




Global Water and Health

University of Washington

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**“Water Supplies in Developing Countries, The
West Africa Water Initiative
as an Example”**

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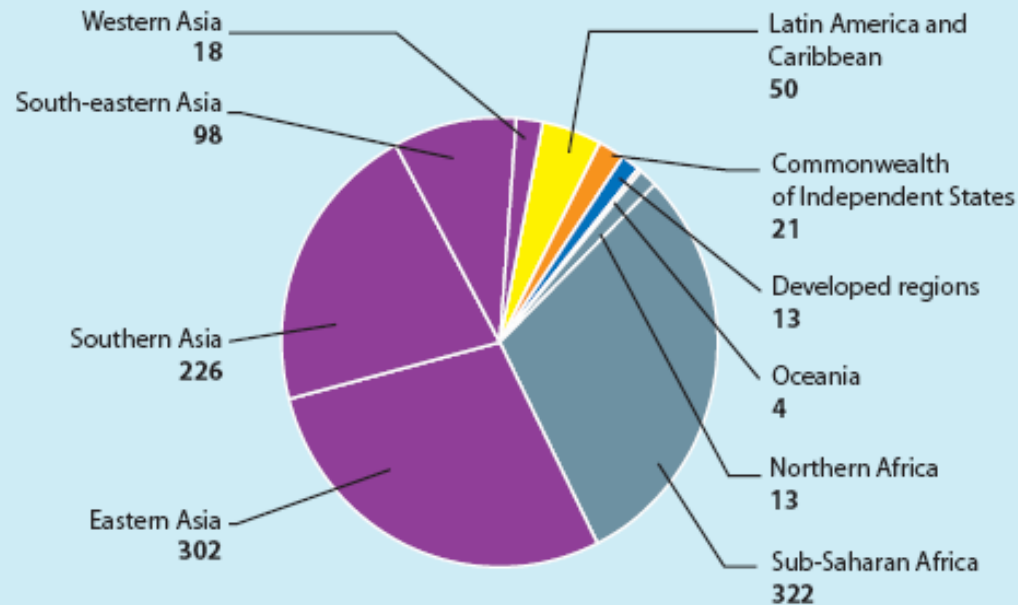
The Numbers: Unmet Basic Human Needs for Water

- ❖ **About 1.1 billion out of the World's 6.5 billion people still lack access to improved water supply**
- ❖ **Global coverage for water was 82%**
- ❖ **88% of diarrheal disease in developing countries is attributed to unsafe water supply or inadequate sanitation and hygiene**

