

AIR POLLUTION & IMPACT ON HEALTH

Presented by:

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Earth - The only planet that can support human life

Take good care of it!



THE GROWING THREAT OF POLLUTION



THE LIVES OF RESIDENTS IN
THE MOST POLLUTED CITIES ARE
SHORTENED BY 1 OR 2 YEARS.

POLLUTION IS ONE OF THE BIGGEST GLOBAL
KILLERS, AFFECTING OVER 100 MILLION PEOPLE.
THAT'S COMPARABLE TO DISEASES LIKE MALARIA AND HIV.

More than 3 million children under age five
die annually from environmental factors.

PEOPLE EXPOSED TO FATAL
LEVELS OF AIR POLLUTION:
1 IN 6

PREMATURE DEATHS PER YEAR
DUE TO AIR POLLUTION: 3.2 MILLION

People who live in places with
high levels of air pollution have
20% higher risk of death from lung
cancer than people who live in
less-polluted areas.

Although the US make up about 5%
of the world's population, it uses 25%
of the world's resources, burning up
nearly 25% of the coal, 26% of the oil,
and 27% of the world's natural gas.

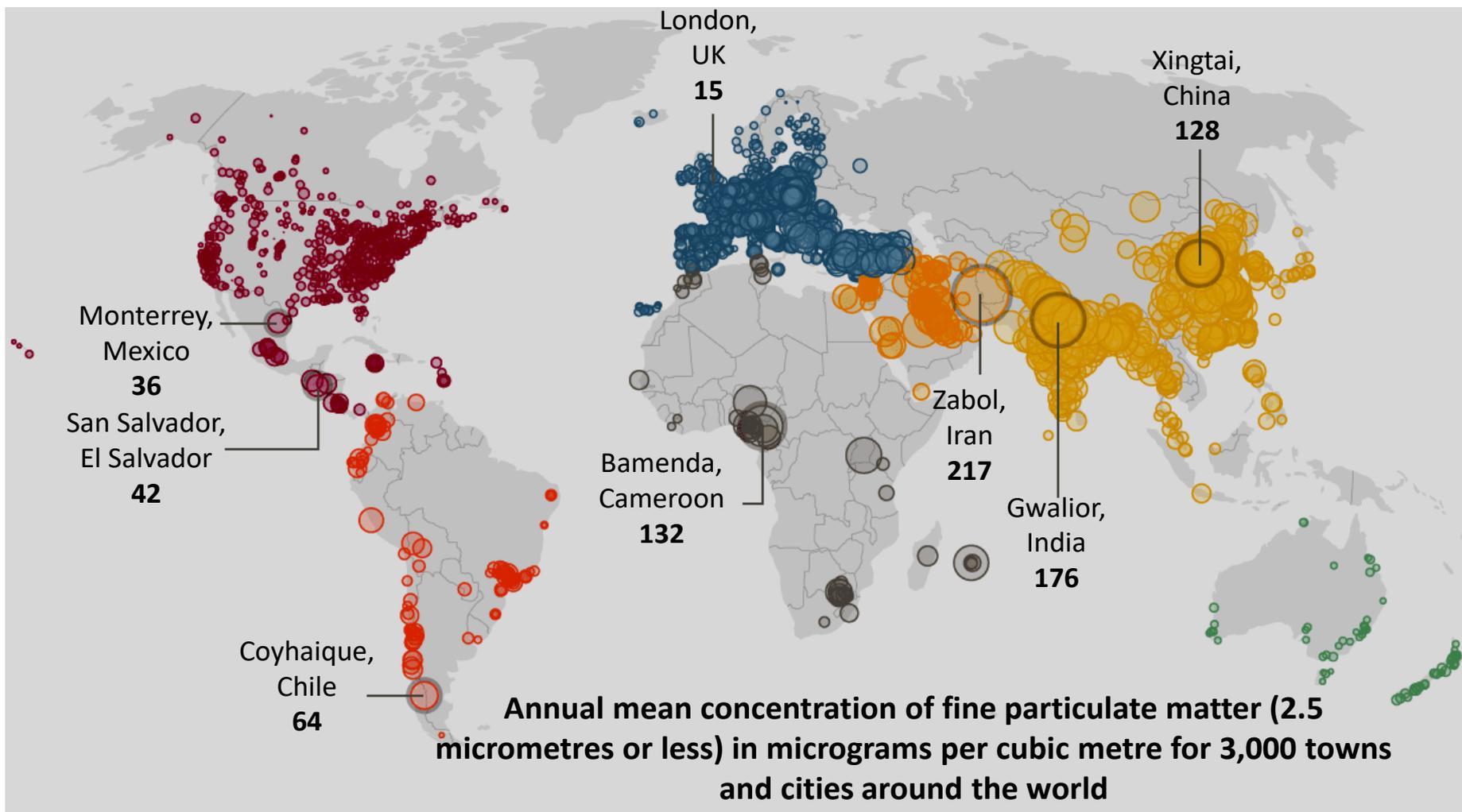
OVER 1 MILLION SEABIRDS AND 100,000 SEA
MAMMALS ARE KILLED BY POLLUTION EVERY YEAR.



