

Addressing Wider Determinants of Health and Accelerating Progress towards Health Equity



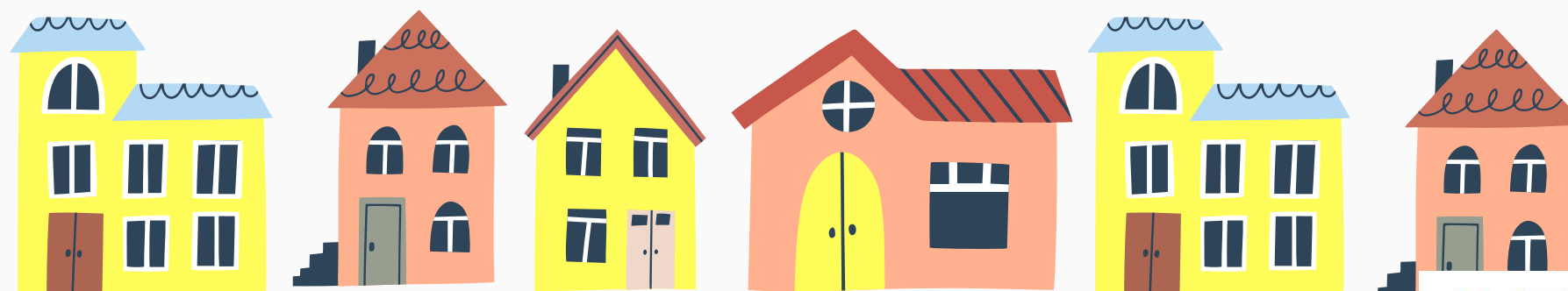
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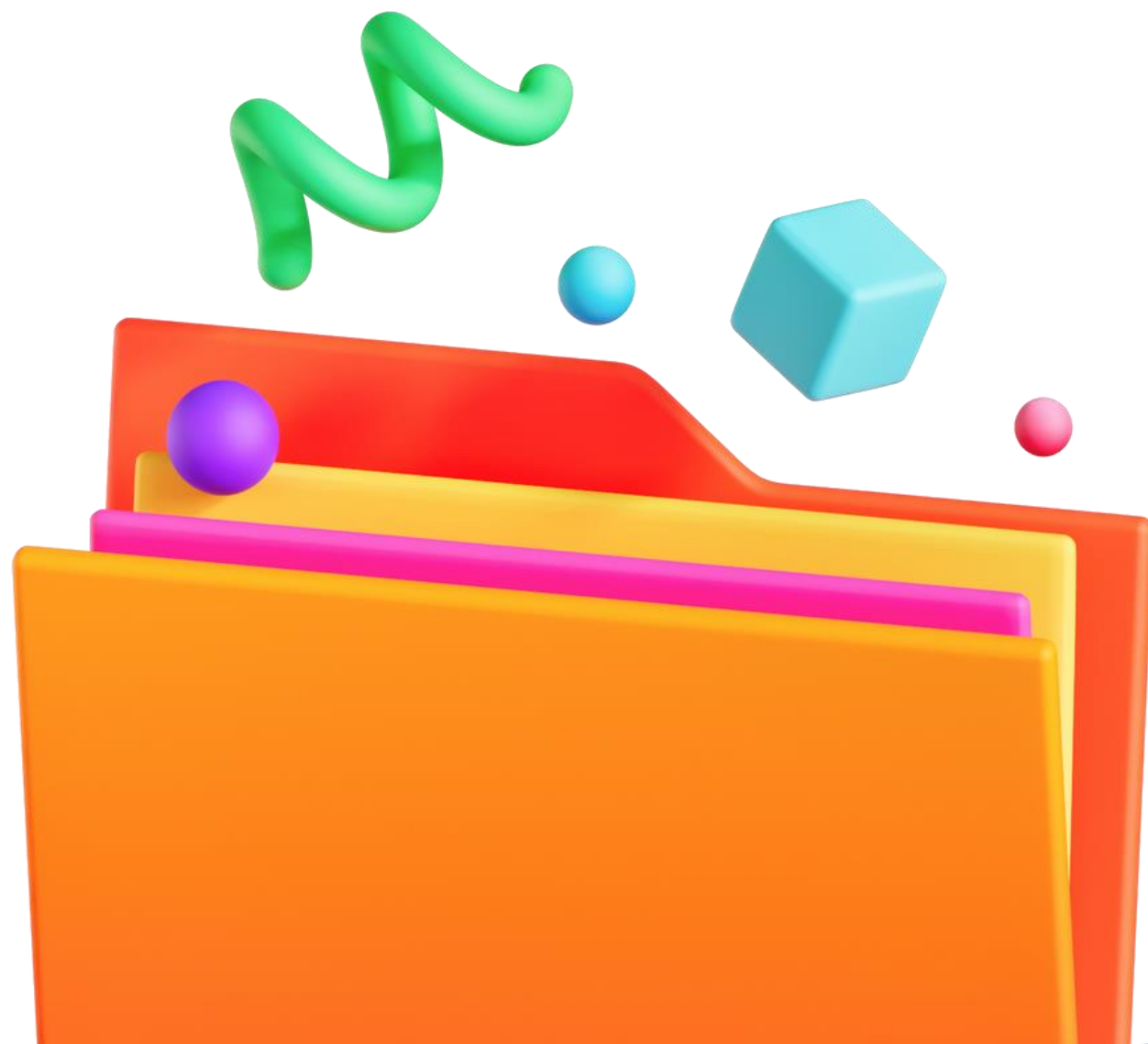


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Presentation outline



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Background-Wider Determinants of Health

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Environment and climate change

3

Agriculture, food production and nutrition

4

Anti-microbial resistance

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Work conditions and occupational risk

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Equity scenario and actions

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Take home message

Background: Wider determinants of health

Health Care



20% of individuals health is determined by access and quality health care

Wider determinants

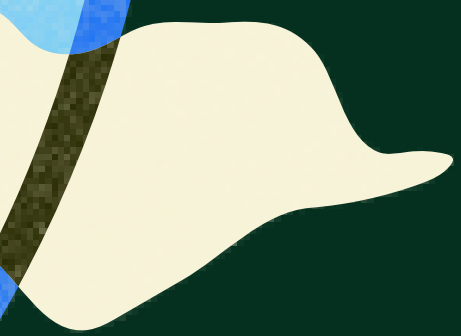


80% of total individuals' health is determined by wider determinants

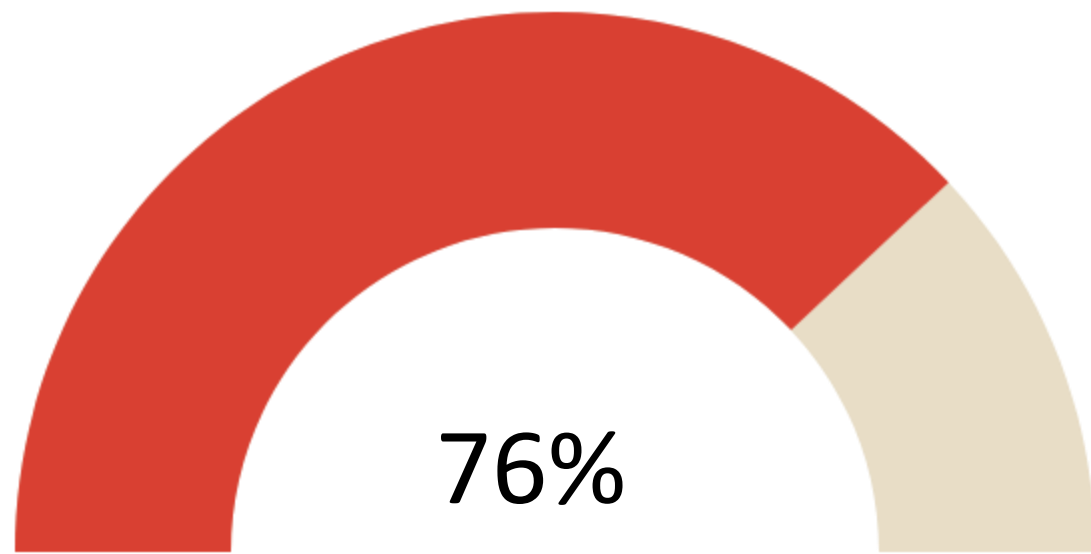


WIDER DETERMINANTS OF HEALTH

1. ENVIRONMENT AND CLIMATE CHANGE



Inter-connection of environment and health



Out of 133 disease analyzed by WHO, 101 were found to have linkage with environmental factors.



