



Hygiene and Environmental Health Implementation Status and Future Directions in Ethiopia

Dagnew Tadesse

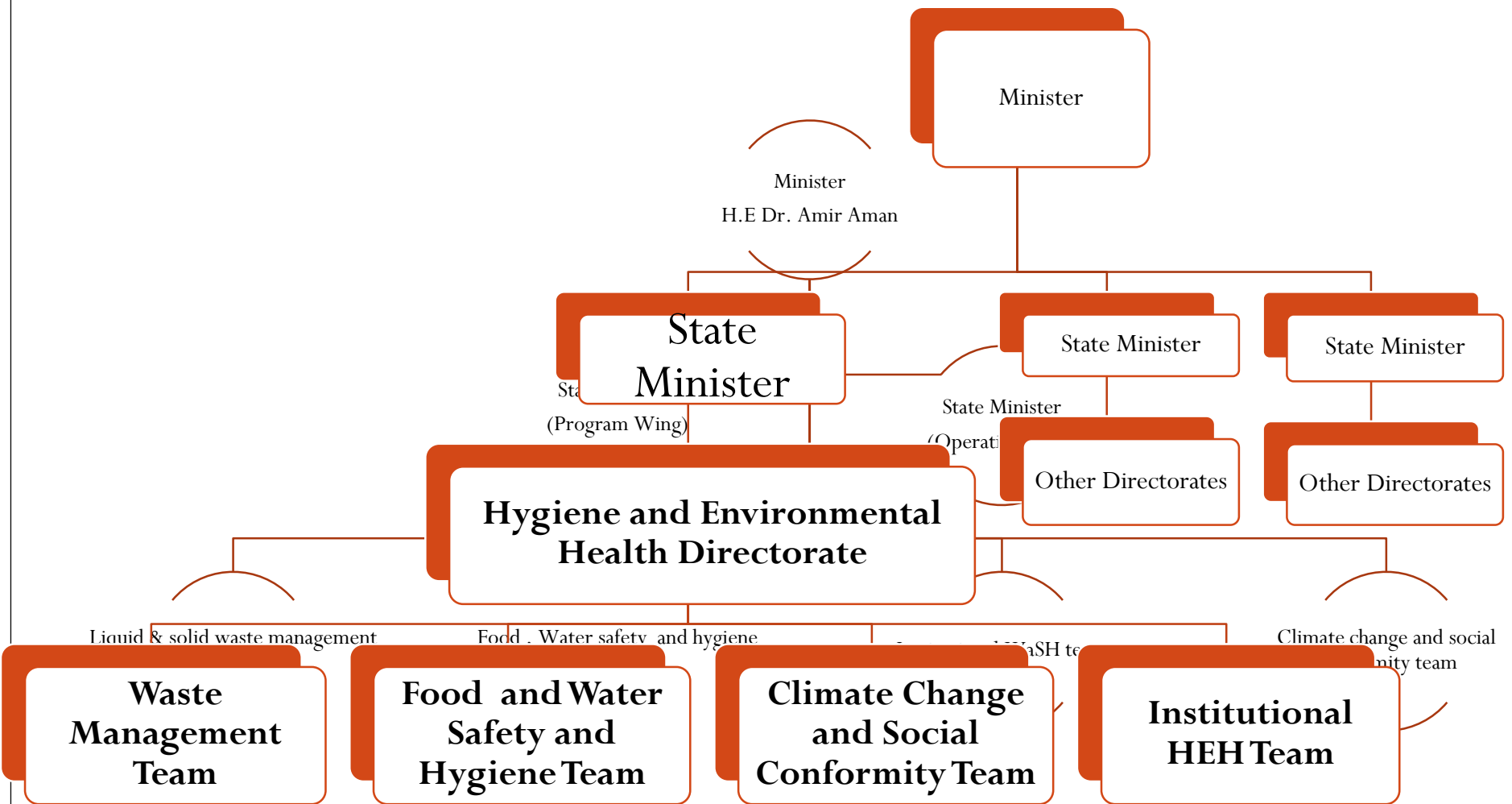
MOH Hygiene and Environmental Health Directorate
A/Directorate

Presentation Outline

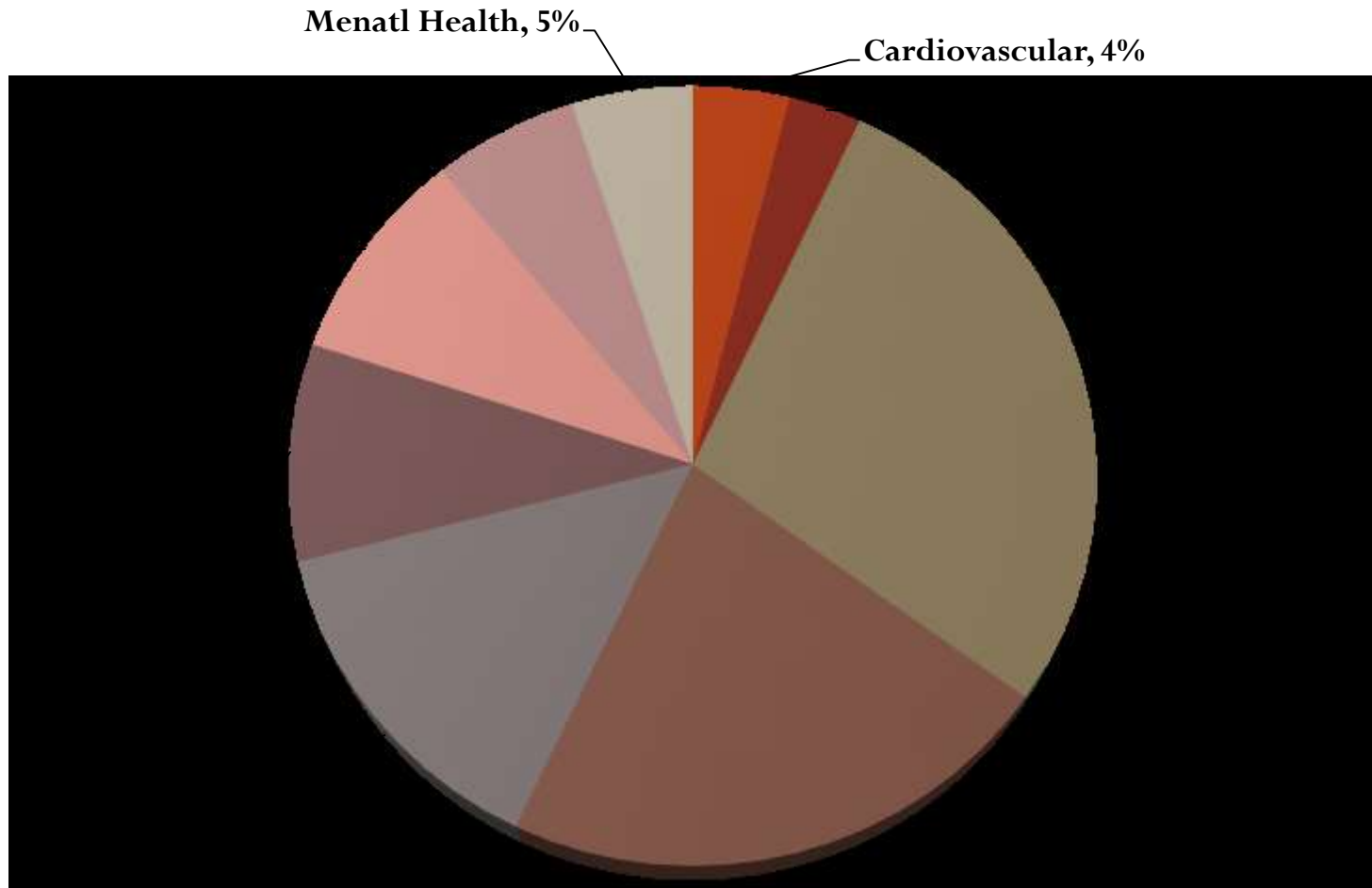
1. Background Information
2. Major Achievements,
 - Lesson Learnt,
 - Key Challenges
 - the Way forward
3. Future Directions

