed in the next section are needed, along with significant support from donors. Table 3 shows that Yemen is committed to attain the EFA FTI whose goals are similar to the MDGs. The EFA targets for 2015 also include completion of primary schooling and can be achieved if the same policy and institutional reforms are achieved and FTI financing is forthcoming. Nevertheless, it is important to recognize that despite the government's best efforts and donor support, attaining 100 percent enrolment and school completion is going to be extremely difficult—experience all over the world shows that the last five percent is the toughest to achieve and may not be attainable.

Conditions needed for achieving MDG targets for universal primary education[4]

28. The targets can be attained by addressing the supply and demand constraints illustrated above. Key reforms are necessary and have been identified as part of the Government Basic Education Development Strategy (BEDS). The attainment of MDG targets will require implementation of these reform measures, which include:

- *Encourage Community Participation* by building on recent and ongoing project experience. The MOE will need to create capacity at the Central and Governorate levels to increase community participation. Decisionmaking on school location, ensuring sustainability, reducing school construction costs, and improving school management are areas for increased participation and partnerships.
- *Improve Access* giving high priority to increasing primary education enrolment, especially girls' enrolment in rural areas. The government needs to place small schools closer to girls' homes after obtaining the community's commitment to enrolling girls as a prerequisite for school construction. These schools need to be constructed with sanitary facilities and boundary walls.
- *Improve Efficiency* by implementing measures to increase the cost-effectiveness of school construction based on the experience of the Social Fund, Public Works project and other donor-funded projects. These include using low-cost standardized designs, involving communities in school construction and siting.
- *Improve Quality* by increasing the provision of materials, in-service training for teachers, and interactive learning, using enhanced textbooks and teaching skills.
- *Improve Capacity* by decentralizing management of schools to governorates and districts. At the central level, the government has to strengthen capacity to develop standard designs for school construction; develop and deliver in-service teacher-training programs and organize effective supervision; capacity also needs to be strengthened at the governorate and district level to manage schools and their construction.
- *Improve Expenditure Management.* Improvements in budgeting and expenditure management are under preparation at the Ministry of Finance and should have a positive effect on resource management in the sector. Greater priority needs to be given to primary education.

29. Despite the strong commitment shown by the government, additional resources will be required. The first three years (2003-2005) of the Basic Education Development Strategy (BEDS), of which EFA is a sub-set, aims to improve the access, quality, equity, and efficiency by strengthening capacity building at the central, governorate, and district levels. Financial requirements for the three-year period are estimated at US$1.2 billion or US$414 million per year. Wages and salaries of existing teachers and new teachers, which are US$792 million (or US$264 million per year), will be financed by the government. The financing requirement for goods and services (quality improvement measures including capacity building) and investment (school construction) is US$450 million or US$150 million per year. The financial envelope for goods and services, and investment is estimated at US$354 million or US$118 million per year. Thus, the additional funding required during the first phase of BEDS is US$96 million (or US$32 million per year—US$19 million for quality, equity, and efficiency improvements and US$13 million for school construction)—equivalent to 27 percent of the budget allocated to goods and services, and investment in 2002. The government is requesting donor resources through the EFA FTI.

[4] The funding requirements shown in this section are based on the Government of Yemen's proposal to the Fast Track Initiative for financing to achieve EFA goals by 2015.

30. The unit costs can be lowered for the period after 2005 if the government fully implements the BEDS efficiency measures. For example, 32 percent fewer teachers and classrooms will be required of grades 1 to 6 of the basic education system if the government increases student-teacher ratios from 25 in 2000 to 35 in 2015 and decreases the proportion of repeaters from 7 to 3 percent by 2015. These and other reforms help to calculate costs projected for the period 2006-2015. The reform scenario projects requirements of an additional 79,000 primary teachers and 88,000 primary classrooms while it assumes 20 percent of classes operating double shifts in the next 13 years. The policy changes presented in this reform are due to large efficiency gains brought on by improvements in student/teacher ratios and by introducing automatic promotion to reduce the number and the cost of repeaters. At the same time, non-teacher items—quality improvement—are factored in, combined with improved resource mobilization based on the following assumptions: i) an increased share of education spending on primary education; ii) an increased amount for promoting female education and operation/maintenance; and iii) an increased share of public recurrent spending on education as a percent of public spending. If the reform were to be fully implemented, the financial requirement for EFA are estimated at US$7.1 billion over the 13 years, from 2003 to 2015, or US$549 million per year. The government's financial envelope for primary education is estimated at US$5.8 billion over the next 13 years or an average of US$442 million per year. Thus, the financing gap would be estimated at US$1.4 billion over the next 13 years or US$107 million per year—an annual US$76 million for recurrent and US$31 million for capital expenditures. This reform scenario is a very indicative financing gap estimate; thus, the financing gap could be wider depending on the pace of reform implementation.

- **Goal Three: Promote Gender Equality and Empower Women**

Targets 1 and 2: Reduce the gender gap in primary and secondary enrolment and in literacy among 15 to 24 year olds

Current situation

31. There is a persistent gender gap in school enrolment, although the situation is improving. The reasons for the enrolment gap have been discussed in the previous section yet the literacy gap can be best explained by the history of low enrolment rates for girls in school—as enrolment of girls improves, the literacy gap is likely to disappear. Table 4 shows a steady improvement over the past few years and the strong support expressed by the government for education implies that the progress will be continued.