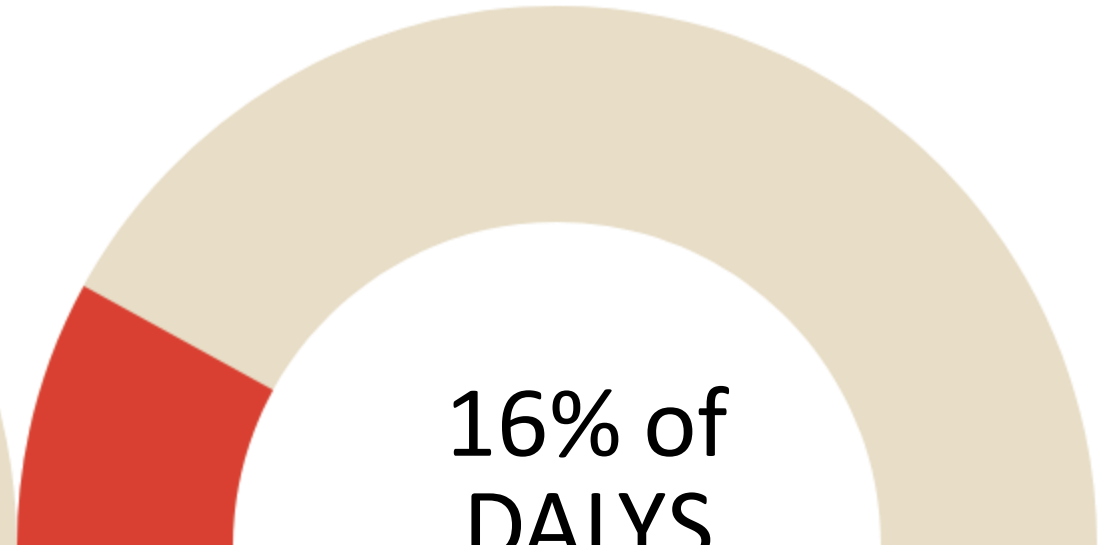
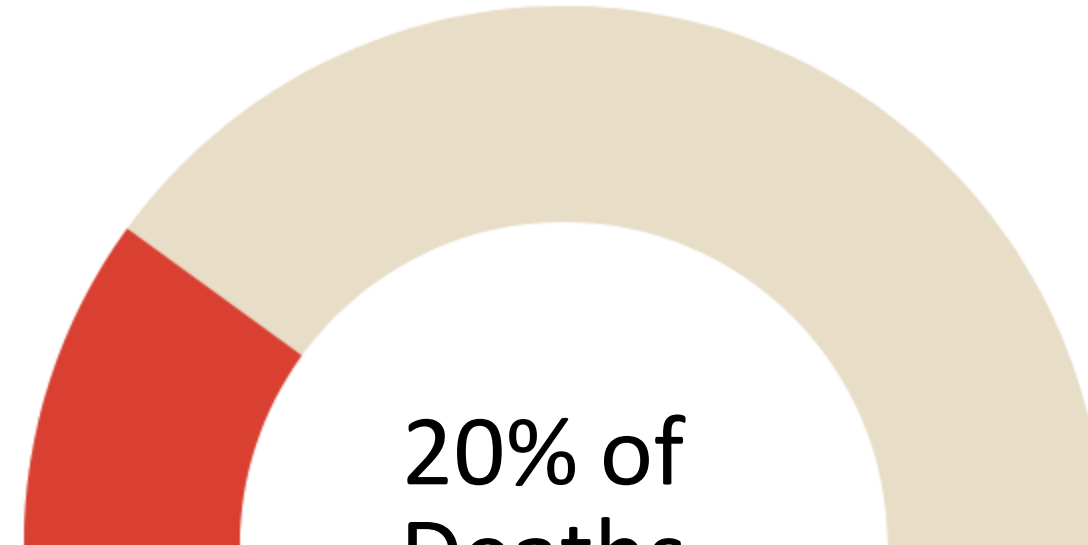
Disease burden attributable to environmental factors

ENVIRONMENTAL FACTORS
RESPONSIBLE FOR

46,687

DEATHS IN NEPAL

Global

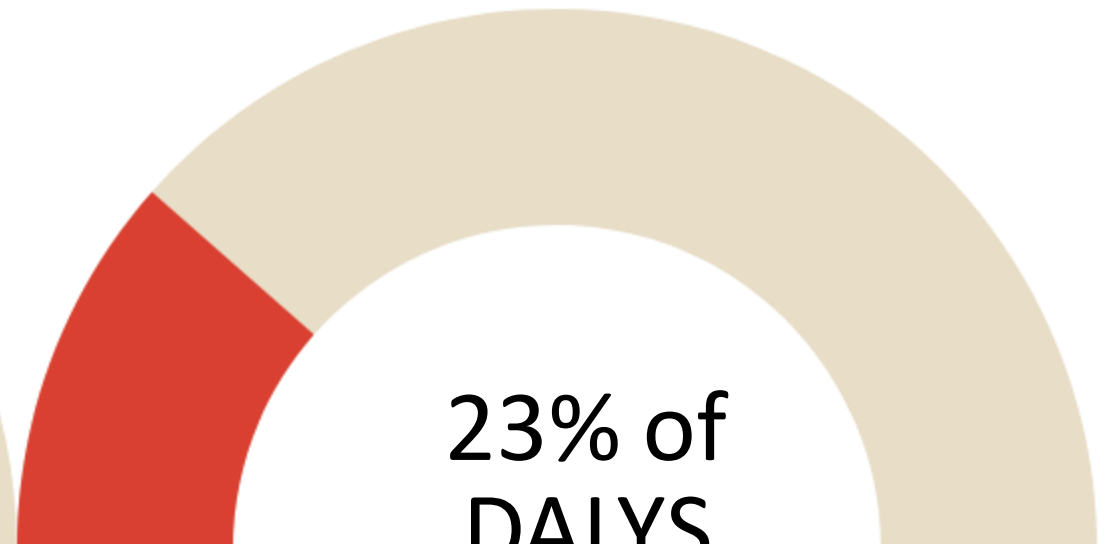
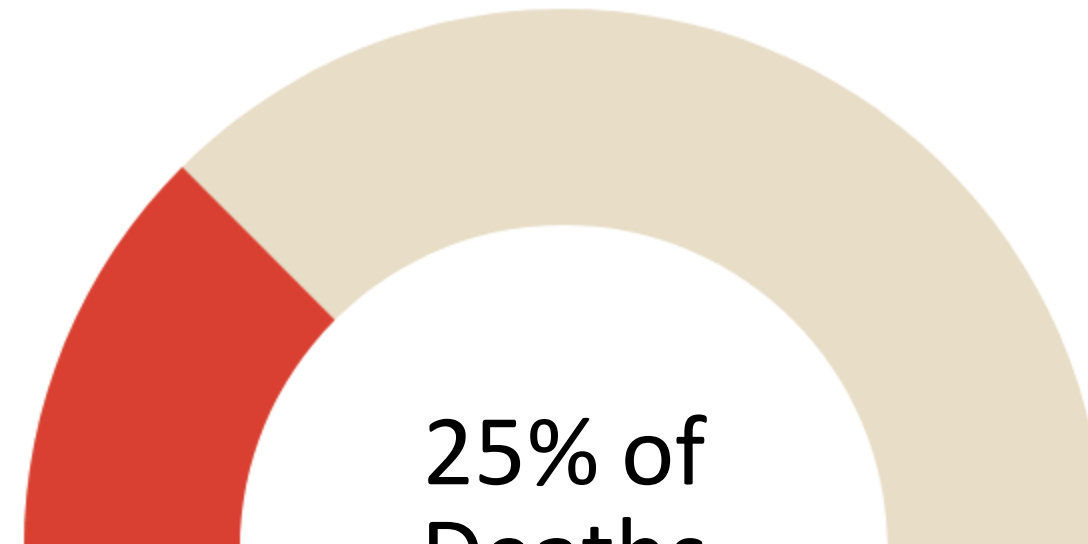