Population Without Access to Improved Water Supply: 2004

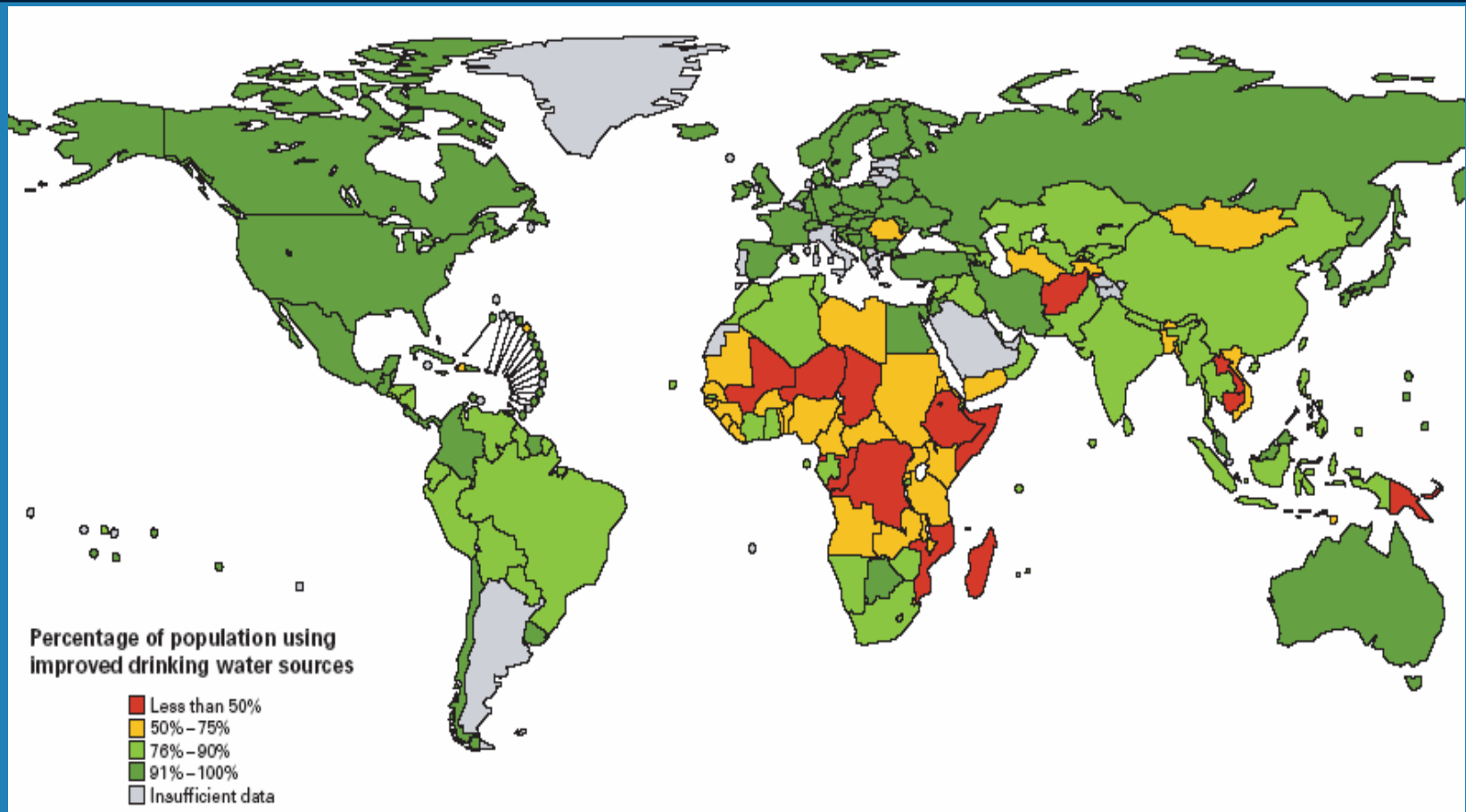
Population (millions) without improved drinking water sources by region in 2004

1.1 billion people unserved globally



> Nearly 50% of the people worldwide without access to improved drinking water are in Eastern Asia and Southern Asia. Another 30% live in sub-Saharan Africa.