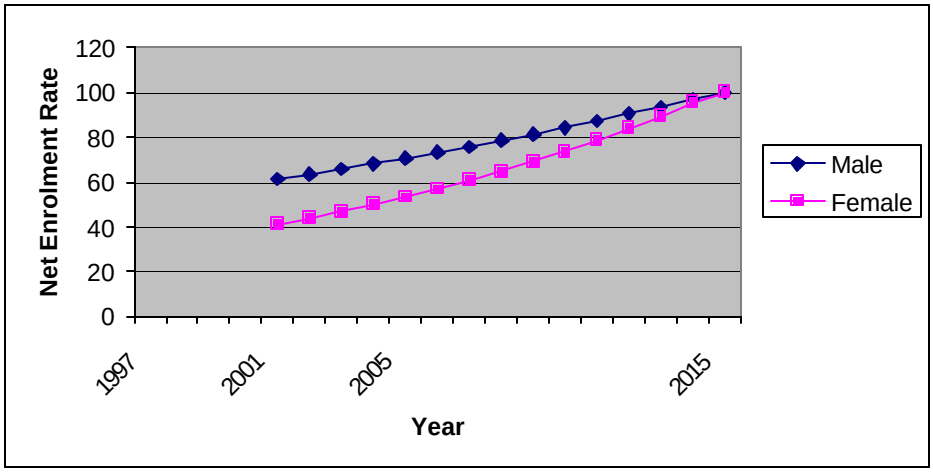
Table 4. Evolution of Gender Bias in Primary Education and Literacy

Year	*1997*	*1998*	*1999*	*2000*	*2001*
Gross primary enrolment ratio (Male: Female)	1.83	1.81	1.77	1.65	1.57
Male	78.3	78	79.5	79.8	81.2
Female	42.9	43.2	44.9	48.5	51.6
Net primary enrolment ratio (Male: Female)	1.77	1.75	1.72	1.52	1.49
Male	62.7	62.6	63.9	61.2	61.3
Female	35.5	35.8	37.2	40.3	41.1
Youth literacy rate (% ages 15-24)	2.06	1.97	1.88	1.81	1.74
Male	80.9	81.6	82.3	82.9	83.7
Female	39.3	41.5	43.7	45.9	48.2

Prospects for attaining MDG targets of reducing gender gaps in schooling and literacy

32. The prospects appear to be unlikely by 2005 but very good by 2015 provided that the reforms described on universal primary education are implemented and donor funding under EFAFTI is forthcoming. As the gender gap for primary school enrolment is reached, the youth literacy gender gap targets will also be reached, although with a lag of a few years. The gender gap is also likely to be reduced for secondary enrolment. The prospect of reaching MDG targets for gender gap reduction in secondary education will be more problematic, given the high drop-out rate for girls, linked largely to early marriage. The projections for reducing the gender gap in primary school enrolment are shown in Figure 2, which assume reforms and funding take place.

Figure 2. Projected Enrolment by Gender if EFA FTI is Implemented



Conditions needed for achieving MDG targets for reducing gender gaps in schooling and literacy

33. The conditions for these targets are similar to the conditions needed to reach universal primary enrolment, with particular emphasis given to school locations, toilets in girls schools, and recruitment and training of female teachers.

Target 3: Increase share of women in non-agriculture employment and in national parliament

Current situation

34. Due to a variety of historical and cultural factors, not least of which is the low education attainment of women in Yemen, women's share in the non-agriculture labor force is abysmally low. Yemen's labor force is more than three quarters male with the female participation rate at 21.8 per cent (11.4 percent in urban areas and 25.9 percent in rural areas). Women provide an estimated 60 percent of unpaid agricultural labor. However, working women in rural areas do not tend to work for agricultural markets, but for family needs (especially livestock farming). The scarcity of water and firewood has tremendous effects on women's time, constraining their ability to participate in non-agricultural activities. Another factor inhibiting women's non-agriculture labor force participation is early childbearing combined with high fertility. This has the dual effect of limiting women's education and their employability—both of which may not be compatible with child-raising.

35. Many traditions, especially in rural areas, persist and limit women's political participation. No more than 15 percent of women participate in political parties. However, some progress has been

made, and, in the 2001 local elections, 125 women were nominated, of which 35 were elected. Currently there are only two women in the elected 301 seats of Parliament and two in the President-appointed Shu'ura council. Women's participation in government has increased and there is now one female Minister and several female Deputy Ministers. However, very few women are in the government above the level of Director and they are concentrated in the social ministries.

Prospects for attaining MDG targets for increasing women's participation in non-agricultural employment and the national parliament

36. Non-agriculture employment for women in Yemen is directly related to educational attainment. Women's participation rates in the non-agriculture labor force will increase sharply by 2015 as women's education rises. Women's education will also help reduce fertility and delay childbearing giving a further push to women's employment in non-agriculture sectors. While no official targets exist for women's role in the non-agriculture economy, all official statements in this regard appear to support this trend. It will require favorable conditions to increase women's role in the economy and, even then, the achievements by 2015 may not be fully satisfactory.

37. The National Women's Committee is currently training women to participate in politics and to get involved in the elections planned for April 2003. The prospects are a modest improvement in the number of women represented at the highest level.

Conditions needed for achieving MDG targets for increasing women's participation in non-agricultural employment and the national parliament

38. The main driving force is likely to be increasing levels of education for women, not just attaining parity in primary education but also in secondary and tertiary education. There is strong public support for education, but cultural and social norms lead women to drop out of secondary school and this needs to be addressed. The most important reason for girls to drop out of secondary school, even when there is an accessible school, with female teachers, appears to be early marriage and childbearing. A strong pro-active family planning education program could play a very useful role in this area.

39. The legal environment could be improved. More importantly, judges and police need to apply the law as written not as they believe. The bureaucracy too needs to understand that Yemen has written women's rights into the law either directly or by ratification of international agreements and conventions. The government can enforce its position by publicizing prosecution of those violating women's rights under Yemeni law.