ENVIRONMENTAL FACTORS
RESPONSIBLE FOR

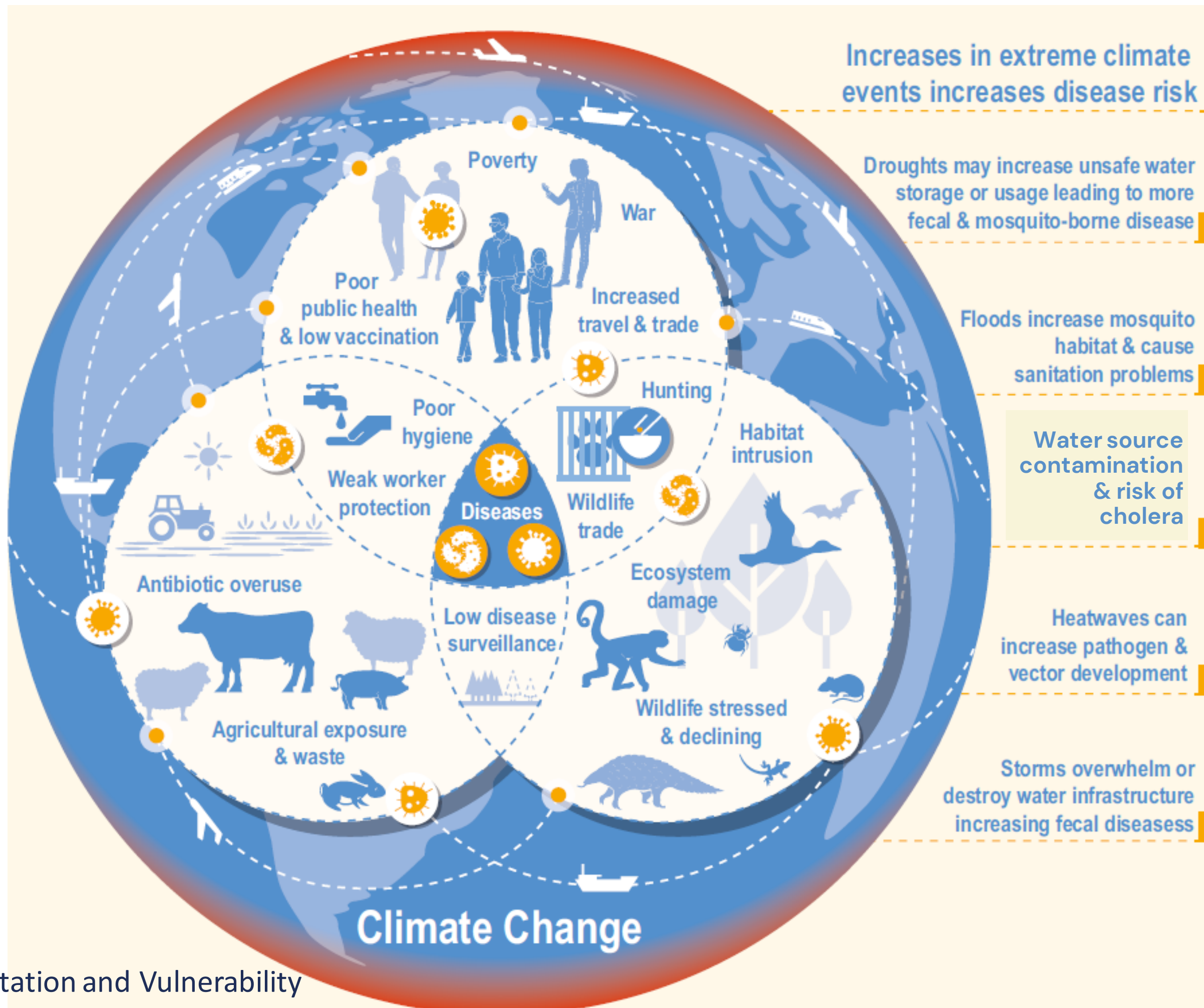
23,69,446

DALYS IN NEPAL

Nepal



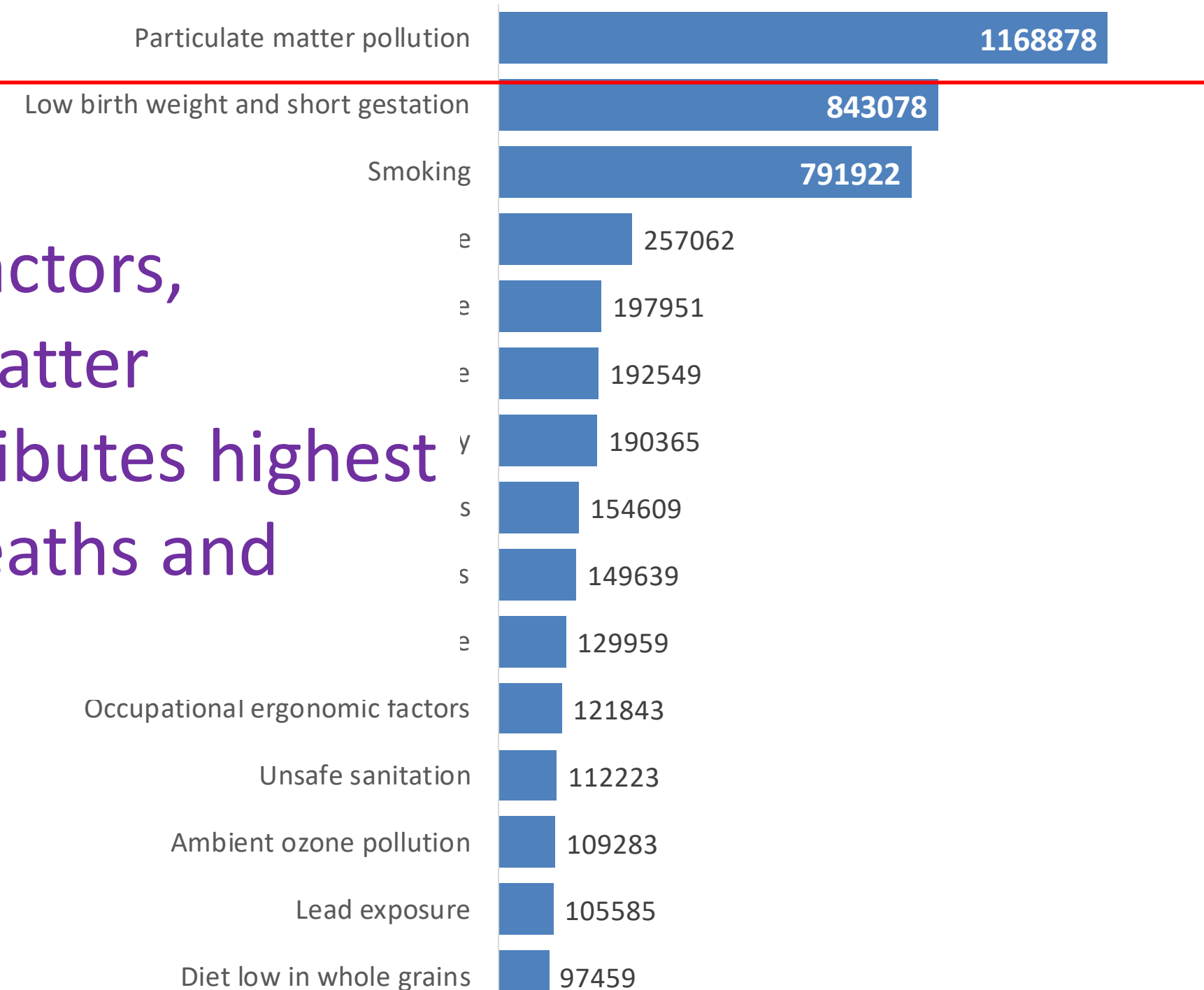
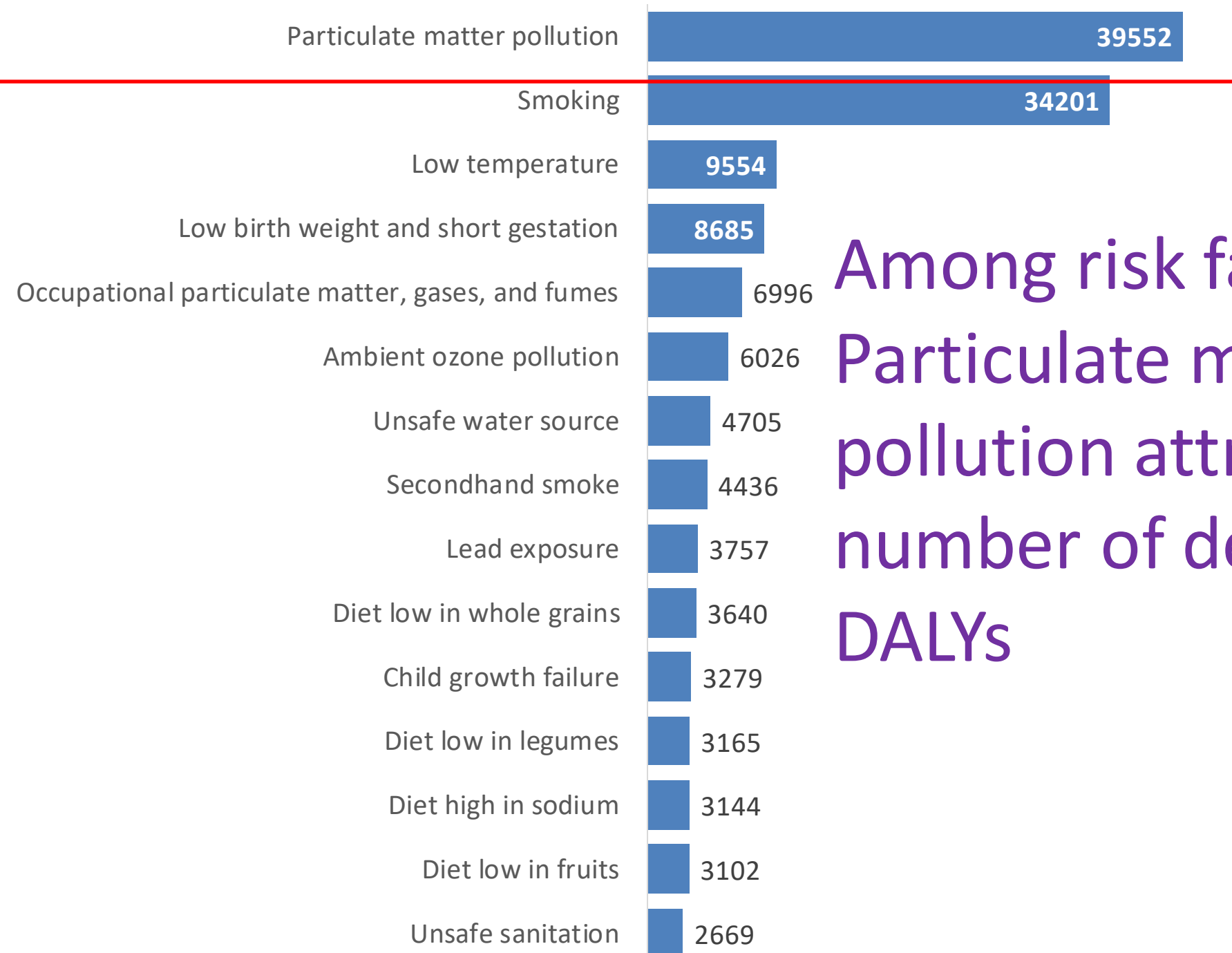
How climate change impacts health?