1. Background Information

HEH directorate organogram



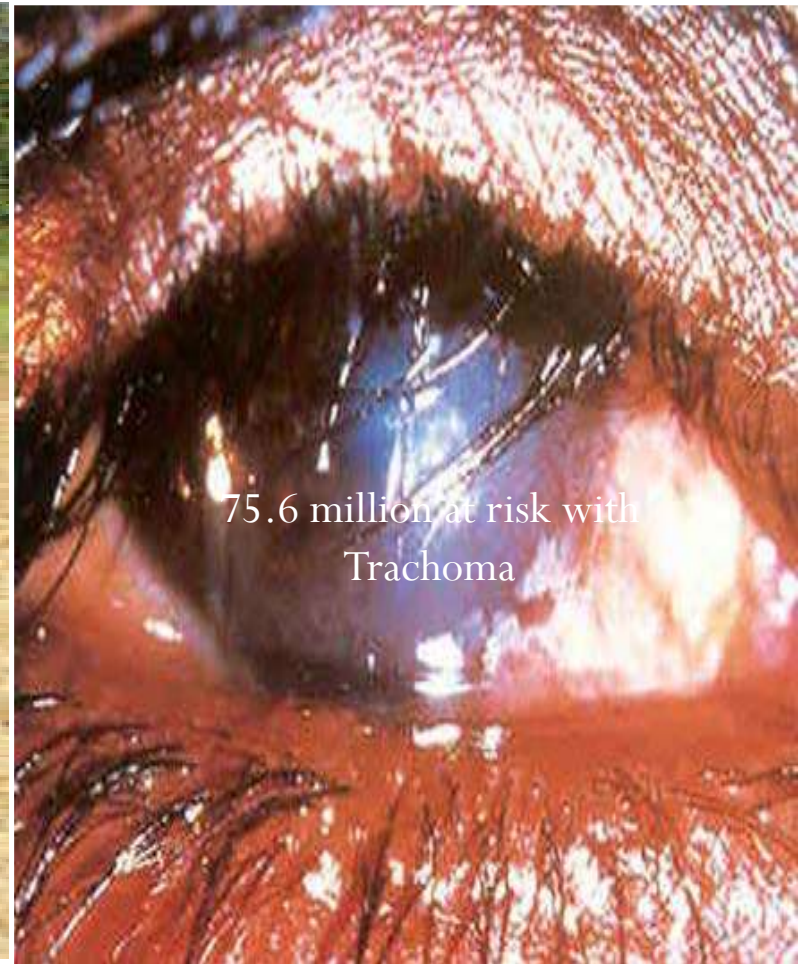
Global:-The pie-diagram below shows how diarrhea and acute respiratory infections (ARI) make up half of the global burden of environmentally related diseases.



National/Ethiopia

- 2nd populous country in Africa
- It has 9 regions and 2 city administrations
- ragged topography (Ras Dashen= +4533m & Dalol=-125m)
- Two rain seasons (kiremt and Belg)

About 30 million at risk With Lymphatic Filariasis



Stephanie Ogden (2013) et al, the prevalence of neglected tropical diseases in Ethiopia

**DIRTY FACES
AND FLIES CAUSE
TRACHOMA**

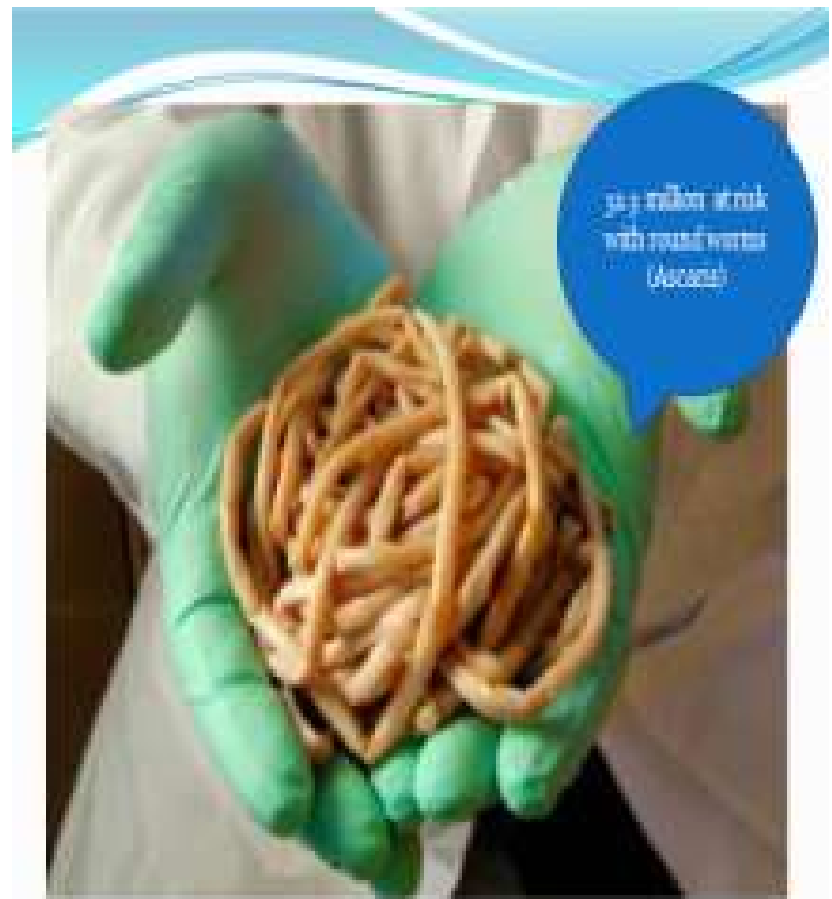


Photo by CMK

**FIGHT TRACHOMA
BY WASHING YOUR FACE**



22.1 million at risk with Schistosomiasis



PM_{2.5} concentration data for different sites during the dry season

Site		PM _{2.5} Concentration, µg/m ³	
Code	Name	24-hour average	Maximum
S1	Aduwa Square (Megenagna)	54.8	4471.9
S2	Arada (Arada building)	30.7	624.0
S3	Betel	135.6	6576.4
S4	Bob Marley Square (Imperial Hotel)	43.6	511.1
S5	Bole Bridge	97.3	1982.6
S6	Bus Station (Addis Ketema)	70.4	1827.5
S7	Entoto (St. Mary Church)	27.2	808.5
S8	Kaliti Road Intersection (Traffic light)	271.4	9082.6
S9	La gare traffic light	83.5	3268.8
S10	Mexico Square	228.6	17169.3
S11	Taklehaimanot Square	342.1	2933.7
S12	Urael Traffic Light	165	1837.5