- **Goal Four: Reduce Infant and Child Mortality**

Targets 1 and 2: Reduce infant and child mortality by two-thirds from 1990 level

Current Situation

40. Yemen has made progress in reducing Infant and Child Mortality Rates (IMR and U5MR), although Yemeni rates remain high at 82 deaths per 1,000 live births for IMR and 105 deaths per 1,000 live births for U5MR. The decline has been led by the decline in mortality among children 1 to 4 and by the decline in post-neonatal mortality (infants from 29 days to 364 days). The slowest decline has occurred in neonatal mortality (infants from 0 to 28 days), which is resistant to decline due to poor maternal health and birth complications. Mothers in poor health give birth to still-born or low-birth-weight. Even when birthed in health facilities, death occurs in low-birth-rate babies,

partially from insufficient neonatal services. Post-neonatal and child mortality seem to be due to the following conditions—acute respiratory infections, diarrheal diseases and malaria. As noted earlier, Yemen has very high rates of malnutrition and this reduces the capacity to resist diseases.

41. The analysis of mortality rates revealed that rural children have a 12 percent greater risk of dying in their first year, and a 22 percent greater risk of dying in their first five years, than urban children. The rural-urban differential was greatest for non-infant child mortality (57 percent), followed by post-neonatal mortality (24 percent). It is interesting to note, however, that there was no rural-urban differential for neonatal mortality, in part because of the overall paucity of neonatal services, even in urban areas.

Prospects for attaining MDG targets for infant and child mortality

42. The government targets for infant and child mortality mirror the MDGs, but despite a clear downward trend, the achievement of the targets is unlikely. A realistic target is a 50 percent decline in rates so that IMR would be reduced to 41 deaths and U5MR to 52.5 deaths per 1,000 live births by 2015. The U5MR target is easier to achieve than the IMR because IMR requires action on several fronts, particularly for the neonates. Mortality of newborns is typically less responsive to improvements in socio-economic conditions, or to low-cost child survival interventions, such as child immunization and oral rehydration therapy, and is affected by the availability and quality of neonatal care, and factors related to maternal health. In fact, maternal health, nutrition, and birthing conditions are the main determinants of newborn deaths and stillbirths. Prematurity, intra-uterine growth retardation, delivery complications, unsafe delivery practices, and congenital malformations—all of which are widespread in Yemen—are contributors to neonatal mortality. The low rate of ante-natal care and post-partum–newborn care are also attributes of the high newborn mortality rate. Moreover, there needs to be poverty-reducing economic growth, progress in education, particularly women's education, and a reduction in fertility, especially the age at birth of the first child. Lower fertility will contribute to healthier babies and mothers, which will in turn reduce neonatal mortality. Poverty reduction and education of mothers will reduce post-neonatal and child mortality. The likelihood of these developments happening within the MDG timeframe is very low.

43. Difficult sectoral issues also need to be addressed. The health sector needs to improve its service provision and access, and, at the same time, address epidemics, such as malaria. To achieve these goals, painful and challenging systematic reforms are required—the successful completion of which is unlikely within the MDG timeframe.

Conditions needed for achieving MDG targets for reducing infant and child mortality

44. The systemic health sector reforms required include:

- *Improve Efficiency of Public Health Spending.* Resource management is centralized, which leads to spending decisions that are not needs based. Resources are spent on infrastructure in mostly urban geographic areas. These are tertiary care institutions with low operations and maintenance budgets and low utilization rates. Resources for assuring proper functioning are insufficient.

- *Improve Accessibility to Health Services*. Less than half the population, particularly in rural areas, have access to basic health services for physical, financial, and social reasons. Physical constraints include lack of transportation, difficult terrain, and dysfunctional health infrastructure (facilities are closed, some are open but have no personnel or medicines). Financial constraints include inability to share costs whether direct (fees) or

indirect (cost of transportation and lodging). Social constraints include inability of women to seek care if the caregiver is not female or if she does not have a male escort.

- *Improve Quality of Health Services*. Quality problems are pronounced: (a) non-availability of drugs and supplies; (b) lack of regulation, standards, and protocols; (c) lack of continuity of care, both vertical (referral from one level to another) and horizontal (service integration); (d) low morale of service providers; and (e) poor management practices at the central and facility levels.

- *Accelerate the Implementation of Integrated Management of Childhood Illnesses (IMCI).* IMCI ranked among the ten most cost-effective interventions in low- and middle-income countries.[5] The program includes interventions that can be provided at home and at health facilities to promote growth and prevent disease, as well as to respond to illness (see Box 1).

- *Improve Perinatal Care*. Poor capacity of the health system, combined with the lack of materials, has reduced the effectiveness of these services. Patients who need care often bypass the primary, secondary, and district facilities, and head straight for the referral hospitals in Aden and Sana'a. This not only reduces coverage but also increases unit costs for those being covered.

- *Improve institutional capacity*. The institutional framework has weak capacity to perform: core functions, such as policy analysis; sector coordination; sector regulation; performance evaluation and monitoring; personnel functions; and drug procurement. The problems from a weak center are made worse by the districts.

- *Improve financial capacity*. Weak management problems are worsened by poor financial management and inefficient resource use. The financial problems include: (a) rising units costs (driven by prices of drugs and technology); (b) low and inefficient public spending; (c) high out-of-pocket costs (59 percent of total costs and 3 percent of income) which are spent on care seeking, such as drugs and transport; and (d) lack of risk pooling arrangements such as social insurance.

Box 1: Interventions of IMCI Strategy

	Promotion of Growth and Prevention of Disease	**Response to Sickness "Curative Care"**
HOME	• Community/home-based interventions to improve nutrition • Insecticide-Treated Materials	• Early case management • Appropriate care-seeking behavior • Compliance with treatment
HEALTH SERVICES	• Immunization • Complementary feeding and breastfeeding counseling • Micronutrient supplementation	• Case management of ARI, diarrhea, measles, malaria, malnutrition, and other infections • Iron and Vitamin A supplementation • Antihelminthic treatment

[5] The World Bank, World Development Report: Investing in Health, World Bank, Washington DC, 1993.