Particulate matter pollution: the leading causes of deaths and DALYs

Deaths

DALYs



Among risk factors, Particulate matter pollution attributes highest number of deaths and DALYs

Burden of air pollution

Ambient air pollution

17,948 deaths

59 DEATHS PER 100,000 POPULATION

Household air pollution

21,603 deaths

71 DEATHS PER 100,000 POPULATION

Ambient air pollution

517,064 DALYs

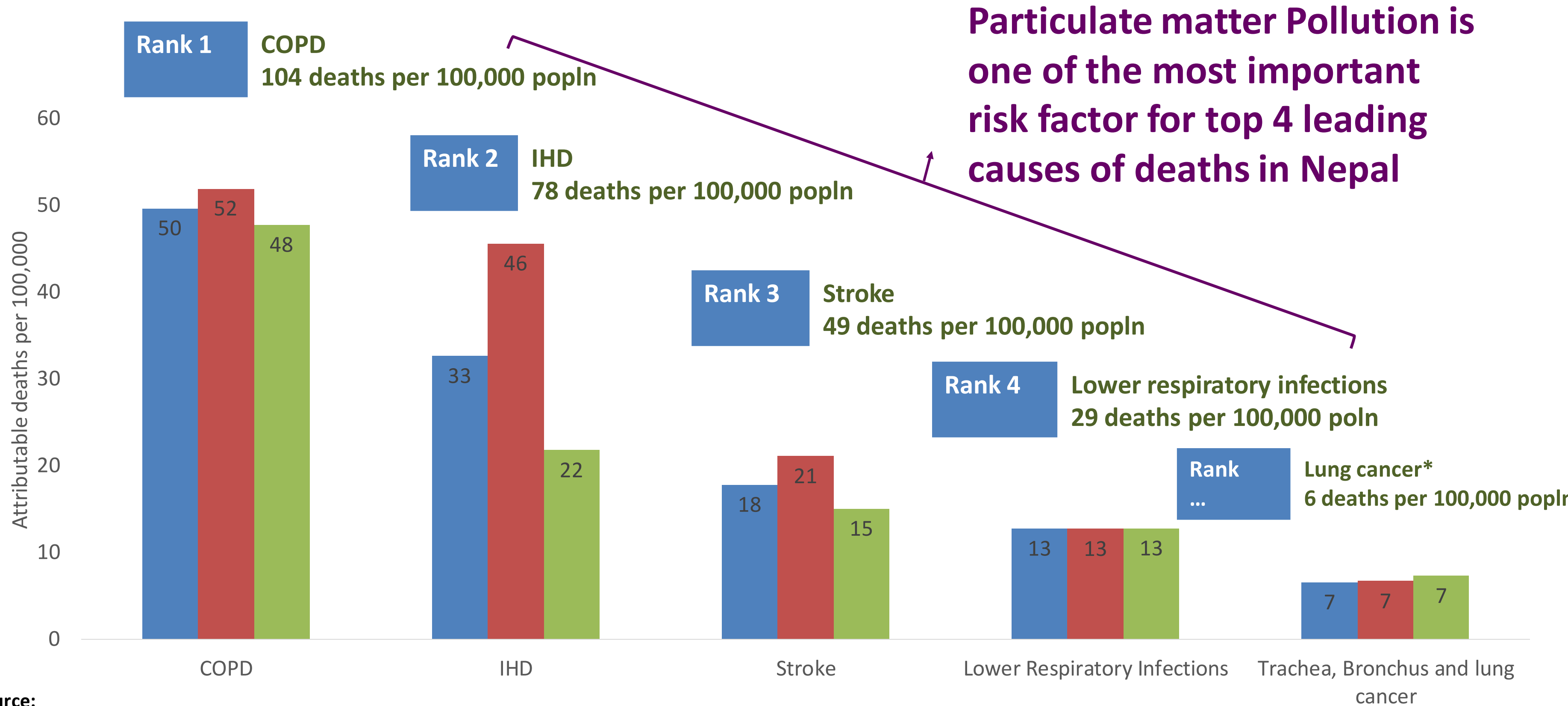
1700 DALYs PER 100,000

Household air pollution

651,814 DALYs

2143 DALYs PER 100,000

Particulate matter pollution plays role in leading NCDs



Source:

- WHO. 2022. Global Health Observatory
- Global Burden of Disease Study 2019

■ Both sex ■ Male ■ Female

Reduction in premature deaths from air pollution if measures are taken to reach 35 $\mu\text{g}/\text{m}^3$ as per target leads to:

26,500 deaths
Can be prevented annually

67%

Reduction in air pollution related deaths

Reduce pollution at source, switch to clean energy options

Promote **climate suitable technologies and infrastructures**

Map facilities in disaster prone area, **modify, adapt and relocate as needed**

Behavior change education, waste reduction, exposure reduction

Actions

Develop resilience capacity of health system

Strengthen VBD surveillance at national and subnational level

Climate informed decision making

Make more stringent criteria for air quality standards and regular monitoring



Wider Determinants of Health

2. ANTIMICROBIAL RESISTANCE

BURDEN OF ANTI-MICROBIAL RESISTANCE

Anti-bacterial resistance attributed death

- 6,413 deaths
- 20.08 deaths per 100,000 population
- 1,113 deaths under 5

Anti-bacterial resistance attributed DALYs

- 230,685 DALYs
- 758.4 DALYs per 100,000

Anti-bacterial resistance associated death

- 23,204 deaths
- 76.29 deaths per 100,000 population
- 4,256 deaths under 5

Anti-bacterial resistance associated DALYs

- 859,516 DALYs
- 2,835.9 DALYs per 100,000

Consumption of anti-bacterials in Nepal



- 79.8 DDD per 1000 inhabitants
- Rapid surge from 40.7 DDD in 2016

The WHO 13th General Programme of Work 2019–2023 set a target of at least 60% of total antibiotic consumption being 'Access' group antibiotics

DDD=Defined Daily Doses

ACCESS GROUP

21.6% of total antibacterials

WATCH GROUP

54.9% of total antibacterials

RESERVE GROUP

0.5% of total antibacterials

UNCLASSIFIED

15.4% of total antibacterials

Are we regulating enough?