**Cities in low- and middle-
income countries
with
> 100,000 inhabitants
DO NOT MEET
WHO air quality standards**

Air pollution rising at an 'alarming rate' in world's cities

Outdoor air pollution has grown 8% globally in the past five years, with billions of people around the world now exposed to dangerous air, according to new data from more than 3,000 cities compiled by the WHO.





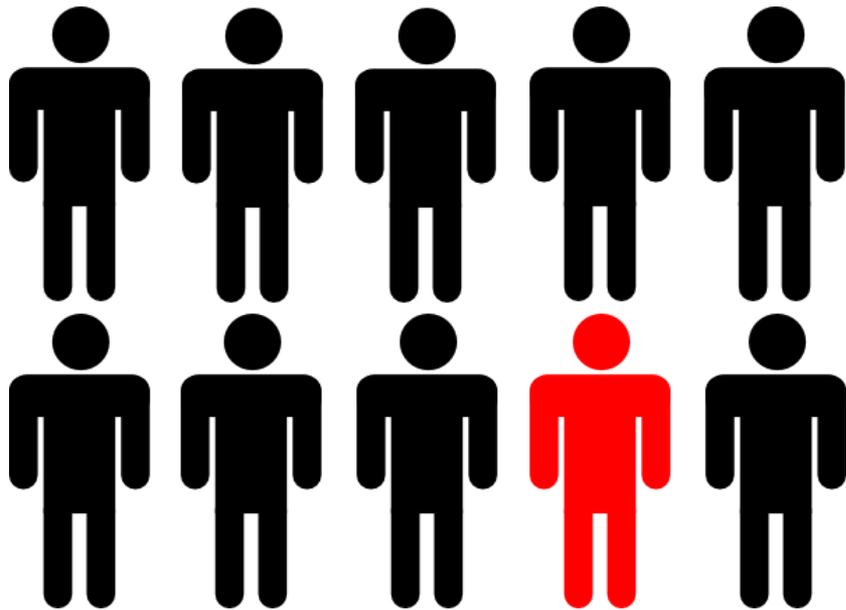
**There is
nothing quite like
opening the
window and
breathing fresh,
clean, air.**

**But then again
how clean is the air
we are breathing
right now?**



**3 billion of world population
still breathe deadly smoke everyday**

As our **world gets hotter** and **more crowded**,
as our **industries** and **engines**
continue to **pump out dirty emissions**,
and when half the **world still lacks access**
to clean fuels or technologies,
the very **air we breathe**
is growing **dangerously polluted.**



9 of **10** people
now breathe
polluted
air!