Access to Improved Water

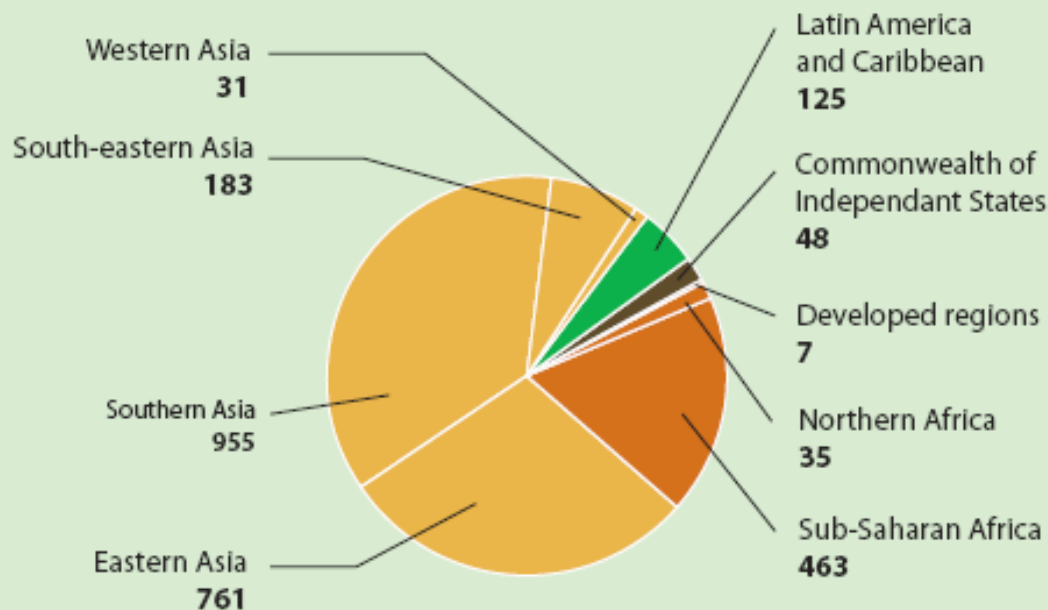


Source: *Meeting the MDG Drinking Water & Sanitation Target: A Mid-Term Assessment of Progress*. 2004. UNICEF and World Health Organisation

Population Without Access to Improved Sanitation: 2004

Population (millions) without improved sanitation by region in 2004

2.6 billion people unserved globally





Common

Water-related diseases

- ❖ Drinking contaminated water transmits **water-borne fecal-oral diseases** such as cholera, typhoid, viral hepatitis, dysentery, and dracunculiasis (guinea worm).
- ❖ Insufficient quantities of water, lack of proper sanitation and hygiene lead to **water-washed diseases** such as trachoma, worm infections
- ❖ **Water-based diseases: schistomiasis (bilharzia),**
- ❖ **Water-related Vector-borne diseases** such as malaria

Clean Water and Sanitation

The First Essential Step

Establishing and maintaining a source of safe, clean water is the first step in breaking the cycle of poverty.

“The first and best medicine”

Without access to this **critical resource**, people in developing nations have virtually no chance of leading healthy, productive lives.



Goal: Water, Sanitation & Hygiene

❖ To Improve the health and well-being of people

- ❑ Contaminated water and poor sanitation contribute to 80 percent of all disease in the developing world
 - ❑ 2.2 to 5 million die annually from preventable water-related diseases
 - ❑ A child dies from a water-related illness every 15 seconds

❖ Three top priorities are:

- Provision of sufficient quantities of safe water
- Basic sanitation arrangements
- Promotion of good hygiene behaviors
- **IWRM**

❖ The term 'sanitation' refers to excreta disposal, vector control, solid waste disposal and drainage.

Benefits of Safe water supplies, basic sanitation and hygiene

❖ Health

- ❖ Improved water supply reduces diarrhea morbidity by 21%
- ❖ Improved sanitation by 37.5%
- ❖ Washing hands at critical times by 35%
- ❖ Adding point-of-use treatment by 45%
- ❖ Reduced trauma due to improved health
- ❖ Eradication of guinea worm, elimination of trachoma, bilharzia by 77%
- ❖ Arsenic and fluoride

- ❖ Several other benefits (poverty, time savings, economic activities, improved schooling for girls, higher status for women etc)

The Contributions of Safe Drinking Water and Sanitation in Achieving the MDGs

<i>Millennium Development Goal</i>	<i>Contribution of Water/Sanitation</i>
• MDG 1 Eradicate extreme poverty and hunger	30%
• MDG 2 Achieve universal primary education	30%
• MDG 3 Promote gender equality and empower women	20%
• MDG 4 Reduce child mortality	30%
• MDG 5 Improve maternal health	45%
• MDG 6 Combat HIV/AIDS, malaria and other diseases	25%
• MDG 7 Ensure environmental sustainability	>50%



The West Africa Water Initiative (WAWI)

- ❖ Public Private Partnership with 14 members
- ❖ Partnerships are very important now because of the change in funding for development (20% public and 80% private)