Consumption of anti-bacterials in Nepal

1

First in anti-bacterials consumption

Among 57 countries for which data are available

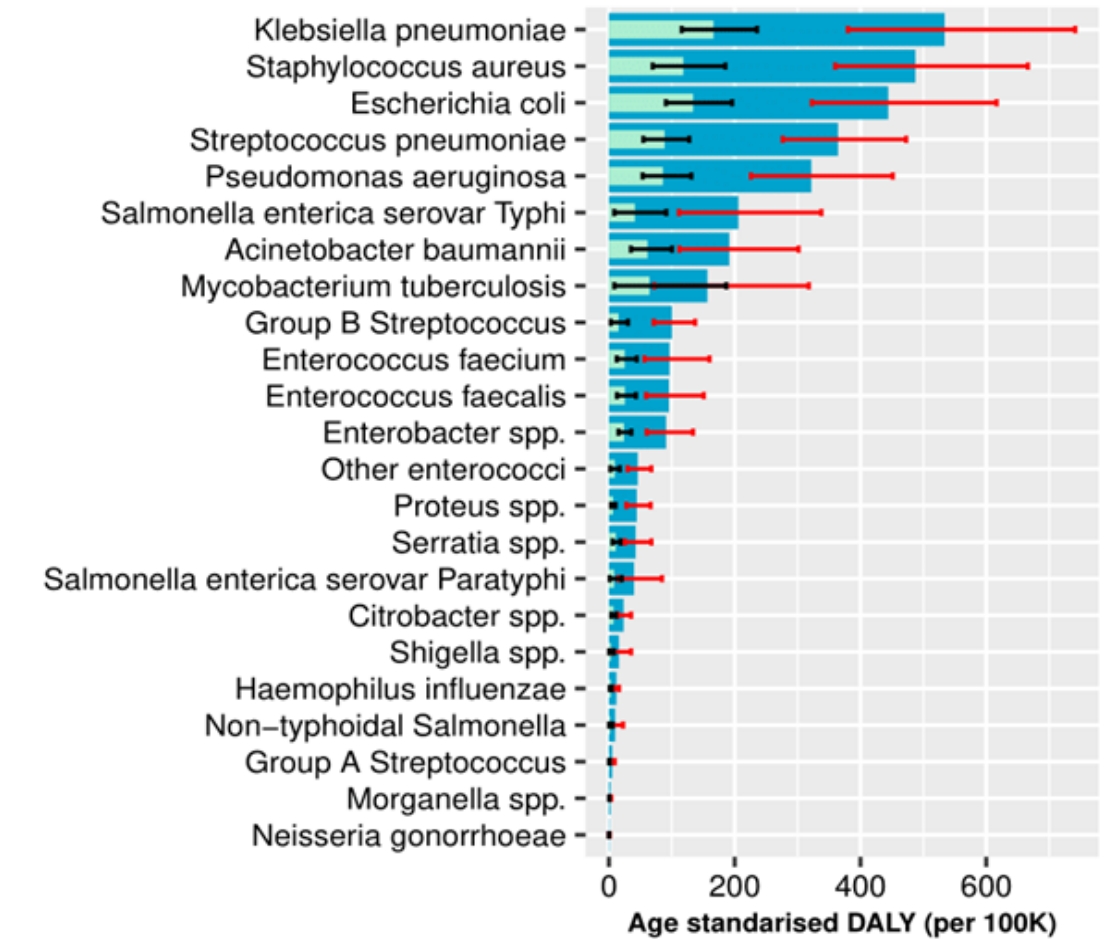
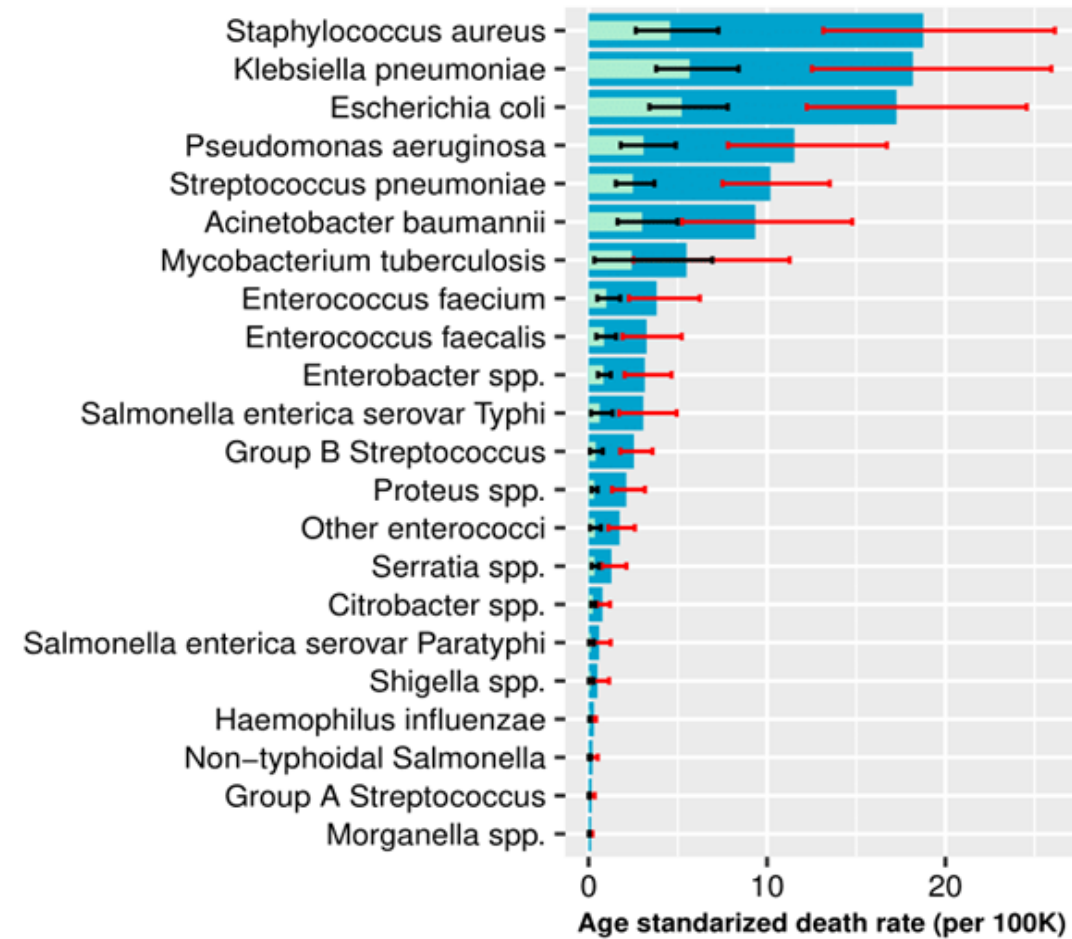
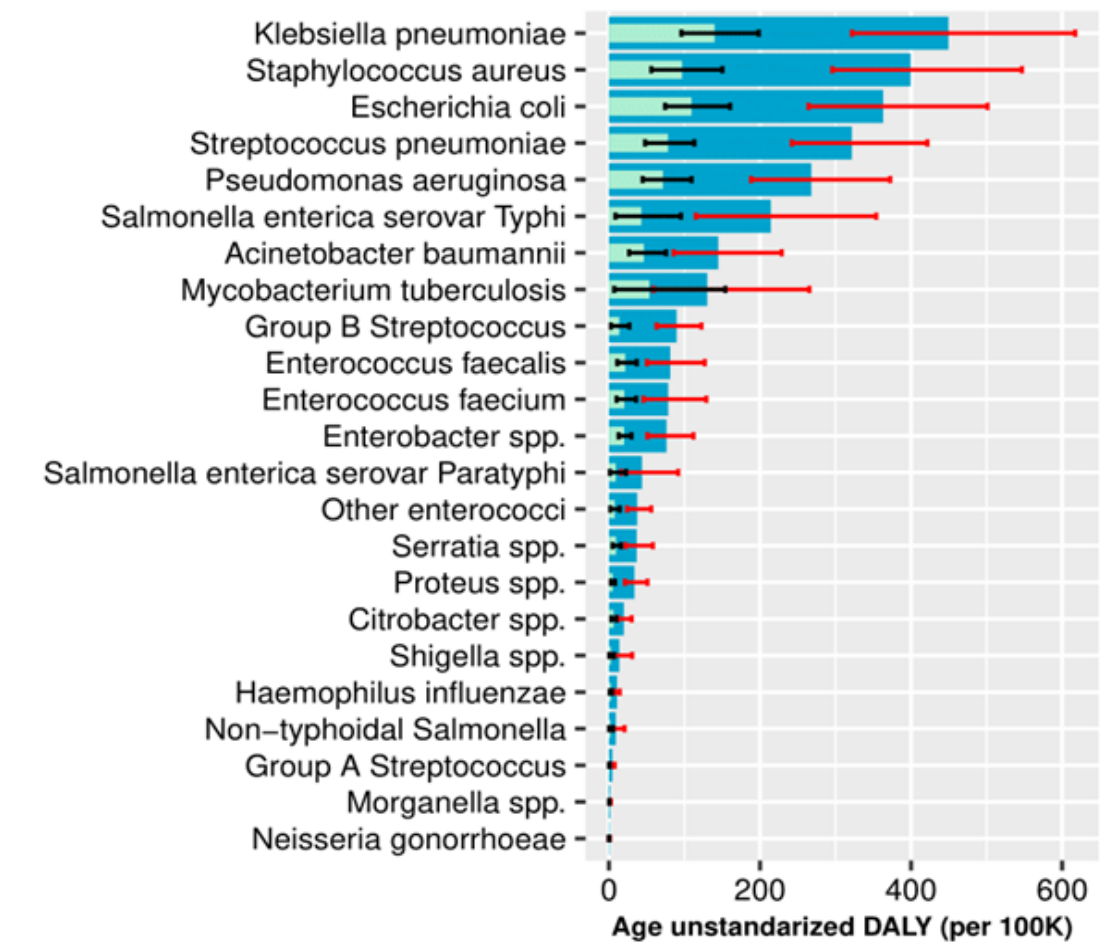
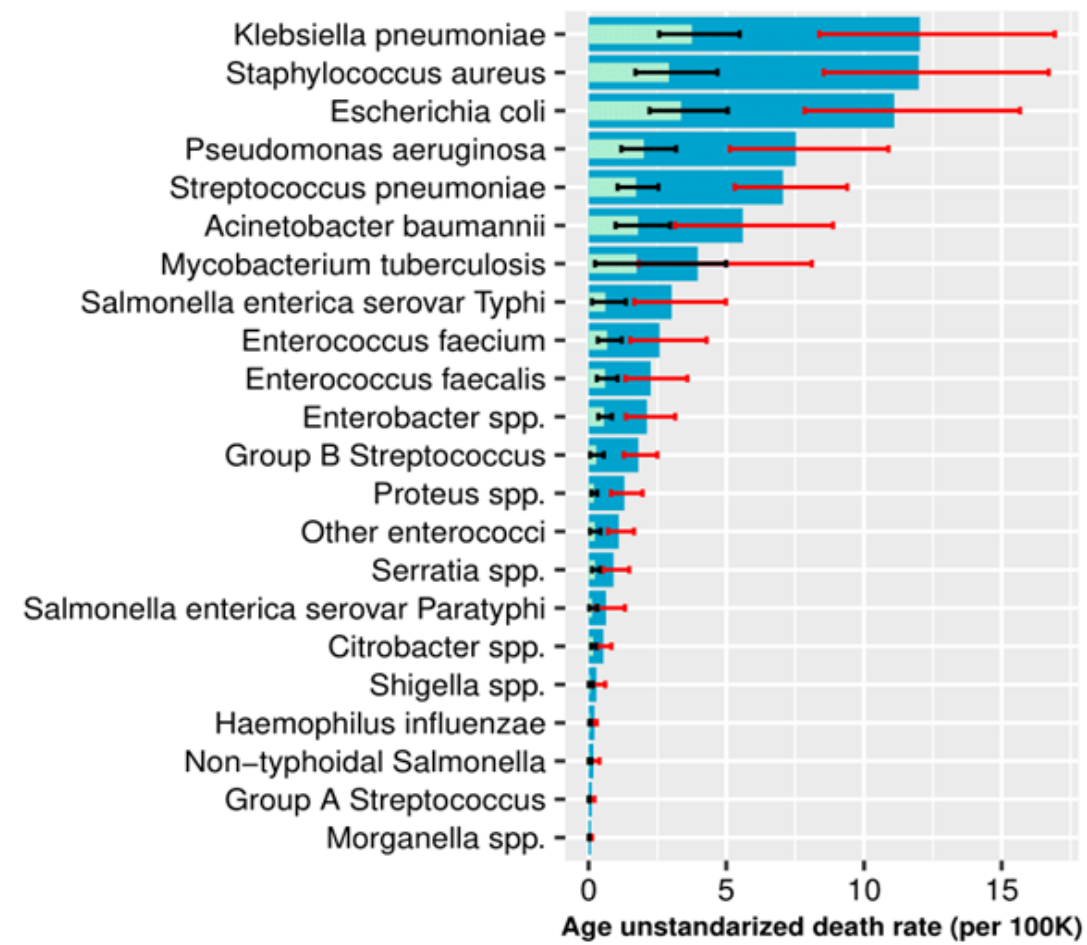
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Has fourth highest consumption of watch group anti-bacterials