45. The Ministry of Health's response is a health-reform program with the following components: (a) decentralization of planning, decision making, and financial management; (b) redefinition of the role of the public sector with a stronger emphasis on policy, regulation, and public health as well as the establishment of limits on its role as service provider; (c) district health system approach; (d) community co-management of health systems; (e) cost sharing and exempting the poor for basic services; (f) essential drug policy, and realignment of the logistics system for drugs and medical supplies; (g) decentralized, outcome-based management system from the central to the community level; (viii) hospital autonomy and eventual basic health facility autonomy; and (h) encouragement of participation by the private sector and non-governmental organizations (NGO) through policy-designed regulation. The health reform program will take place in two phases: (1) an *initiation* phase, in which key aspects of reforms will be initiated: lessons learned, key legislation passed, district health systems put in place in at least 40 percent of districts, revisions of the financial system initiated, and major actors brought on board; and (2) a *consolidation* phase in which the lessons learned in the initiation phase can be fashioned into long-term systems, policies and regulations, and the remainder of the districts brought into the health district system.

46. The government has realized that the first phase should include improvement in basic health services, particularly for maternal and child health which is in line with the MDGs. The government will support the effective delivery of maternal and child health services in district hospitals and health centers, including the development of clinical standards and upgrading the skills of health care providers. The package of integrated maternal and child health services will build on the clinical service delivery elements of IMCI and expanded Reproductive Health services including Family Planning and Essential Obstetric Care. A notional package has been developed (Box 2).

Box 2: Integrated Maternal and Child Health Services by Level of Health Facility

Level of Facility	Children	Pregnant Women and Newborn	Non-pregnant Women in Reproductive Age
Health Center (HC)	• Periodic examination and growth monitoring & promotion • Vitamin A & iron/folate supplementation • Iodine supplementation in risk areas • Immunization plus • Management of diarrhea, acute respiratory infections, malaria and other infections including referral • Management of referred complicated cases such as marasmus, pneumonia, malaria and xerophthalmia	• ANC including HgB & urine analysis • PNC • TT • Breast-feeding promotion and weaning practices • Iron/folate (daily) & multiple micronutrient or low dose vitamin A supplementation • Obstetric first aid and referral • Syndromic STI treatment & counseling • HIV/AIDS counseling • Malaria treatment • Post abortion first aid and referral • Post abortion follow up with FP provision • Counseling on Qat and smoking cessation and indoor air pollution • ANC and PNC of referred cases • Care of normal delivery • Care of normal newborn	• FP counseling & provision of all methods (except IUD and Norplant) • Syndromic STI treatment & counseling • HIV/AIDS counseling • Partner treatment, & provision of condoms • Malaria treatment • Iron/folate supplementation • Targeted food supplementation to correct for low pregnancy weight • Counseling on Qat and smoking cessation and indoor air pollution

Level of Facility	Children	Pregnant Women and Newborn	Non-pregnant Women in Reproductive Age
		• bEOC and full post-abortion care in selected HCs	• IUD insertion • Referred FP and STI complicated cases
District Hospital (DH)	Above plus ? Severe dehydration or persistent diarrhea ? Severe pneumonia ? Severe febrile diseases ? Other complications such as mastoiditis	Above plus ? ANC and PNC of referred cases ? cEOC for complicated cases ? Care of complicated newborn ? Full post-abortion care	Above plus ? Norplant implantation ? Sterilization ? Referred FP and STI complicated cases requiring hospitalization such as missed IUD or PID

47. Extensive external support will be required to make progress towards these ambitious reform goals and the government has requested and received from donors about US$50 million for the first phase. Additional donor support close to US$200 million may be required to meet the ambitious reform program.

➢ Goal Five: Improve Maternal Health

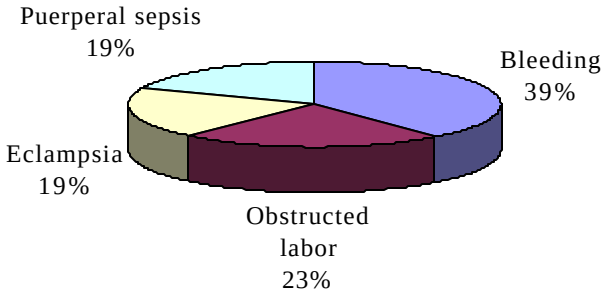
Targets 1 and 2: Reduce maternal mortality and increase the proportion of births attended by skilled staff

Current situation

48. Access to maternal health care is difficult and, together with the high fertility rate, contributes to the high maternal mortality and morbidity. The reported Maternal Mortality Rate (MMR) is 350 deaths per 100,000 live births, which is believed to be underestimated. According to UNICEF and WHO, the MMR was estimated in 1995 at 850 per 100,000 live births (range of uncertainty: 620-1100)[6], which is more realistic and will be used for this analysis. Maternal deaths account for 42 percent of all deaths among women of reproductive age (15-49 years). For Yemeni women, pregnancy and childbirth are life-threatening events, with a lifetime risk of dying a maternal death of 1 in 38.

49. The reported direct causes of maternal deaths in Yemen (Figure 3) are bleeding (39 percent), obstructed labor leading to ruptured uterus or complications at caesarean section (23 percent), eclampsia and puerperal sepsis (19 percent each). Abortion-related mortality has declined in recent years. Indirect causes include viral hepatitis (23 percent), malaria, and anemia. Complications that

Figure 3: Causes of Maternal Death, UNICEF, 2000.



cause women to require emergency services include: jaundice, hemorrhage, pregnancy-related infections, toxemia, and other obstetric complications. The high fertility rate is also considered to be a contributing factor to the high rate of maternal deaths.[7]

50. According to UNICEF, the factors that most contribute to unsafe motherhood are the heavy burden of physical work, infectious diseases, anemia, malnutrition (which begins in infancy and childhood), and the low socioeconomic status of women. Female Yemenis were described as being illiterate, marrying at an early age, having seven babies delivered at home, spending 16 hours a day farming and/or domestic labor, and tending to perpetuate traditional health practices.