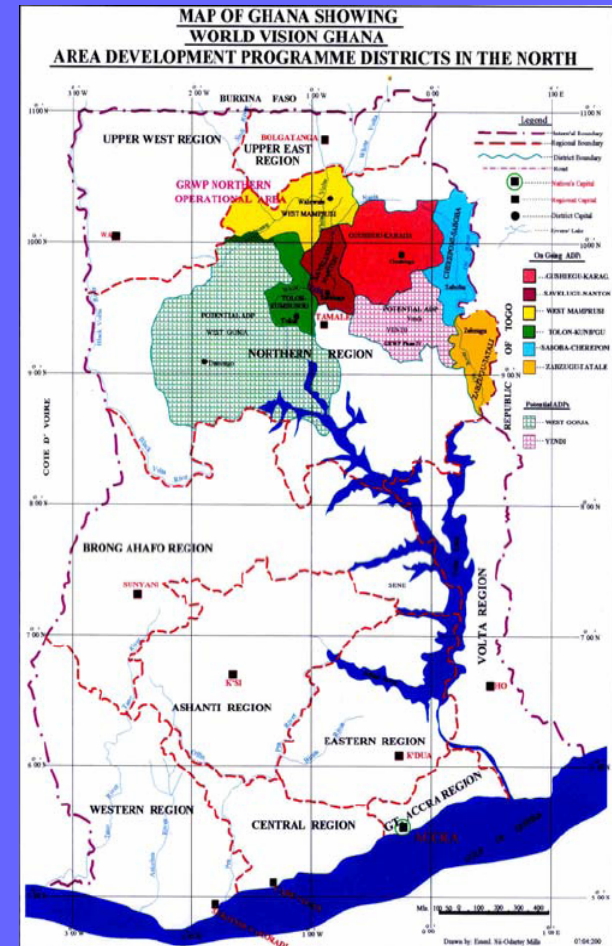
WAWI PARTNERS

- Governments, local Authorities & Communities
- Conrad N. Hilton Foundation (The main donor & Architect of WAWI)
- World Vision
- USAID
- UNICEF
- World Chlorine Council
- Cornell University (CIIFAD)
- Desert Research Institute
- Lions Club International Foundation
- WaterAid
- Winrock International
- UN Foundation
- International Trachoma Initiative
- Helen Keller International
- Carter Center

Program Location

❖ Ghana

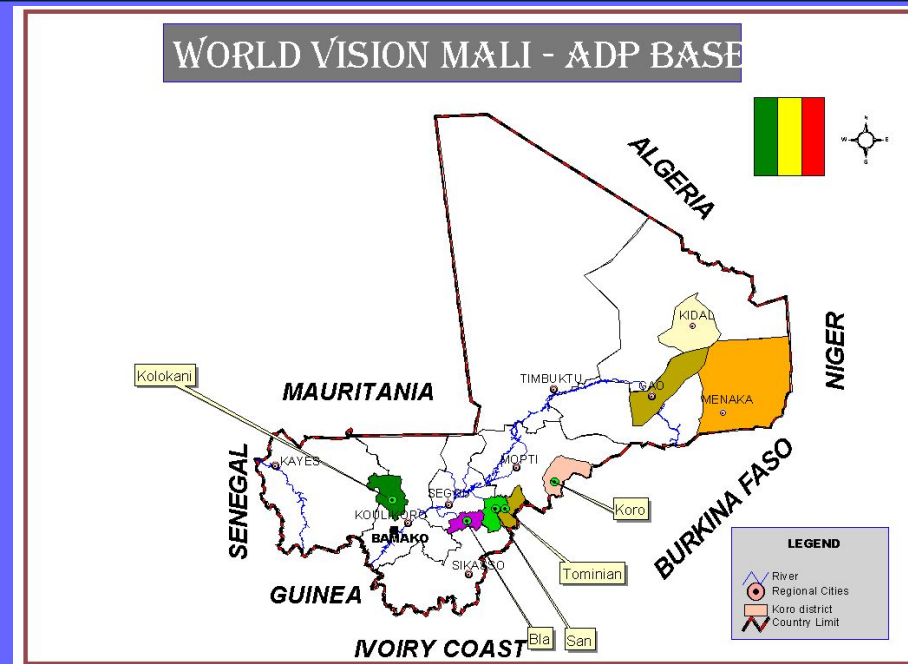
❖ 8 Districts in the Northern Region



Program Location

❖ Mali

- 9 Districts in the Segou Region
- 2 Districts in the Mopti Region



Key Elements of WAWI

Improved Drinking Water Coverage (%)