Disease Burden in Addis Ababa

ተ.ቁ	Ten Top Causes of Morbidity for AA RHB	# of Cases 2004 EFY	%	# of cases in 2005 EFY	%	# of cases in 2006EFY	%
1	Acute Upper Respiratory Infection	223,365	25.37	307,403	27.85	361,473	29.87
2	Other or Unspecified Diseases of the Eye and adenexa	98,532	11.19	83,948	7.61	81,939	6.77
3	Dirrhoea (Non bloody)	88009	10%	102,373	9.16	112948	9.3
4	Diseases of Musculoskeletal system and connective tissues	81,250	9.23	99976	9.06	95,072	7.86
5	Urinary Tract Infection	78,320	8.9	106,418	9.6	112,741	9.32
6	Acute Febrile Illness	68387	7.77	101,036	9.15	112,024	9.26
	Trauma(injury and fracture	51193	5.81	71067	6.44	85180	
8	Dyspepsia	64,385	7.31	94,723	8.58	104699	8.66
9	Infections of Skin and subcutaneous tissue	60324	6.85	74,000	6.78	79,900	6.6
10	Pneumonia	-	-	61,980	5.62	64147	5.3
	Top ten total	813,765		1,102,788		1,210,123	

Root Causes of Burden of Diseases

Elementary environmental Health problems I.e. :

- Low solid and liquid waste management;
- Poor housing, and low food and drinking water quality monitoring.
- Poor maintenance system and the non-functionality of the available latrines(30-80% of the latrines are non-functional



Miss managed Public Toilet, what shall we do about it?



Drainage System pass near by Market places

Poor solid waste management



Kids and scavengers looking for any thing valuable for them from Unprotected dumping site



- open defecation,
- crude tipping,
- In-adequate access to safe water and basic sanitation facilities,
- lack of livelihood diversification,
- low hygiene and environmental health awareness,
- poor nutritional status,
- high fertility and population pressure, deforestation,

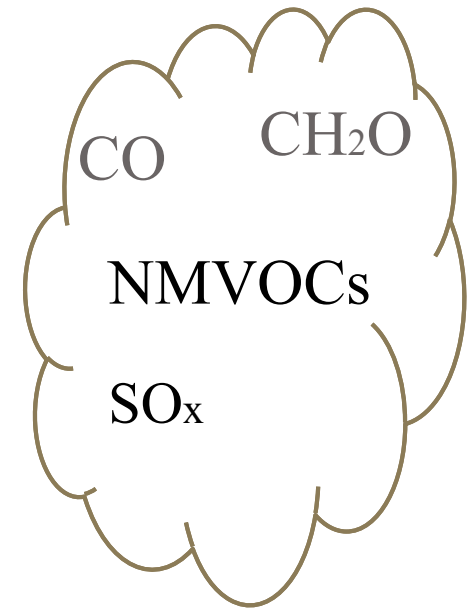
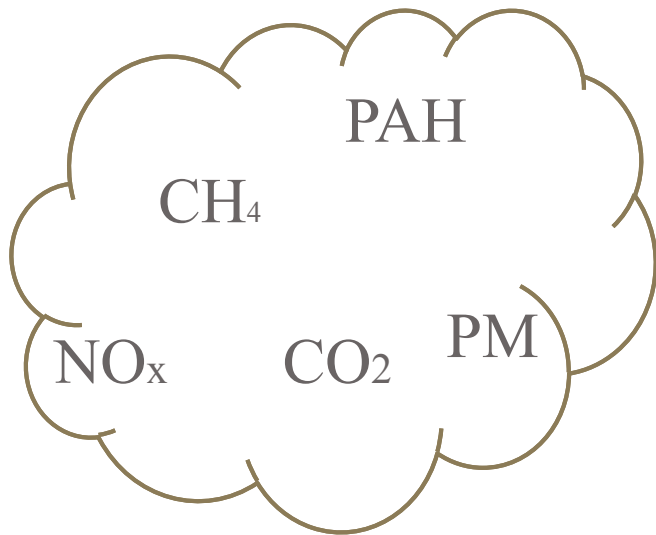
Advanced environmental health

problems: emerging problems emanating from modern development schemes:

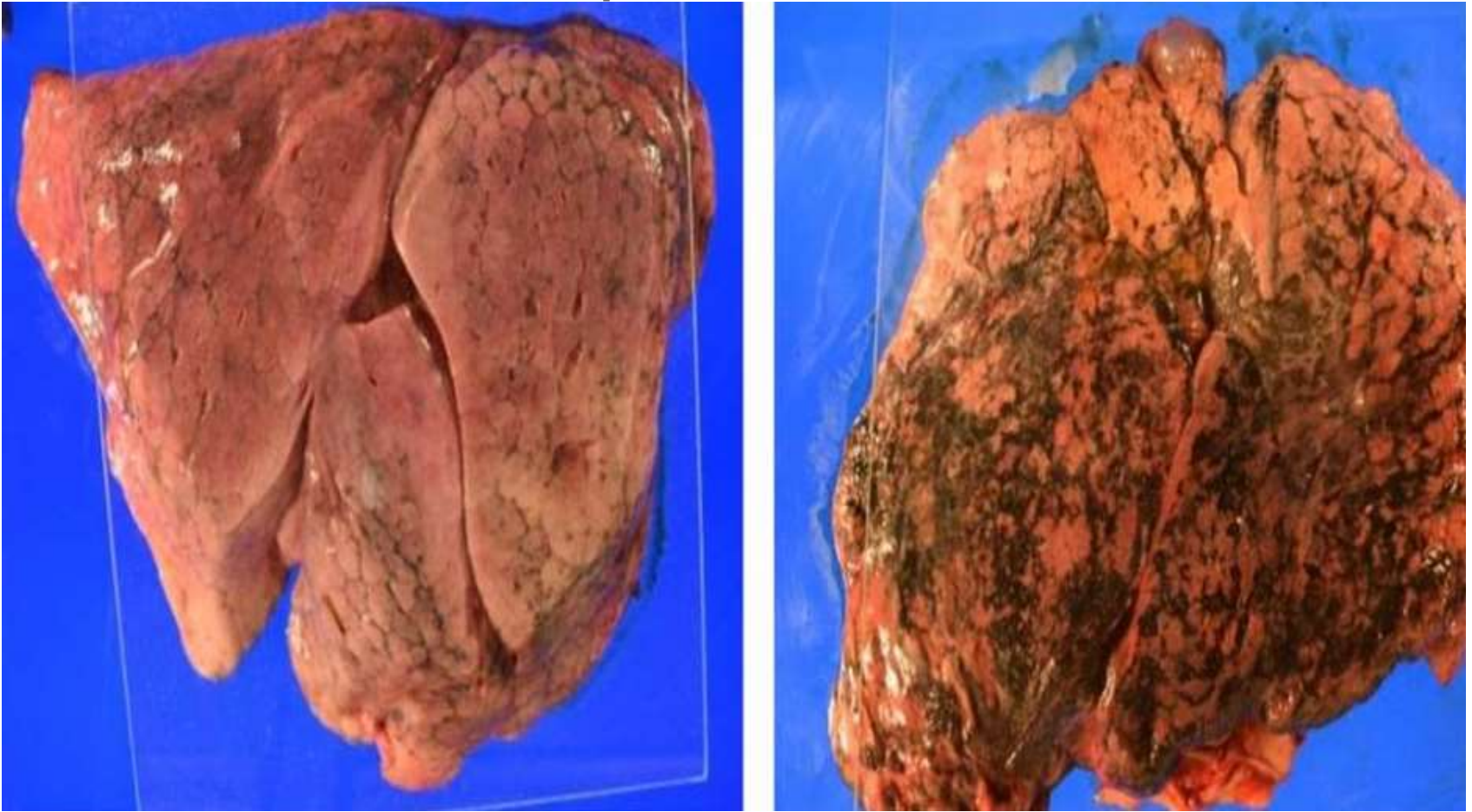
- population growth
- industrialization,
- modernization of commercial trade
- Mechanized road transport and port activities Mechanization of agriculture
- Uncontrolled use of agro-chemicals, fertilizers and disinfectants of health importance and mining which could be causes for:
 - Global climatic change
 - Occupational hazards
 - Air pollution
 - Solid and liquid waste
 - Noise pollution....
 - urbanization