Among 57 countries for which data are available

3 most common pathogens developing resistance

- *Klebsiella pneumoniae*
- *Staphylococcus aureus*
- *Escherichia coli*



Addressing problem of anti-microbial resistance

Public private partnership
in addressing
interconnectedness of
people, animal and
environment

Enforcing regulation and
pursuing legal actions to
ensure prudent use of
anti-microbials

Address sub-optimal
and incomplete doses in
community through
awareness

Collaborate with Ministry
of Agriculture and
Livestocks to regulate use
of anti-microbials in
animals

Wider Determinants of Health

3. Agriculture, Food Production and Nutrition

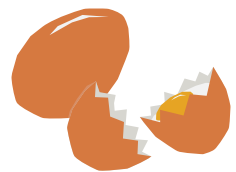


Burden attributable to Malnutrition



Malnutritional attributable deaths

- **12,329 deaths**
- **41 deaths per 100,000 population**
- **13 deaths per 100,000 by 2040**



Malnutritional attributable DALYs

- **1299295 DALYs**
- **4272 DALYs per 100,000**

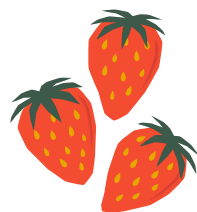


Burden attributable to dietary risk factors



Additional deaths from dietary risk factors

- **19232 deaths**
- **63 deaths per 100,000 population**
- **126 deaths per 100,000 population**



DALYs attributable to dietary risk factors

- **500826 DALYs**
- **1646 DALYs per 100,000**



Changing scenario

2019

High BMI

**30 deaths
per 100,000 population**

Undernutrition

**30 deaths
per 100,000 population**

2040

High BMI

**71 deaths
per 100,000 population**

Undernutrition

**20 deaths
per 100,000 population**

Will educating people about proper diet work?



As of 2021

21.4 million Nepalese
cant afford healthy food

71% Of total population

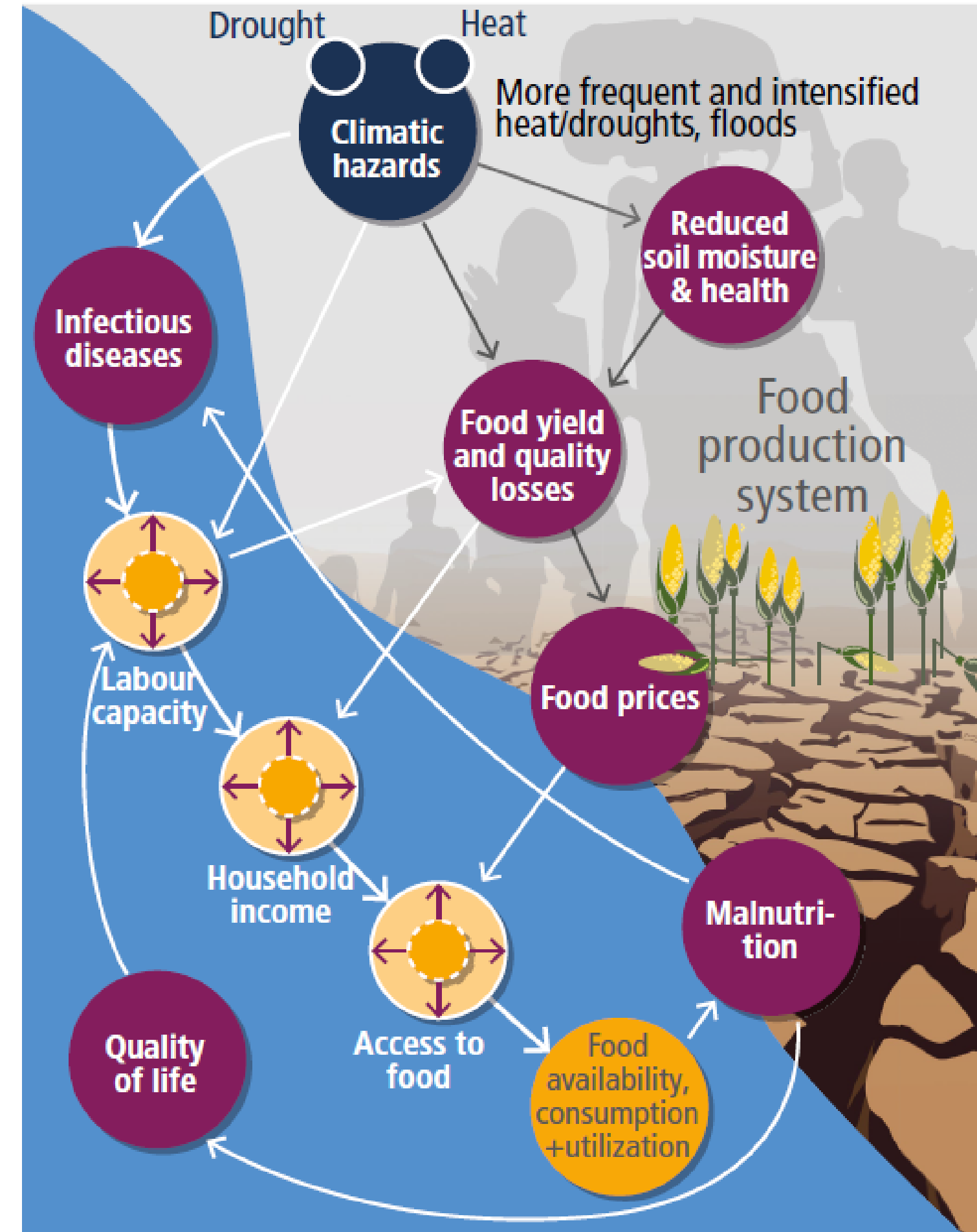
COST OF HEALTHIER FOOD IS

2.2 times higher
than normal starchy rich food
in Nepal

Nepalese need to pay more for healthy diet than global average Cost of healthy diet in Nepal is \$4.12 which is higher than global average of \$3.66 in 2017