51. According to UNICEF, it is estimated that 30 percent of the coverage of MCH services is of low and poor quality. The attendance rates for antenatal, delivery and postpartum care are estimated to be 26 percent, 16 percent, and 5 percent, respectively, indicating insufficient care during pregnancy and lactation.

52. According to the Central Statistical Organization, it is confirmed that nearly two-thirds of Yemeni women reported not receiving ANC during their last pregnancy. Among those who did, the median number of ANC visits was 1.9. Receipt of ANC is more than twice as common among women in urban areas than in rural areas (61 percent and 27 percent respectively). Receipt of ANC differs by region: 43 percent in the coastal region, 22 percent in the mountainous region, and 38 percent in the plateau and desert region.[8] A 1997 report notes that only 17 percent of births in the five years preceding the survey were to women who had received one or more doses of tetanus toxoid.

53. It was estimated that 84 percent of women nationally, and 87 percent of women from rural areas, deliver at home. Only 22 percent received trained assistance during delivery. Over half of the births are assisted by a relative. Home deliveries are often unclean, unsafe, and not attended by a trained practitioner. The standards of obstetric care and referral are low due to resource and manpower constraints. Obstetric services that do exist are underutilized.

54. The causes for the low rate of seeking obstetric-related care include fear of being examined by a male healthcare worker, travel-related costs, and difficulties in getting help or transport at night. These factors delay women from accessing services until it is too late, at which point they attempt to access more costly and distant tertiary services, which lack appropriate care for obstetric emergencies, including drugs, equipment, or safe blood transfusion capability.

Prospects for attaining MDG targets for maternal mortality reduction

55. Using the MDGs target of 75 percent reduction, the MMR would need to be about 212.5 deaths per 100,000 live births by 2015. The Yemen National Strategy for Reproductive Health and the National Population Policy target the reduction of maternal mortality to 75 per 100,00 live births by 2025. The first phase (2001-2005) will endeavor to reduce maternal mortality to less than 25 percent of its present level through antenatal care services for 60 percent of pregnant women, provision of services by trained personnel for at least 40 percent of deliveries, coverage of 15 percent

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[6] Hill K, Abou Zahar C, and Wardlaw T. 2001. *"Estimates of Maternal Mortality for 1995."* WHO Bull. (2001), 79 (3). WHO, Geneva. Reported MMR is 350 per 100,000 live births, YDMCHS, 1997.

[7] UNICEF, 2000. Recommendations for the Implementation of a UNICEF Yemen's Safe Motherhood Project, Dr A El-Malatawy.

[8] Central Statistical Organization and Macro International. 1998. Op. cit.

of mothers with postnatal services and availability of basic essential obstetric emergency services. A realistic and achievable MDG target would be to reduce MMR by 50 percent to 450.

56. Reduction in maternal mortality will require improving women's access to reproductive health services and maternal health services. The health service improvements are part of the strategy to improve child health described earlier and their implementation faces severe constraints from the inertia of a health system resistant to reform. Even more difficult may be increasing access to population and reproductive health services due to the social inertia which does not allow women to seek family planning assistance without their husband's permission.

57. While the maternal mortality reduction target may be difficult to meet, progress will be made as education improves. The second target of increasing the proportion of pregnancies covered by the health care system should be achievable if the government implements the health sector reforms.

Conditions needed for achieving MDG targets for maternal mortality

58. Removing the social constraints women face when using reproductive health services are a necessary precondition to improve the MMR. As education improves and poverty is reduced, the necessary conditions reduced maternal mortality will be formed. In addition to all the conditions necessary to achieve the MDG s for IMR and U5MR, which are relevant and necessary for the MMR target, the following two additional conditions are critical:

- *Accelerate the implementation of the area-based improvement of Essential Obstetric Care (EOC).* Systematic area-based planning and gradual implementation are necessary to improve care for women with severe obstetric complications. Planning for such provision should be part of a structured approach led by the Governorate and District health offices, so that population distribution, transport and communication mechanisms and existing infrastructure end functions can be taken into account. The next steps comprise the gradual upgrading of facilities including infrastructure, equipment and consumables, staff (training, routines, standards, supervision) and monitoring. A key component of such upgrading is the improvement of the referral system: reaching agreements between staff of the units in the network when and how to refer, how to support peripheral units from the center, and how to communicate to make the system function in partnership.

- *Ensure continuous improvement in Family Planning services.* In a country where the use of contraception is so rare and illiteracy so high, there are misconceptions among the population and health staff concerning contraceptive use.[9] Introduction of new contraceptives must be done carefully, supported by IEC messages and materials, and staff training. The GOY should recognize the need for uninterrupted contraceptive supply to maintain the upward trend of CPR, and be prepared to find ways, in the budget, to supplement the contributions of international collaborators in this field.

[9] Population Council 2000.

- **Goal Six: Combat HIV/AIDS, Malaria and Communicable Diseases**

Targets 1 and 2: Slow the rate of HIV/AIDS, malaria and increase contraceptive prevalence

Current Situation

59. HIV/AIDS prevalence is low but rising since 1990 when the first case was detected in Yemen. By the end of March 2000, according to the National AIDS program (NAP) the cumulative number of HIV/AIDS cases in Yemen was 806, of which 196 were suffering from AIDS. Given that AIDS is largely under-diagnosed and the coverage of health services is limited, these numbers are probably underestimated. According to official statistics about 26 percent of the HIV/AIDS infected were women. The major mode of transmission is sexual and the young population is most affected. The likely spread of the disease is linked to: poverty, illiteracy and unemployment, low quality health services, inadequate monitoring of blood and blood products, taboos on discussion of sexual matters, high prevalence of STDs, flow of population to and from Yemen and neighboring countries in the Horn of Africa where more are infected by HIV/AIDS and /or other Gulf countries in search of jobs. While the available data indicate an apparently low overall HIV prevalence on the basis of blood screening, the HIV prevalence is .28 percent for the year 2000. The information points as well to a steadily growing epidemic since in 1993, when seroprevalence among blood donors was 0.05 percent. The same increasing trend is observed among Yemeni travelers who seek visa to work abroad: HIV seroprevalence in 1995 was 0 percent, .17 percent in 1996, 1.26 percent in 1998, and 1.19 percent in 2000. The epidemic concerns the largest sector of the population since more than two thirds of reported AIDS cases are in the age group (20-40). The major reported mode of transmission is sexual. Tuberculosis (TB) is a highly prevalent condition in the country and its relation to the HIV epidemic can become a major concern.