Household Air Pollution

- Household air pollution (HAP) incomplete combustion of carbon-based fuels (wood, coal, dung). Released during use of inefficient technologies for activities including cooking, heating, lighting



Lungs exposed to tobacco smoke & household air pollution



Pathology slides - Courtesy Prof. Saldiva, São Paulo, Brazil

Diseases Burden Associated with Household Air Pollution

CO PM
PAH NO_x SO_x NMVOCS

- Ischaemic Heart Disease
- Stroke
- Chronic obstructive pulmonary disease
- Childhood pneumonia
- Lung cancer
- Cataract
- Adverse Pregnancy Outcomes
- Cognitive development
- Tuberculosis
- Diabetes



Deaths due to “polluting” fuel use for cooking, 2014

- **4 million deaths** a year from household air pollution—including over 3 million deaths to noncommunicable diseases
- Accounts for **over half** of childhood pneumonia deaths (the largest cause of death in children under 5 years)
- **2nd largest** environmental risk for noncommunicable disease in women in developing countries

Deaths per 100,000 people

■ <5 ■ 6-29 ■ 30-59 ■ 60-79 ■ 80+

■ Data not available

2. Major Achievements

Constitution, Policy, Strategies and Guidelines

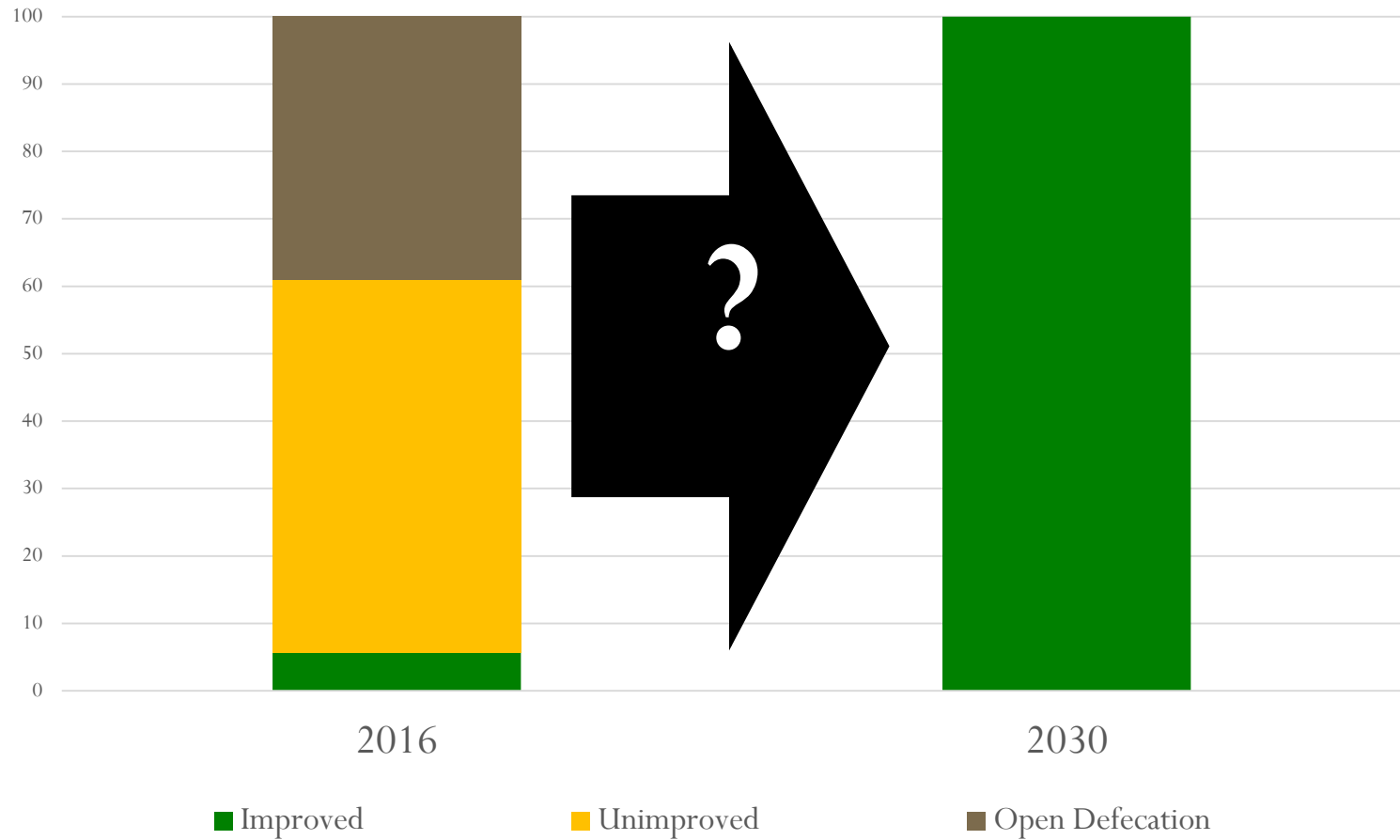
- Constitution-declared that Every Ethiopians have the right to live in a clean healthy environment.
- The health policy is preventive and promotive
- The HEP is composed of 16 service packages and is being implemented at household level.
- Out of which the 16 service packages seven service packages are concerned with hygiene and environmental Sanitation.
- 39,000 HEP Workers are trained and deployed in urban and rural sectors

- Developed and implemented different guidelines
 - CLTSH (implementation & verification guideline, and training manual)
 - Sanitation marketing guideline
 - WASH design & construction manuals for Health facilities and Schools
- Recently Prepared and endorsed strategies
 - Hygiene and environmental health Strategy
 - Health component of national adaptation plan
 - Integrated urban sanitation and hygiene strategy, SAP, guideline and MoU
 - Menstrual hygiene management guideline
 - Latrine technology option manual
 - Hygiene and Environmental Health Communication Guideline
 - Sanitation Marketing Occupational Standard and Curriculum and teaching guide