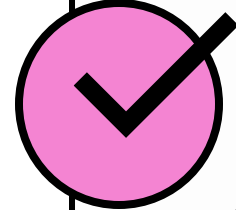
Climate change, food & nutrition

Climate change, through well established pathway, can impact food availability, and consumption

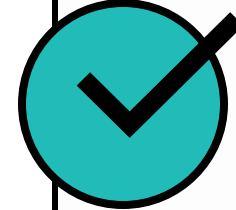


Broader actions for addressing wider determinants of health

Agriculture, food and nutrition



Advocate
for/collaborate
climate resilient
and sustainable
agriculture and
food ecosystem



healthy food
market friendly
trade and
investment
policies

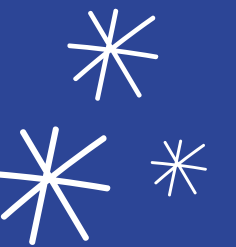
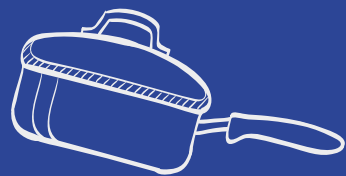


Governance,
market
monitoring and
quality control in
food market



Wider Determinants of Health

4. WORK CONDITIONS AND OCCUPATIONAL RISKS



WORK CONDITIONS & OCCUPATIONAL RISKS



Occupational Risk Factors
Attribute

10,366 Deaths

36 deaths per 100,000 population

Occupational Risk Factors
Attribute

493,545 DALYs

1,623 DALYs in nepal

7th Leading cause
of Deaths

6th Leading Cause
of DALYs

LEADING OCCUPATIONAL RISKS

Occupational Particulate
Matter Pollution

6996 deaths

23 deaths per 100,000 population

Occupational Injury

2062 deaths

6.78 deaths per 100,000 population

Asthmagens

948 deaths

3.12 deaths per 100,000 population

Occupational Carcinogens

360 deaths

1.18 deaths per 100,000 population



DALYS ATTRIBUTABLE TO OCCUPATIONAL RISK FACTORS

Occupational Injury

154,609 DALYs

508 DALYS per 100,000

Occupational Particulate Matter

149,369 DALYs

492 DALYS per 100,000

Ergonomics

121,843 DALYs

401 DALYS per 100,000

Occupational Carcinogens

29,581 DALYs

97 DALYS per 100,000



Low back pain in Nepal



Prevalent Cases

2,060,649

Total DALYs

230,665

6775 DALYs PER 100,000



Wider Determinants of Health

5. HOUSING, DISASTERS AND DISPLACEMENT

Displacement

Between 2011 to 2021

245 events

leading to displacement

3.4 million

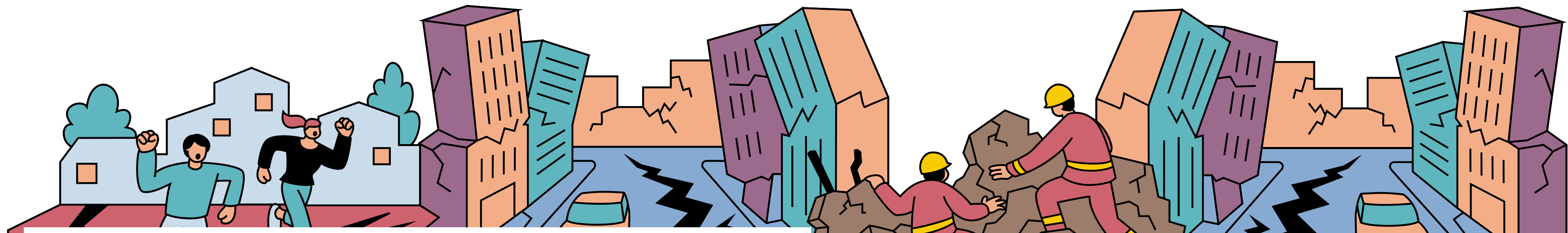
population displaced

Most common causes of displacement

79% by earthquake

19% by floods

2% by landslide and storm



Displacement

Displacement could have life-time and inter-generational impact

Consider an example of Gorkha earthquake

22% Lost sources of income

Among those who earn, income is

66% Lower than non-displaced

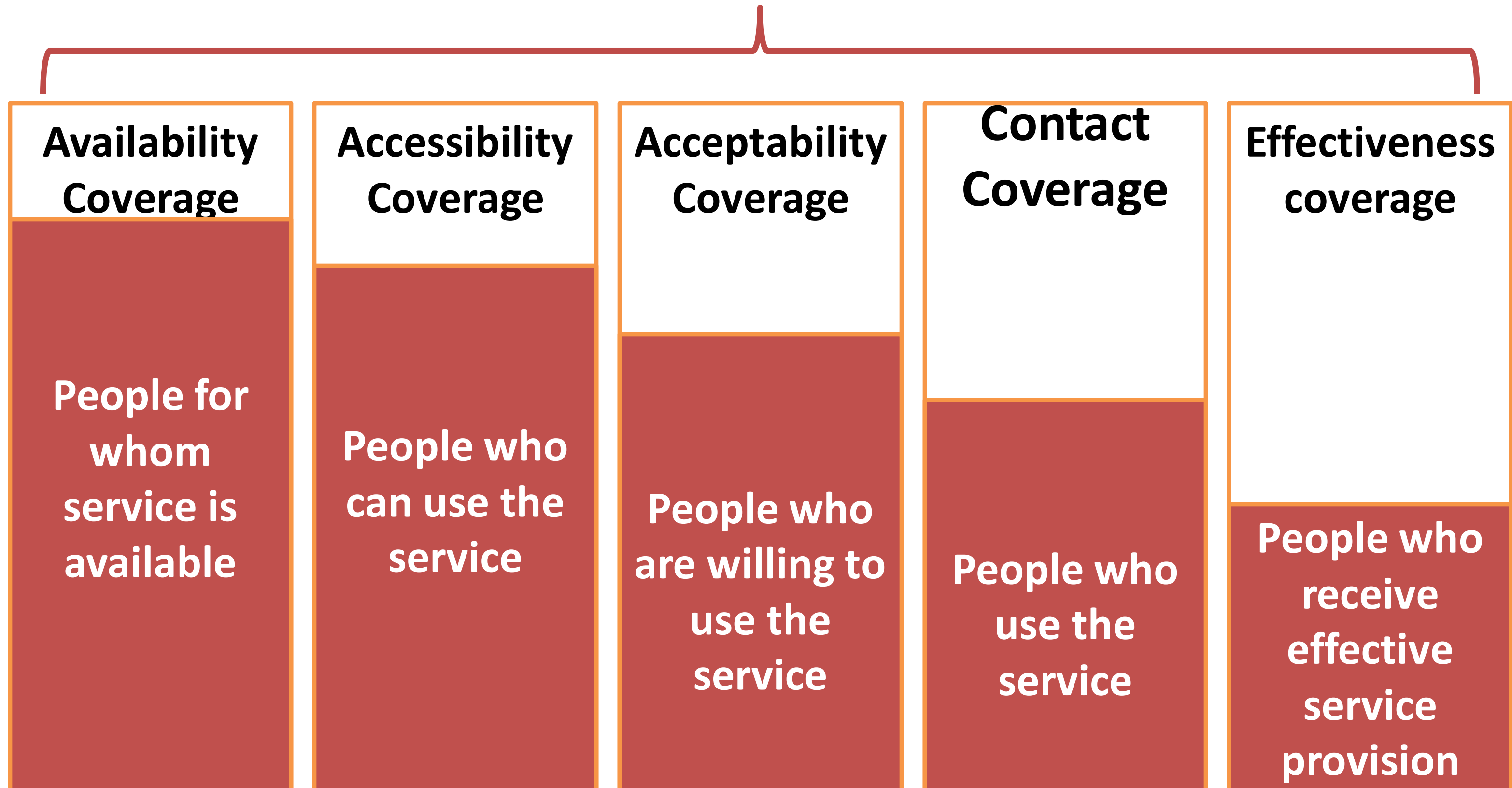
64% of those who lost income still unemployed 7 years after