Air Pollution

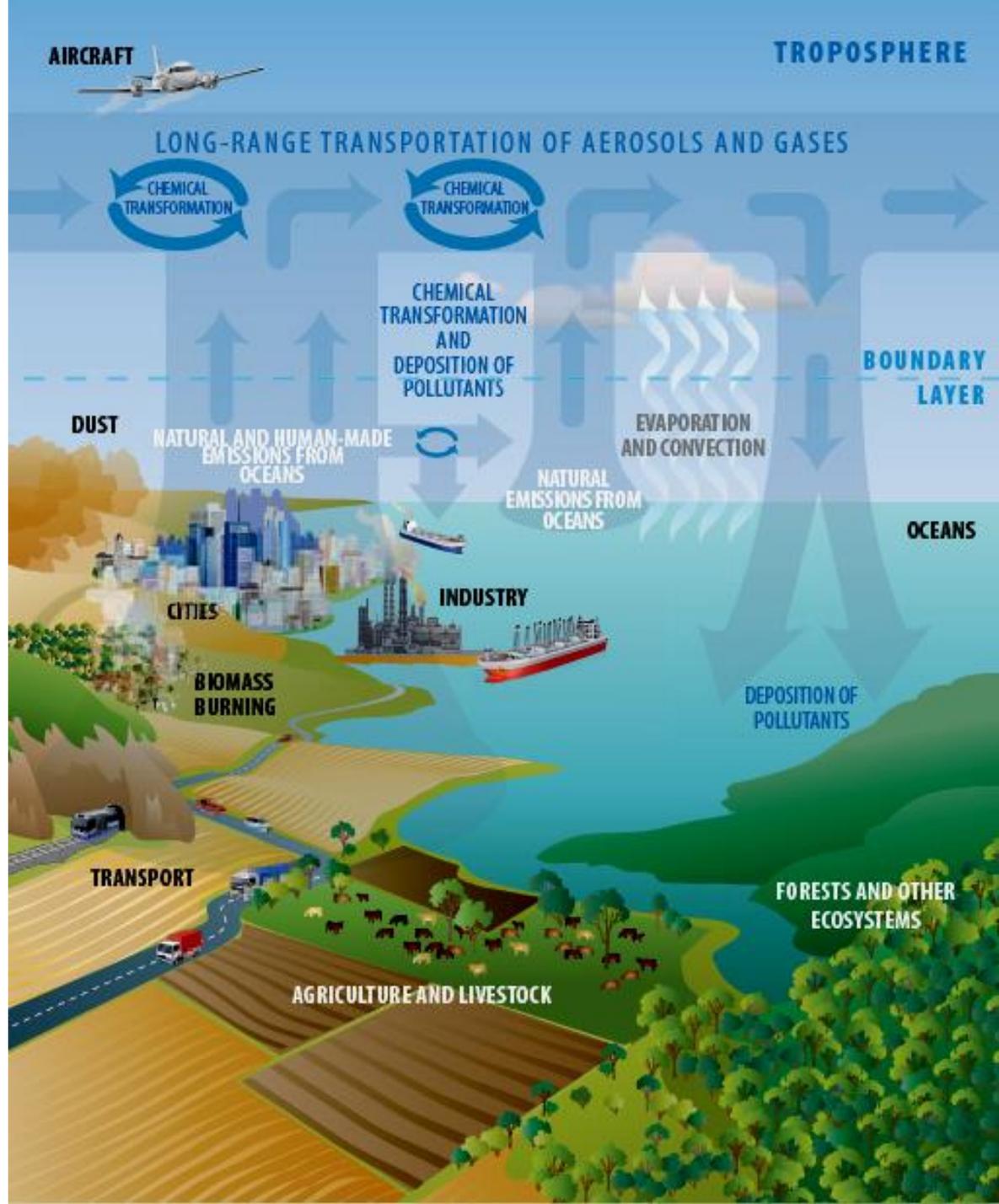


**“The presence in air
of substances put
there by acts of man
in concentrations
sufficient
to interfere with the
comfort, safety, or
health of man,
or with the full use,
or enjoyment of his
property”
(WHO)**

What air pollutants are the most **harmful** to health?