60. Malaria is the most prevalent vector-borne disease in Yemen and one of the leading causes of child death. The disease can be fatal for pregnant women. Malaria had historically been endemic in the coastal areas where the population has over time acquired certain immunities. Recently it has started affecting areas where the bulk of the population does not have immunities. It affects all age groups and, in pregnancy, may cause increased incidence of abortion and low birth weight, as well as hemolytic anemia. It is estimated that out of 20,000 malaria deaths, about 4,000 to 5,000 deaths occur among children below five years of age. The poor suffer disproportionately from malaria and about 65 percent of the population is estimated to live in high risk malaria endemic areas.

61. Targets for reducing other communicable diseases, such as TB, are articulated only in very broad terms but are specified in the national health strategy. Despite considerable progress in reducing the incidence of and mortality from major communicable diseases, significant burdens of disease (especially TB and malaria) persist among poorer households. New pulmonary Tuberculosis cases were estimated to be 5,600 occurring annually according to the National Tuberculosis Project. The immunization coverage improved gradually since 1988, reaching its highest peak of 100 percent in 1990, then decreasing to reach its lowest level of 54 percent in 1992 and improving again in 1999 to reach 78 percent.

62. Total unmet need for contraception is 39 percent of women of childbearing age (DHS, 1997). In order to achieve the contraceptive prevalence target set out in the Population Action Program for 2001-2006, satisfying unmet need would suffice to reach the target. Also, expanding total demand for contraception by reaching more couples remains necessary. The PRSP strongly argues for policies to raise awareness of the different population policy issues, intensifying population programs

in all the various media channels. The DHS data indicates significant urban rural differentials in contraception use which may be correlated with education and income.

Prospects and conditions for attaining MDG targets

63. The prospects for slowing the rate of HIV/AIDS in line with MDGs appears to be unlikely despite the recent political support and government's recognition that HIV/AIDS is a national problem. Yemen lies at the crossroads of the Horn of Africa and the Middle East and given relatively high seroprevalence rates in neighboring countries with whom Yemen has close trade and business relationships, the potential for an explosive growth in HIV/AIDS exists. It is expected to rise to 3.3% by 2015.[10] The national AIDS committee has existed for years and there is now an attempt to develop a strategy. Given the unwillingness to publicly discuss AIDS prevention, the approach will have to be through a national reproductive health strategy, and the AIDS strategy being developed will have to focus on that as well as raising awareness.

64. Over 2 million cases of malaria are diagnosed each year in Yemen, resulting in approximately 20,000 deaths. The government has developed a National Malaria Control Program for 2001-2006—the implementation of which will first be done in pilot governorates or districts, and will then be expanded throughout the country. This is a first step toward Yemen reaching its objective of controlling malaria. The strategy will be implemented with support from the National Center for Epidemiology and Disease Surveillance (NCEDS), in collaboration with WHO. The program includes the following elements:

- *Improved Diagnosis and Case Management*: A national system for assessment and review of national malaria treatment policies will be developed. In addition, referral laboratories will be revitalized in seven governorates. These laboratories will be responsible for quality control of blood slides collected from health facilities and clinical training and supervision of laboratory staff in the governorate.

- *Integrated Vector Management, including Promotion of Personal Protection Measures*: The package of vector control interventions will include residual house spraying, use of Insecticide Treated Materials (ITMs), environmental management, and larviciding. It will be targeted at high-risk and epidemic-prone areas.

- *Epidemic Detection and Response:* Mobile teams will be formed and equipped with vehicles and necessary supplies and equipment, including stocks of essential drugs and ITMs, for responding to suspected epidemics.

- *Disease Surveillance:* The capacity of NCEDS will be strengthened at the central and governorate levels in support of malaria disease surveillance as well as other communicable and non-communicable diseases with particular focus on the selected districts.

65. Contraceptive prevalence is likely to increase somewhat, although it is unlikely to reach any ambitious MDG targets. Research from all over the world indicates that contraceptive prevalence is driven by education and income, and given certain levels of education and income, can be influenced by active programs such as successful programs in Bangladesh, Egypt and Iran. Population has been recognized as a major problem by the government but the willingness to take on traditional forces has

[10] World Bank/ WHO/ UNAIDS (2002).

yet to be demonstrated. If this happens, Yemen can achieve the reproductive health targets though this seems unlikely.

- **Goal Seven: Ensure Environmental Sustainability**

Target 5: Better and sustainable access to safe drinking water

Current Situation

66. Few countries face as difficult a challenge as Yemen in environmental sustainability, particularly regarding water. In recent years, Yemen has witnessed a significant degradation of its natural resources. The increase in population and the spread of poverty have lead to a strain on natural resources, in general, and on soil, vegetative cover, and water resources in particular. The water denudation of land that accompanies floods and the increasing neglect of rain-fed agricultural land because of poor returns are two important challenges in Yemen. The depletion of groundwater has a direct impact on poverty and the protection of watersheds is of paramount importance. Wastewater sanitation acquires significant importance due to the health risks it can cause and the pollution that results. An important cluster of underlying causes for malnutrition is related to the availability and use of safe water and sanitation and personal hygiene. Access to safe drinking water is still far from universal. Sanitation remains a major problem in Yemen with, according to the Poverty Update in 1998, on average, only an estimated 40 percent of the population have access to safe water, with substantial urban/rural discrepancies. In rural areas access to safe drinking water is limited to 25 percent, while in urban areas access covers 65 percent.