	2002		2004	
Country	Overall Coverage	Rural Coverage	Overall Coverage	Rural Coverage
Ghana	79	68	75	64
Mali	48	35	50	36
Niger	46	36	46	36

Improved Sanitation Coverage (%)

	2002		2004	
Country	Overall Coverage	Rural Coverage	Overall Coverage	Rural Coverage
Ghana	58	46	-	-
Mali	45	38	46	39
Niger	12	4	13	4

Key Elements of WAWI Health

- ❑ Blinding trachoma is prevalent among more than one-third of children younger than 10 years of age in Mali and Niger.
- ❑ The highest trachoma prevalence in the world is in the Zinder Department of Niger: 62.7%
- ❑ Trachoma is a significant public health problem in some districts in the northern region of Ghana: 10% among <10s in Tamale and Savelugu Districts



Key Elements of WAWI Health

- ❑ Of the 1,000 cases of guinea worm reported in Niger in 2000, 725 were in Zinder Department
- ❑ 10% of WAWI target communities in Northern Ghana are guinea worm endemic.
- ❑ 40 percent under 5s in Mali and Niger have recurrent diarrhea



Key Elements of WAWI

- Combined total population is 46.6 million
 - Ghana: 22.4 million
 - Mali: 11.7 million
 - Niger: 12.5 million

Key Elements of WAWI

- Funding Levels

- \$55 million

- Hilton Foundation 40%

- World Vision 40 %

- USAID 14%

Why WAWI and why in Ghana, Mali & Niger?

- Great need in the area
- Leveraging of resources and expertise
- Desire by CNHF to expand and replicate the high successes of the World Vision Ghana Rural Water Project
 - Strategies used and Lessons learned in GRWP



WAWI: Goal & Objectives

OVERALL GOAL: IMPROVE THE HEALTH AND WELL-BEING OF FAMILIES AND COMMUNITIES IN GHANA, MALI & NIGER

- ❑ **Objective 1:** To increase the access to sustainable, safe water and environmental sanitation to poor and vulnerable communities in rural and peri-urban settings
- ❑ **Objective 2:** To reduce the prevalence of waterborne and water-related diseases, particularly trachoma, guinea worm and diarrhoeal diseases through the promotion of personal hygiene and environmental sanitation practices
- ❑ **Objective 3:** To ensure ecologically, financially, and socially sustainable management of water quantity and quality
- ❑ **Objective 4:** To foster an effective and replicable partnership framework for sustainable water and sanitation development and water resources management.



Program Outputs

- By 2008, partners expect to provide
 - Impact 500,000 people
 - Minimum of 915 wells equipped with hand pumps, reaching over half a million people
 - 100 alternative water water systems
 - 9,000 household and public latrines
 - Develop Research and development Centers and train people
 - Build Resource Centers
 - Conduct participatory action research

Program Outputs-2

- By 2008, partners expect to provide
 - Education on trachoma and other water-related diseases
 - Local capacity developed
 - 1000s of adults, children and teachers will have been instructed in safe hygiene and sanitation practices
 - Train community members on management skills, development and literacy

WAWI, How sustainable?

- ❑ Long-term commitment of partners
 - The Hilton Fdn
 - The World Vision ADP concept
- ❑ WAWI is addressing a wide range of developmental issues to guarantee sustainability
 - Adequate water and sanitation
 - Community-led projects
 - Integrated water resource management
 - Addressing environmental concerns by Cornell and DRI-water budget/shed studies
 - Capacity building, including community O&M, monitoring of water quantity and quality
 - Income generation/Food security-Small-scale irrigation