Directorate targets

- ❑ Improved latrine Coverage 28% to 40%
- ❑ ODF Coverage 27% to 40%
- ❑ HF Water Supply 30% to 50% and Latrine coverage 69% to 75%
- ❑ Infection prevention MGt coverage 58% to 70%
- ❑ HWTSS 10% to 25%
- ❑ Urban OD Reduction 6% to 4%
- ❑ Solid Waste Management coverage 22% to 40%
- ❑ Liquid Waste management coverage 15% to 20%
- ❑ Food Utensils storage shelves 10 % -20%
- ❑ Hand Washing Coverage 27% to 40%
- ❑ Cloth Washing and Shower service coverage 5-10%
- ❑ Land, water and noise pollution Reduction 5%
- ❑ Occupation Health and Safety Management 5 to 10%
- ❑ Climate Change and Health Adaptation 0 to 5%
- ❑ Environmental Management 0 to 5%

Transforming Sanitation FMOH Flagship Agenda



Best practices from regions



Amhara



**Benishalgul
Gumuz**



Tigray

Experience of Amhara

**Mechakal
Woreda**



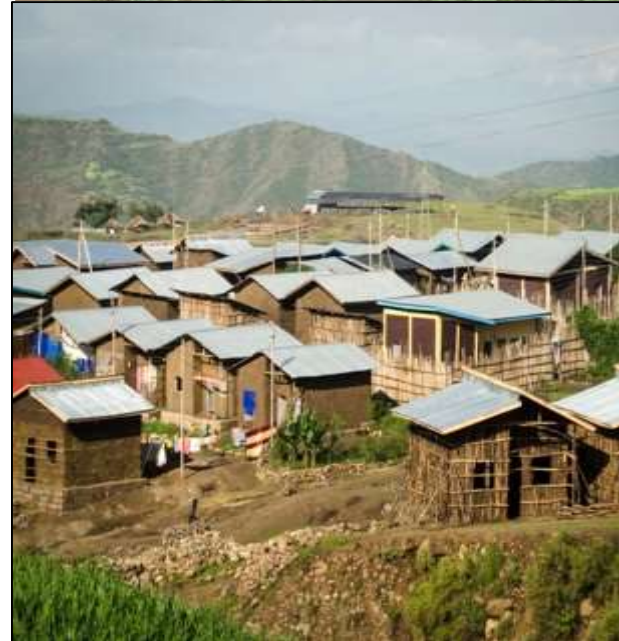
Maraki Sani- center

- 11214 concrete slab
- 12340 improved energy saving stove
- 16794 – focet fitted hand washing jerry cans
- 1245- traditional baby carriers-



Urban Sanitation and Hygiene

- 935 centers recognized as urban/towns
- 850 towns have a population of less than 20,000
- 507 have a population of 5000 & below
- 60% of the urban population is living in about 68 towns
- Urban centers are contributing about 60% for the GDP, with AA alone contributing about 40 %.
- All towns are running housing program, and other infrastructure development including road construction, investment on Hotels and etc



Back-ground information

- **Urban population** is projected to nearly **triple** from **15.2 million** in **2012** to **42.3 million** in **2037**
- New Attractions are;
 - Industrial park
 - Opening up of Universities, TVETCS and other modern establishments
 - Tourism and Market opportunity
- *Pollution due to weak management of waste and poor hygiene practice is a common feature for all size of towns*



Progress Update (revised)

- There are 12 strategic targets set around;
 - Behavioral change
 - Access to facilities / infrastructure
 - Creation of ODF towns
 - Safe transport and disposal
 - Treatment and reuse
 - Capacity building
 - Resources leveraging and utilization
 - Establishment of robust Monitoring and evaluation
- IUSH is under implementation: 23 secondary towns project is designed in line with IUSH concept for wastewater management;
- 124 small towns have limited resources to only expand access by constructing Public latrines
- Most towns have started to practice solid waste collection through organized micro enterprises
- WaSH-LMG document prepared to train program managers at all levels
- Working documents developed manuals(LTO, Post ODF, MHM..)
- Steering & Technical committee established
- Advocacy workshops were conducted

- WASH platform established in cities/towns and sub cities
- Citizen forums established that will help to ensure accountability
- 7,874 UHEPs, supervisors & WASH-TWG members got training
- Training conducted on waste management technology options

Climate Change and Health

- **Vulnerability and Adaptation Assessment of Health to Climate Change in Ethiopia** conducted
- **Health National Adaptation for Climate Change** developed and **Advocacy Workshop** conducted (70 participants)
- **Water Quality Monitoring Surveillance Guideline** developed
- **Kit CD Based Operational Training** provided for 120 participants
- **Water test kit reagents** procured and distributed
- **Menstrual Hygiene Management Guideline** developed and **Disposable and Reusable Sanitary pad standard** developed

Key lessons

- Best experiences documented on sanitation marketing and regional commitment improved
- Strong link with CLTS-H and demand generations with supply chain
- Integration with partners and stakeholders is improving
- HEH steering and technical committee met regularly and evaluate performance

Key Challenges

- Weak and slowly developing coordination amongst regional sectors actors
- Resourcing the initiatives in the initial stages such as providing competency based training for entrepreneurs through TVET established modality and systems;
- Lack of financial start up support – In kind and cash for early adopters of business models;

- Lack of space to construct latrines and other related infrastructure in urban areas
- weak planning on hygiene and sanitation facility in newly developed projects-like- road, condos sites
- Facility utilization problems
- Capacity gaps on:-
 - Piloting and full scale implementation of urban and rural hygiene and environmental sanitation/health for woreda transformation
 - Disease burden root cause analysis for high impact interventions selection, implementation and impact evaluation

Way forward

- Bring Leadership commitment and ownership to create difference
- Revising and strengthen integration and Coordination
- Enhance Accountability
- Learning from others : Experience sharing, documenting and adapting
- Regular monitoring and coaching support to make onboard

➤ Introduce stepped approach that encourage towns towards;

➤ To be free of open defecation

➤ Improve the quality of containment and

➤ Increase the access to conventional and modern systems

➤ Coordinate with other sectors to consider sanitation as basic ingredient e.g; express way, condominiums, industrial park

➤ Enforcing existing laws

• Providing need based training for leaders, especially for town mayors

• Capacitate UHEPs to introduce and piloting HH level **waste reduction**

- ❑ National Environmental Sanitation Risk assessment
- ❑ Evidence-based National Environmental Sanitation Safety plan development
- ❑ Advocate and Sensitize DPs on Environmental Sanitation Safety Plan to mainstream SSP in their respective projects
- ❑ Woreda-based environmental sanitation pilot project implementation
- ❑ Documentation of best practices to inform the scale up of environmental sanitation safety plan
- ❑ Environmental sanitation M&E system strengthening

3. Future Directions

3.1. Environmental health in HSTP

Strategic Initiatives

1. Implement urban sanitation strategy
2. Scale up Community led and School led total sanitation and hygiene and sanitation marketing
3. Build adaptation and resilience to climate change in health sector

HSTP HEH Targets

1. Increase proportion of households with access to improved latrines to 82%
2. Increase proportion of Open Defecation Free (ODF) kebeles to 82%
3. Increase proportion of households using water treatment and safe storage practice to 35%
4. Increase proportion of health institutions with gender and disability sensitive complete WASH package to 60%
5. Increase proportion of households with proper solid waste collection and disposal service to 40%
6. Increase number sanitation marketing centers to 40%

3.2. IUSHS



**THE FEDERAL
DEMOCRATIC REPUBLIC
OF ETHIOPIA**

INTEGRATED URBAN SANITATION AND HYGIENE STRATEGY



Scope of the Strategy

- The key areas covered by IUSHS includes:
 1. **Liquid waste service delivery:** including safe disposal of human excreta, liquid waste generated by human activities management of drainage.
 2. **Solid waste service delivery:** solid waste generated by human activities
 3. **Promotion and Behavioural Change:** including correct hygiene practices, use and management of latrines, payment for services, eradication of open defecation, solid waste management (reduce, reuse, recycle).