67. One of the PRSP goals is to reduce the percentage of the population that does not have access to safe water almost by half from 60 percent in 2000 to 35 percent in 2005. To do this, the government intends to increase water production to 162.5 million cubic meters in urban areas and to 423 million in rural areas which should help raise coverage of the network to its targeted levels. The policy implications of this objective, however, are not straightforward. Yemen is a country where groundwater is not only "depleted" but is actually "mined". Countrywide groundwater abstraction exceeds annual recharge by about 70 percent reaching higher rates in highland basins where a quarter of the country's population lives. Abstracting more water is not the solution; but rather conservation (including abolishing subsidized diesel, drilling and abstraction regulation, levying fees for irrigation water) and helping farmers modernize irrigation methods.

68. The government is making plans to begin aggressive resource management measures, creating incentives to save water, which could be used to increase coverage in both rural and urban areas. Water production will only be increased with simultaneous conservation measures to avoid a water scarcity problem. However, progress in key areas such as water pricing, removing diesel subsidies, regulation of groundwater use are being delayed despite agreement among technicians on their importance.

69. In April 2001, the Ministry of Tourism and Environment was established and shortly thereafter, the Environmental Protection Authority (EPA) was set up as the primary body for environmental oversight, from both protection and regulatory perspectives. EPA in Yemen is enabled by the Environmental Protection Law No. 26 of 1995. EPA has the responsibility of coordinating the activities and is a young institution with well-defined goals but immature institutional and governance structures.

70. The urban drinking water sector will need significant improvement in the management of water utilities and, while there has been progress in pilot cities, delivery of drinking water throughout

the country remains a problem. The structure of various water management institutions at the central level is very confusing and possibly works in a counterproductive manner. In the rural drinking water sector, success has been achieved primarily by community-managed schemes—those developed without community participation have failed.

Prospects for attaining targets

71. Infrastructure is presently the government's primary focus, and piping water to most urban households is its target. The target may be attained by 2015; however, a faster than expected urban population increase lends doubt, and long-term sustainability remains a major issue. Whether for drinking or for agriculture, if pipes are connected and water utility management is improved, the central question will remain, "Will there be water?" To ensure water's long-term sustainability, the focus must be on proper pricing.

72. The approach to rural water with its focus on community management is more sustainable from an operations and maintenance perspective. The sustainability of rural drinking water, however, is threatened by overall depletion of aquifers due to unrestricted and subsidized (through diesel pricing) water agricultural use. The likelihood is that rural safe drinking water coverage will rise from 25 percent to 50 percent and the unit investment cost per household will go up from $40 to $100 by 2010 due primarily to water scarcity.

73. The availability of cheap diesel is affecting water supply. People are using readily available cheap diesel in pumps to mine groundwater. Not only is this depleting the source, it is also deterring conservation efforts. The prospects for reversing this trend are dependent on: (1) removal of diesel subsidies, (2) better regulation of groundwater use, and (3) incentives for rainwater harvesting.

Conditions needed for achieving MDG targets for access to an improved water resource

74. Progress on both the sustainable provision of drinking water and better management of water resources and watersheds will require movement on or removal of diesel subsidies and willingness to introduce scarcity pricing for agriculture water. There is a need to involve communities in the management of rural drinking water and watersheds, and there is also a need to introduce professional management of urban water utilities.

75. To delineate responsibility forthrightly, the water sector needs to be restructured. Currently the Ministry of Agriculture oversees the sector nationwide. The National Water Resources Authority and the National Water and Sewerage Authority have responsibility for the urban sector; the General Authority of Rural Water Projects and certain municipalities, the rural sector. Added to this labyrinth is a recently enacted local administrative law that delegates all water responsibility to local authorities. The World Bank and other donors are offering the government assistance and advise on the sector's structure, and, at present, consideration is being given to creating a Ministry of Water.

76. The management of watersheds and the provision of drinking water should be governed by the most competent decentralized level of government. In addition, the role of communities, particularly in rural drinking water and rainwater harvesting, needs to be increased. In summation, there is an urgent need to implement the already enacted local administration law.

- **Goal Eight: Global Partnerships for Achieving MDGs**

77. There is increasingly strong support in the donor community in Yemen for a process of partnership to take hold, starting with the PRSP and continuing with the CG meeting. There was

considerable discussion at the 2002 donor-government CG meeting in Paris in October 2002 around this work. There was also a good degree of consensus in the donor community as to the role and importance that the government could play in improving the quality of donor support.

78. Although funding for EFA FTI was not formally approved at the recent donor meeting, responsibility was given to the local donor group for the funding to move forward. The local donors have not synchronized their procedures yet but under the strong leadership of the Ministry of Education, they have agreed to work through a joint implementation program in close coordination with each other. The education example provides an excellent model for other sectors to follow, provided of course the requisite strong government leadership is forthcoming.

79. All donors believe in the MDG framework for allocating their donor support to Yemen's development but support is conditional upon establishing a high quality monitoring and evaluation mechanism. However, donors are not ready to align all their aid to the actions and outcomes defined in the MDG until the government takes the lead and sets the strategy and goals.

Conclusions, Risks and Issues to be Addressed

Conclusions

80. Yemen has made significant progress on the MDG targets, especially when one considers that Yemen started relatively late, largely due to historical reasons. It seems likely that by 2015, Yemen may achieve the primary education target, the elimination of gender gap within primary education target, and the absolute poverty reduction target, provided that the policy and institutional reforms recommended are implemented and donor support is forthcoming. However, the reforms required are difficult and may be opposed by many. Also, in the case of many targets—95 percent of the goal may be achieved with the last 5 percent being the most difficult and possibly not achievable for reasons beyond the control of government.