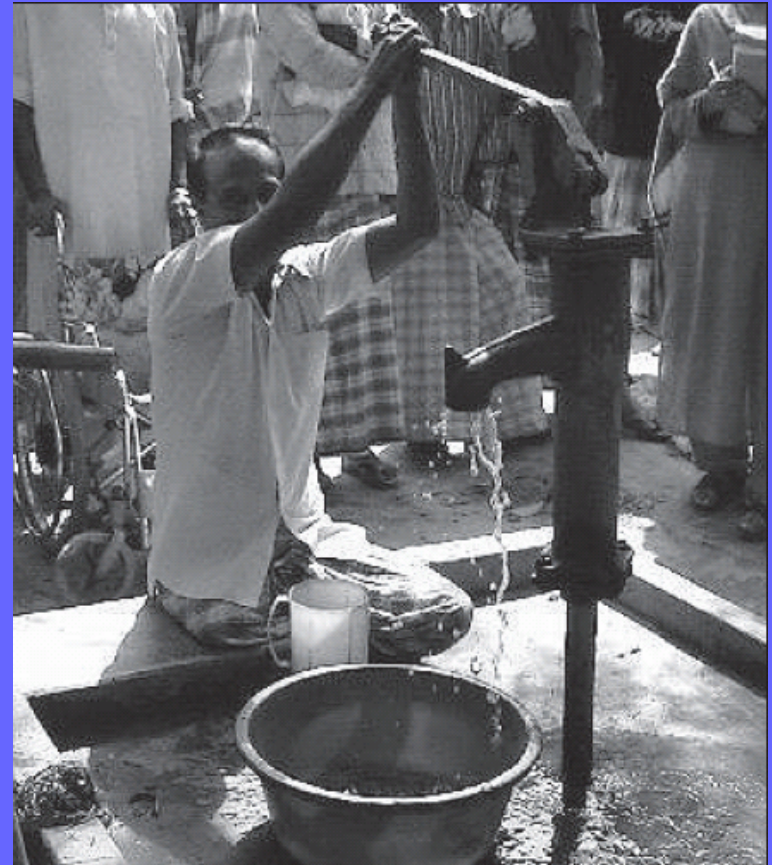
Other Highlights

- ❑ Water Quality
- ❑ Gender Mainstreaming
- ❑ Small-holder irrigation



Other Highlights

- ❑ WATSAN in Disability
- ❑ IWRM
- ❑ M&E Plan

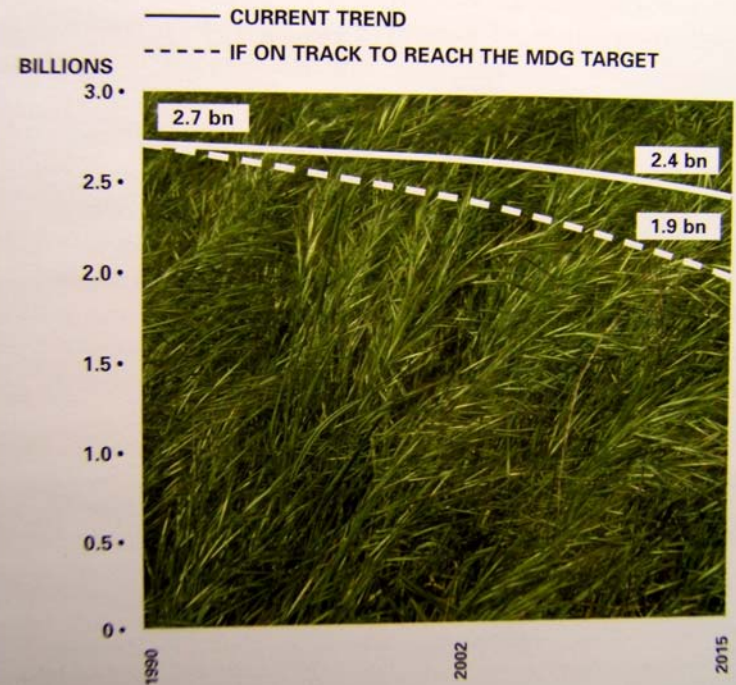


CONCLUSION

- ❖ The failure to meet basic human and environmental needs for water is the greatest development failure of the 20th century (Peter Gleick).
- ❖ Even if we meet the Millennium Development Goals for water, 34-76 million people will die of preventable water-related and sanitation diseases by 2020.
- ❖ We aren't going to meet the MDG given current commitments. But new approaches, new solutions, and new ways of thinking are available.

Accelerate progress or miss the sanitation target by half a billion people

FIGURE 11 Projected population without improved sanitation 1990-2015



Thank you!!!