Guiding Principles

1. Equity:
2. Partnership:
3. Integration:
4. Alignment
5. Coordination/ Harmonization
6. Community engagement and ownership.
7. Efficient use of resources
8. Innovation and use of technology
9. Integrated City Wide Approach (ICWA)
10. Stepped Planning Approach:
11. Sustainability

Vision :To see all cities/towns enjoying safer and cleaner man-made and natural environments that contribute to the achievement of healthy ,productive and prosperous nation

- **Goal:** The overall goal of this strategy is to mitigate the negative impacts of poor urban sanitation on health, environment, society, education and the economy by implementing full sanitation systems.

Strategic Objectives

- ❖ To bring sustained behavioural change for better hygienic practices, installation of sanitation facilities and delivery of sanitation services by 2020.
- ❖ To ensure ODF cities and towns by 2020.
- ❖ To ensure that 100% of urban households in any given town or city have access to improved latrines by 2020.
- ❖ To increase capability of safely removing, treating and recycling faecal matter to 70% coverage by 2025 (interim targets of 30% by 2020).

- To dispose of 100% of the remaining solid waste in controlled tipping and sanitary landfill sites by 2030 (interim target of 50% by 2020).
- To ensure safe disposal of 100% health care waste from all health care facilities by 2025 (interim target of 95% by 2020).
- To enforce safe treatment, reuse or disposal of industrial liquid and solid wastes from all industries by 2035 (interim target of 30% of all industries by 2020).

Strategic Components

- Advocacy , raising sanitation and hygiene profile, behavioral change communication and promotion
- Service delivery for solid waste, faecal sludge, liquid waste and industrial waste
- Institutional sanitation
- Emergency urban sanitation
- Capacity building
- Technical innovation, research and development
- Cross cutting issues(equity ,gender, environment, health and safety, private sector engagement , community engagement and ownership, sustainability
- Sanitation financing and tariffs
- Institutional arrangement/ Role and Responsibilities
- Regulation enforcement
- Monitoring and evaluation

3.3. Hygiene and Environmental Health Strategy

VISION

‘To See all Ethiopian enjoying a safer and cleaner living and working environment which contribute for the achievement of healthy, productive and prosperous nation ‘

MISSION

Reducing and Controlling of (Food Infection and intoxication; Excreta borne; Vector Borne; Waterborne and Air borne, Zoonotic and other Oro-facial)diseases; and Occupational (Physical, Chemical, biological, psycho-social, and ergonomic)Hazards by Promoting and implementing Hygiene, Safety and Environmental Health

Strategic Objectives

Objective 1: By 2020 achieve access to adequate and equitable sanitation for all.

Strategic Targets:

- ⇒ Increase proportion of households with access to improved latrines and hand washing facilities from 28% to 82%.
- ⇒ Increase proportion of latrine utilization from 71% to 100%
- ⇒ Increase proportion of Open Defecation Free (ODF) and verified Kebeles 27% to 82%
- ⇒ Proportion of households with integrated solid waste management service from 22% to 82%
- ⇒ Proportion of households with integrated liquid waste management service from 15% to 80%

Objective 2: By 2020 promote basic hygiene behavior in order to control related communicable diseases.

Strategic Targets:

- ⇒ Increase the number of households practicing hand washing with soap/substitute at all critical moments from the present 10% to 82% by the end of 2020.
- ⇒ Increase the number of people practicing face, oral and body hygiene from 58.3% to 100%.
- ⇒ Increase the number of women practicing menstrual hygiene from 46% to 100%.

Objective 3: By 2020 Ensure safe water from the point of source to consumption.

Strategic Targets:

- ⇒ Increase number of households using drinking water from protected source from the baseline 57% to 100%
- ⇒ Increase effective correct and consistence use of household water treatment options from baseline 10% to 35%
- ⇒ Increase regulation of household water treatment products from the baseline to 100%.
- ⇒ Increase proportion of improved water scheme implementing water safety plan from the baseline to 100%.
- ⇒ Increase water supply system quality surveillance and regulation from the baseline to 100%.

Objective 4: By 2020 ensure basic WASH in all institutions.

Strategic Target

- ⇒ Increase proportion of institutions with gender and disable sensitive complete improved WASH package from 20% to 60%.
- ⇒ Increase institutional WASH surveillance and regulation from the baseline to 100%.
- ⇒ Increase proportion of health facilities implementing CASH (risk based WASH) and national health facility standards from the baseline to 100%.

Objective 5: By 2020 ensure food safety from farm to fork

Strategic Target

- ⇒ Increase number of households implementing Good Hygienic Practices(GHP) from the baseline to 100%
- ⇒ Increase institutional food safety surveillance and regulation from the baseline to 100%.
- ⇒ Increase number of institutions implementing Good Manufacturing Practice and other food safety management systems and Good Hygienic Practice from the baseline to 100%.
- ⇒ Increase surveillance and regulation of food products from the baseline to 100%.

Objective 6: By 2020 reduce vector borne diseases.

Strategic Targets

- ⇒ Increase environmental management for vector control by mobilizing communities from the baseline to 100%
- ⇒ Increase household hygiene by creating awareness at household level from the current baseline to 100%.
- ⇒ Increase biological vector control from the baseline to 43%.

Objective 7: By 2020 ensure safe and conducive working environment in all institutions

Strategic targets:

- ⇒ Increase number of institutions implementing occupational health and safety standards from the baseline to 100%.