81. Targets for maternal mortality, child mortality, reduction of gender gaps in secondary and higher education are likely to be met but probably after 2015—subject to difficulties noted above. With regard to access to drinking water—it is possible that the target will be met in urban areas but it is unlikely to be met in rural areas where the majority lives.

Risks

82. Yemen faces many risks in achieving the targets. It has been the direct and indirect victim of terrorism which has affected potential growth engines such as tourism or Aden growth pole. The assessment given here assumes no further major risks.

83. Yemen also faces a long-term risk in revenues unless new sources of oil are found or revenues are diversified to reduce oil dependency. It is likely that currently proven reserves of oil will run out over the next decade.

Issues to be Addressed

Governance

84. The policy measures and public actions needed to ensure that the Yemen's MDG goals are met vary from goal to goal. One overarching constraint whose solution would solve or ease the other challenges is improving governance. Good governance allows the efficient allocation of public resources, effective provision of public services, accountability, transparency, and reduced corruption.

Improving public sector governance means dealing with the shortcomings of the civil service (central and local), the judiciary, and the security forces, which involves a mix of policy reforms, procedural streamlining, institutional reform, skill upgrading, and ultimately attitudinal change. Improving governance is made even stronger when it includes a feedback mechanism to monitor actual performance, public satisfaction with performance, and longer-term impacts and changes.

85. Within Yemen, forces are pushing for reforms to take place, which could eventually create conditions for better governance. Three areas of reform tappear to be moving forward: judicial; public administration, and decentralization. Public administration reform aims to move towards a leaner and more accountable public service and could have a major effect on the quality of education and health services as well as environmental regulation. Decentralization could also help increase accountability as services would be delivered by the lowest level that can effectively deliver services.

86. Progress on public administration reform seems to be blocked by the difficulty of deciding what to do with civil servants who should be fired. Overdue retirements are not being processed as the retirement system lacks resources to include them in the program. In these circumstances, early retirement is not an option and is not recommended as a "Best Practice".

87. Decentralization progress seems to wax and wane—with national security and financial management concerns delaying the process and other forces moving it forward. Yemen as a State has limited control over its full territory and there is concern that decentralization may weaken its control even further. Nevertheless, a well-designed decentralization program, particularly in the delivery of basic services, could actually enhance the role and power of the state, as people begin to see the sources of service provision rather than the traditional networks. The success of decentralization in education can serve as a guide to show the potential that can be achieved.

88. The likelihood of more open debate on public policy is high and the recent experiences of the PRSP and the process of developing the Basic Education Development Strategy show good examples of progress.

Monitoring Progress towards MDG targets

89. The proposed Census of 2003 will be followed by a census in 2012 and Yemen will meet its international commitment to move decennial censuses dose to the beginning of the decade. The census should give information on literacy, education, access to water supply, and can provide other useful information. A Pan-Arab Population and Family Health Survey (PAPFAM) is being carried out soon under the auspices of the Arab League. This survey is based on the DHS but includes additional information and the results should provide updated information on many MDG targets such maternal and child mortality, contraceptive prevalence, and so on. If this survey takes place, a follow-up survey in 2015 will allow progress to be measured and monitored.

90. With regard to measuring poverty and living standards, a survey was planned for 2003 but it is likely to be delayed and consideration is being given to waiting for the results of the new Census planned in 2003 and then using those results to base the sampling framework. These surveys usually take place every five years—and even if the survey is delayed to 2004 or 2005, two more rounds would take place before 2015 allowing progress to be measured and monitored towards achieving the MDGs in poverty and living standards.

91. Attention needs to be paid to monitoring the quality of public services such as those related to education and health, through opinion surveys that ask households about service delivery experience. Measuring non-material dimensions of progress will require putting in place mechanisms to collect

and analyze qualitative information. This is also essential to help interpret causal relationships resulting from the analysis of the formal household surveys. The Participatory Poverty Assessments (PPAs) have demonstrated the usefulness of qualitative research for understanding local-level realities. Institutionalizing this approach within monitoring and evaluation will be important in the coming years.

Define linkages between inputs, outputs, outcomes and impact

92. The outcome indicators are not yet well-integrated into a framework that clearly indicates the hierarchical links between inputs, outputs, outcomes and impact. The targets are set at the outcome level. These now need to be broken down into clearly specified *outputs* with a time frame and *inputs*, i.e. public spending, for reaching these outputs. The collection of reliable input and output indicators by the Ministry of Finance and sector ministries at the central and local level requires serious strengthening of administrative reporting systems to ensure the data reflect field-level realities, and not just the outcome they are expected to reach. Administrative data are also often aggregated at the local level making it impossible to use them for analytical purposes and to monitor targets for sub-groups of the population.

93. The analytical work needs to be linked to the policymaking process. This will require strengthening of networking and interaction among ministries, research institutes and universities in order to (1) ensure research efforts meet the needs of policymakers, and (2) help policymakers to better define their analysis needs. Researchers and others need to have much better access to survey data than is currently the case. Technical assistance for strengthening analytical capacity should be based on an overall approach for long-term capacity building for evidence-based policy analysis. Eventually this should lead to the establishment of independent, well-managed, high-quality and responsive policy research institutions that can address the increasingly complicated analytical demands of the government.

94. In the coming decade, economic growth is unlikely to reach all areas equally. Effective targeting mechanisms for development initiatives will become crucial. Producing high-resolution poverty maps can be an important tool for this. Such maps can be developed through combining household living standard survey data, census data and Geographical Information Systems. The IDA-supported Social Fund for Development already uses a graphical GIS tool to target underserved poor communities. IDA is also helping the government to improve its household survey system and follow-up analysis of poverty, and to deploy a relatively sophisticated map-based planning tool linking the Central Statistical Organization's database on poverty and public infrastructure with local authorities to help them better-target their new investments.

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