51% displaced children encountered break in schooling

EQUITY SCENARIO AND ACTIONS



Inequalities appear at multiple level



Zooming wealth-based inequalities in NMR

HIGHEST WEALTH QUINTILE

**12 deaths per
1000 live births** **Achieved in
2016**

Rich and poor achieve the target

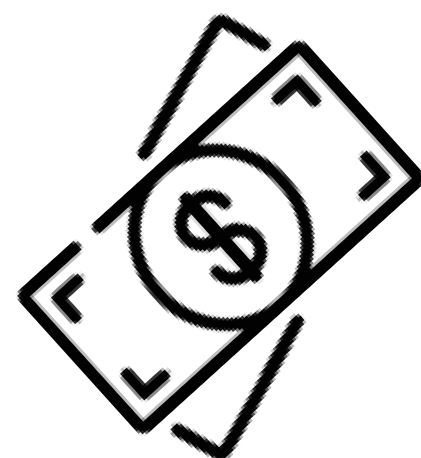
51 years apart

IN LOWEST WEALTH QUINTILE

**12 deaths per
1000 live births** **Will be achieved
in 2067**

What if we eliminate inequalities in NMR

Economic status



- 29% lower
- 4.9 points lower

Provinces



- 29% lower
- 5.1 points lower

Urban Rural



- 7.9% lower
- 1.4 points lower

Education



- 16% lower
- 2.8 points lower

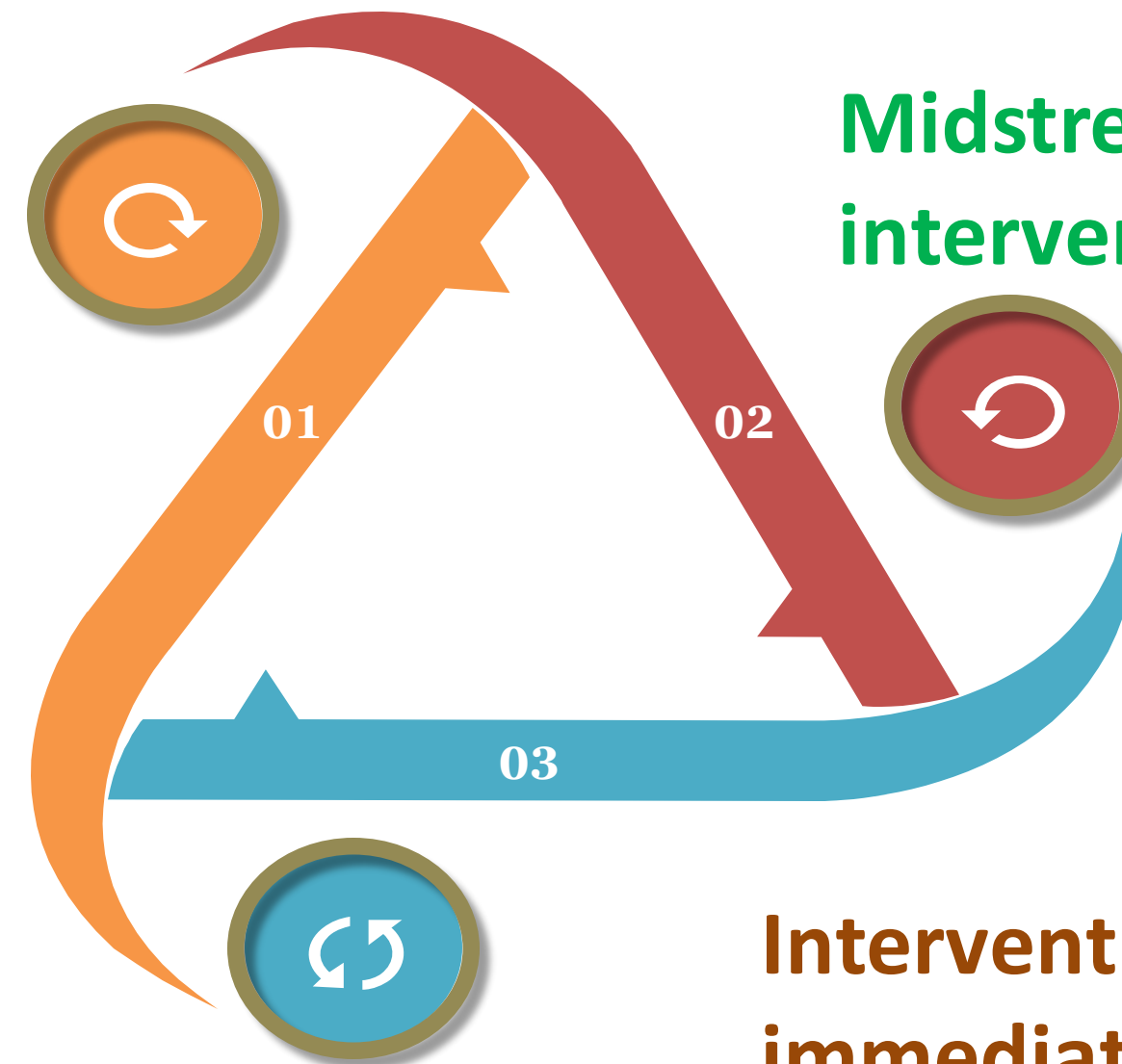
Interventions for addressing inequities

Addressing wider determinants of health through policy interventions

Upstream interventions

Midstream interventions

Addressing individual circumstances and living conditions that lead to inequitable access

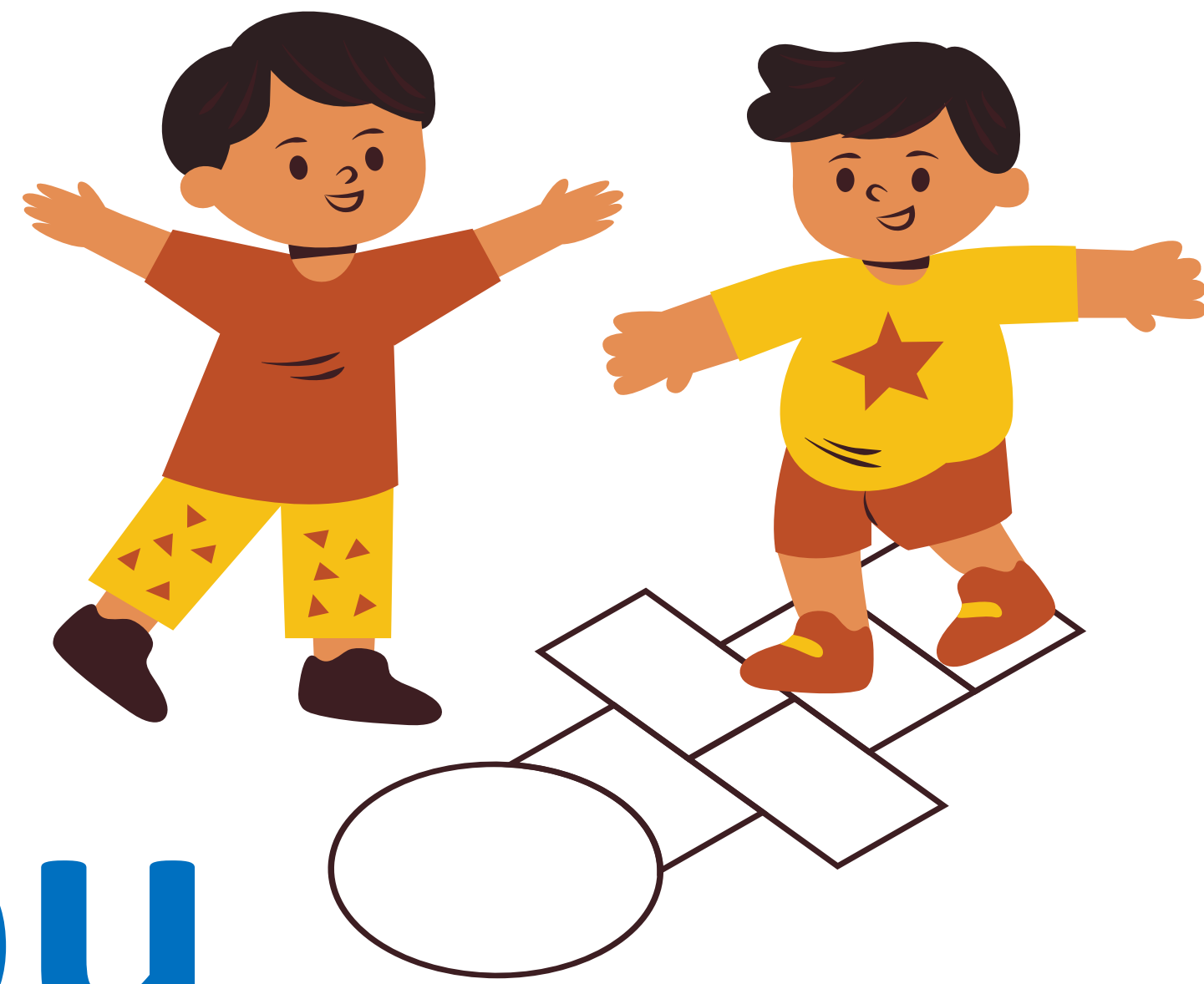


Downstream interventions

Interventions to address immediate health needs to improves access to use of quality health care

Take home message

- Health depends on wider determinants and health sector efforts alone can not ensure good health of citizens
- Multi-sectoral actions, considering health in all policies
- Municipal structure, with all sector under single leadership of Mayor could be an opportunity for intersectoral actions in health



Thank You



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