Objective 8: By 2020 enable abatement of generation and exposure to sources of pollution

Strategic Targets

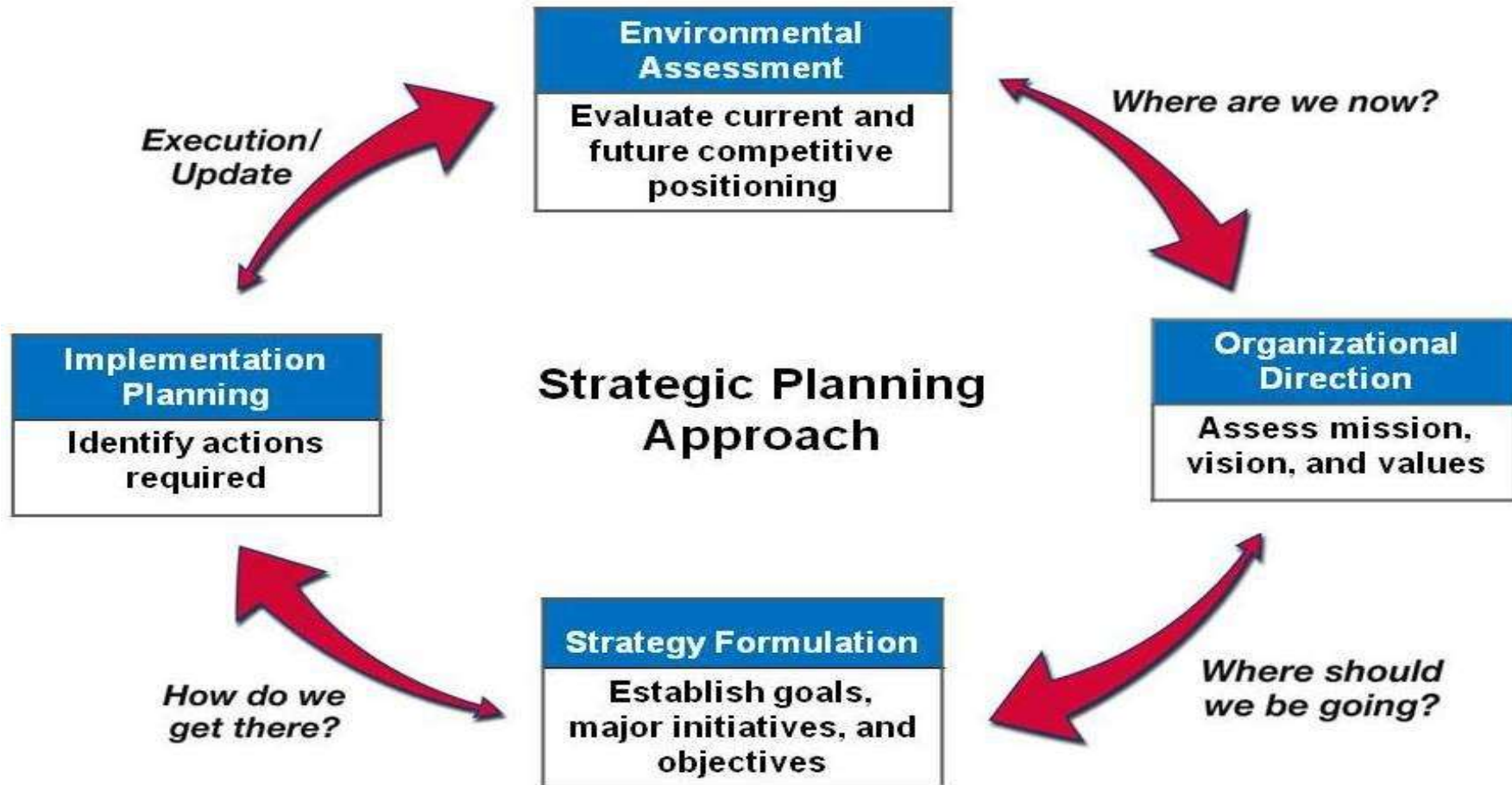
- ⇒ Increase the number of institutions that are emitting environmental pollutants (air, water, land and noises) below the limiting standard from the baseline to 100%.
- ⇒ Increase institutional surveillance and regulation from the baseline to 100%. Develop early warning system for hazardous and toxic substances from federal to woreda level.

• Objective 9: By 2020 ensure empowered community through organized and promotional interventions

• Strategic Targets:

- ⇒ Increase awareness, attitude and behavior of the people towards targeted behavioral indicators of hygiene and environmental health from the baseline to 90%.

Hygiene & Environmental Health Strategy



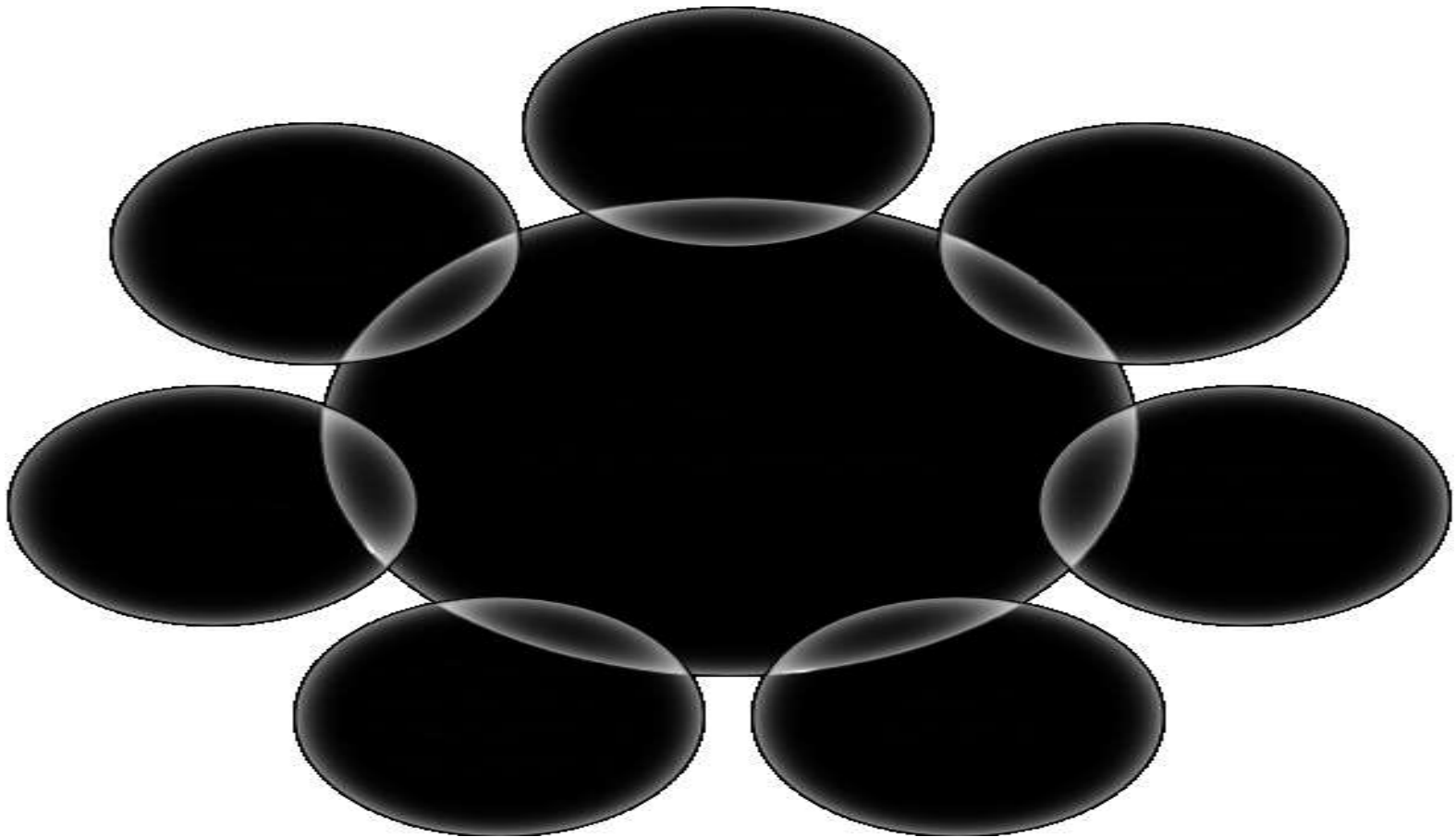
Strategy formulation

(8 domains/scope of the strategy)



Program management/ Implementation frame work

The strategy have the following management components



HNAP

- **Goal**

- Contributes to Goal of HSTP with the focus on to make sure the health system is climate resilient

Strategic Objectives

- Enhance the early warning and surveillance in the context of health emergency risk management
- Building the capacity of health system for realization of climate resilient health system
- Enhance the resilience of health system in provision universal health coverage
- Create enabling environment for health adaption to climate change implementation

Strategic Approaches

- Mainstreaming climate change adaptation to Health Programmes
- Community Mobilization
- Strengthening partnership
- Strengthening the existing health system
 - Strengthen health care delivery
 - Strengthen IDSR
 - Improve HMIS

Key intervention Areas

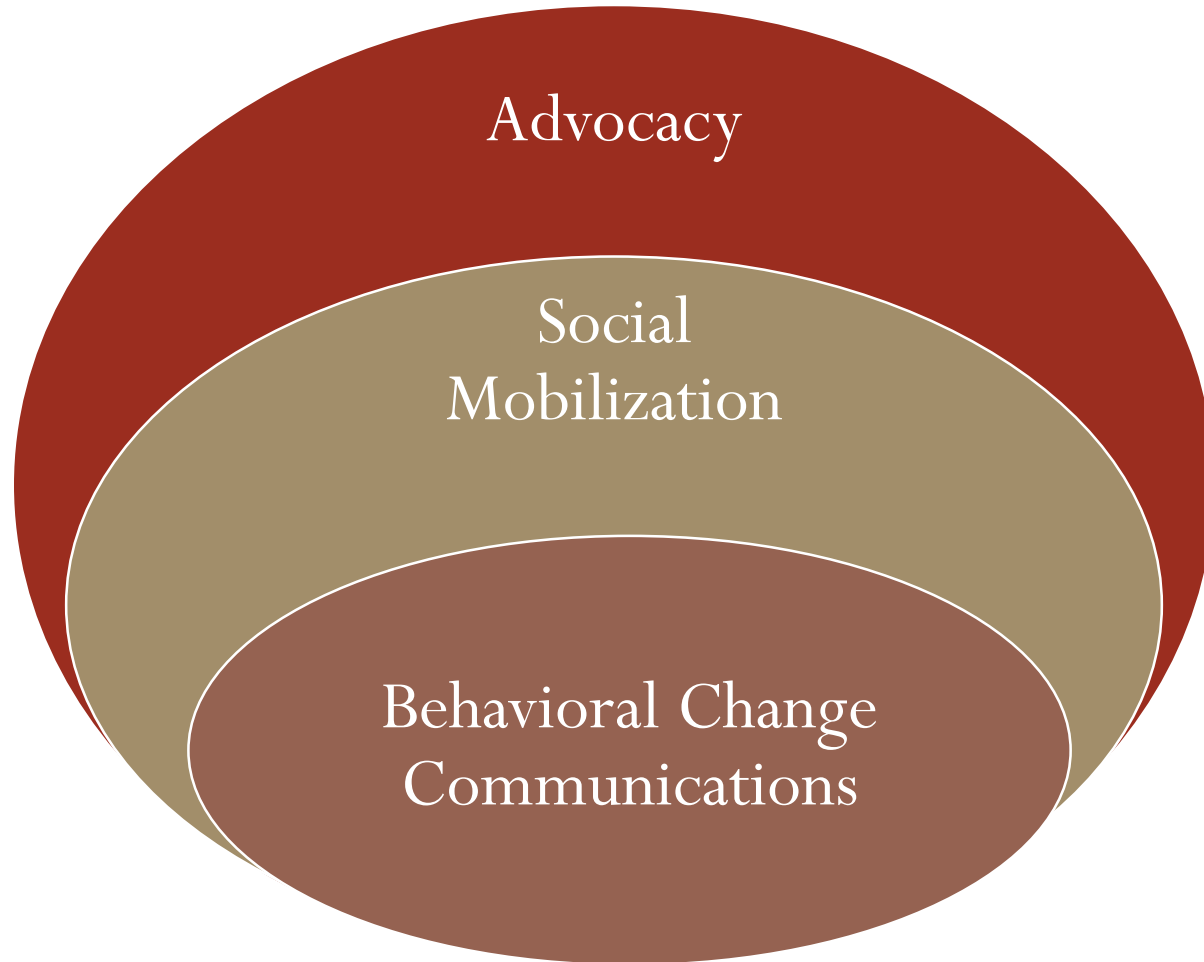
- Strengthening and Expanding Health Infrastructure
- Strengthening existing IDSRs
- Promoting climate resilient sanitation facilities
- Promoting climate resilient water safety plan
- Promoting Family Planning
- Revising building codes of health facilitiesPromoting climate change mitigation initiatives
- Promoting community health insurance scheme
- Encouraging operational research on health and climate change
- Advocating and creating awareness on climate change and health



Wind energy



Strategic Communication Frameworks



MHM

- **Partnership and Coordination**
- **Research and advocacy**
- **Social and resourcemoobilization**
- **Ensure Availability of WASH facilities**
- **Minimum Standard Package for MHM**
- **Water, Sanitation and Hygiene (WASH) Facilities**
- **Reusable and disposable Sanitary Pad Production**
- **Management and disposal of sanitary materials**

- **Monitoring and evaluation**

- Focusing on Improved latrine construction
- Implementing HEH Promotion and Regulation
- MOH has developed LTO standard
- Collecting baseline data on HEH and using for decision
- Preparing HEH design compendium
- Training HEH professionals
- Cascading HEH structure Regions/zone/Woreda and HFs
- Resource mobilization and Utilization

Members of NSC

- MoH Chair person
- MoUDH Co-Chair person
- MoWIE Co-Chair person
- MoCT Co-Chair person
- MoEFCC Co chair person
- MOE Member
- MWCA Member
- Representatives of the private sector/PAs Member
- Invited Representative of Civil Societies Member
- Environmental Health Section of MoH Secretary
- UCRSD of MoUDH Co-Secretary

Benefits of Implementing Hygiene and Environmental Health

- The economic benefits of sanitation are persuasive. Every US\$1 invested in improved sanitation, translates into an average return of US\$9.
- Environmental Health is Beneficial for the following dimensions
- **Health-** diarrhea prevention, mortality decreased, curative care reduced and nutrition improved.
- **Socio-economic-** fitter workforce, less time caring for the sick, less money spent treating sickness
- **Educational** –enhanced girl child school attendance and attaining higher levels of education
- **Social-** privacy, dignity, safety and cleaner environment
- **Gender-** women stand most to gain from improved hygiene and environmental health

I THANK YOU!!!