Sources of Ambient Air Pollution



What's in indoor air ?



Airborne particles

Diesel exhaust, carbon black, dust, smoke, fibres, plant matter, hair, pollen



Household odours and gases

Cooking odours, pet smells, cigarette smoke, chemicals, sink or drain smells



Volatile Organic Compounds (VOC's)

Paints, glues and varnishes, wood preservatives, cleaning supplies, office equipment, furniture



Microorganisms

Bacteria, mould (fungi), yeasts, mites and virus

Sources of Indoor Air Pollution

Chemicals from Building Materials

Outdoor Air Pollutants

Animal dander and Hair

New Electronics and Broken Lights

Mold & Bacteria

Cigarette Smoke

Chemicals from Paint and VOCs

Cleaning Supply Chemicals

Gases from Fireplace

Chemicals seeping through foundation

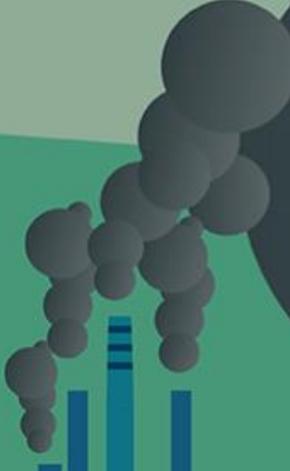
Carbon monoxide

Air Pollution and Effects on Human Health

Proven link between air pollution and diseases.



AIR POLLUTION - THE SILENT KILLER

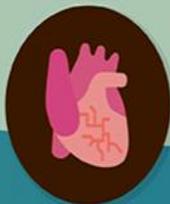


Every year, around **7 MILLION DEATHS** are due to exposure from both outdoor and household air pollution.

Air pollution is a major environmental risk to health. By reducing air pollution levels, countries can reduce:



Stroke



Heart disease



Lung cancer, and both chronic and acute respiratory diseases, including asthma



POLLUTION

The World's Largest Environmental Threat to Health

POLLUTION KILLS THE POOR AND THE VULNERABLE.

92% of deaths

occur in low- and middle-income countries. Children are most affected.



9 MILLION premature deaths

= 16% of all deaths worldwide

Pollution costs the global economy **\$4.6 trillion** per year, equivalent to **6.2%** of global economic output.

Pollution is neglected by funding agencies worldwide.



We can all help to make a difference.

Governments
Implement programs to reduce pollution.
End special treatment for polluting industries.

International donors, foundations, & individuals
Prioritize funding for pollution planning, interventions and research.



VISIT WWW.POLLUTION.ORG for metrics and to connect.

Deadly impact of air pollution

How fine particles affect the body

LUNGS

- Worsening of chronic obstructive pulmonary disease
- Reduction in lung function

BRAIN

- Increase in strokes, brain ischemia
- Cognitive disorders
- Neuro-degenerative illnesses

HEART

- Changes in heart function
- Increase in heart rhythm problems

BLOOD

- Passage of particles through walls of blood vessels
- Blood flow problems
- Peripheral vessel disease/thrombosis

VASCULAR SYSTEM

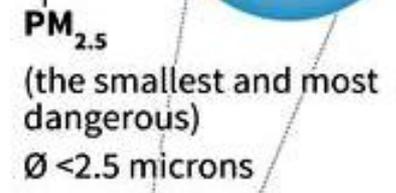
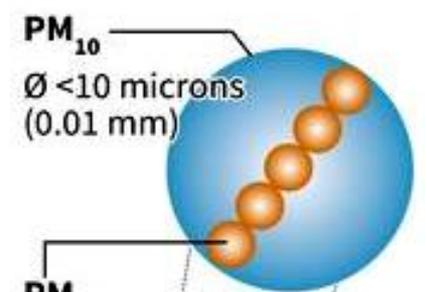
- Atherosclerosis
- Reduction in diameter of blood vessels, high blood pressure

REPRODUCTION

- Fertility problems
- Miscarriage
- Foetal growth problems
- Premature birth
- Low birth weight

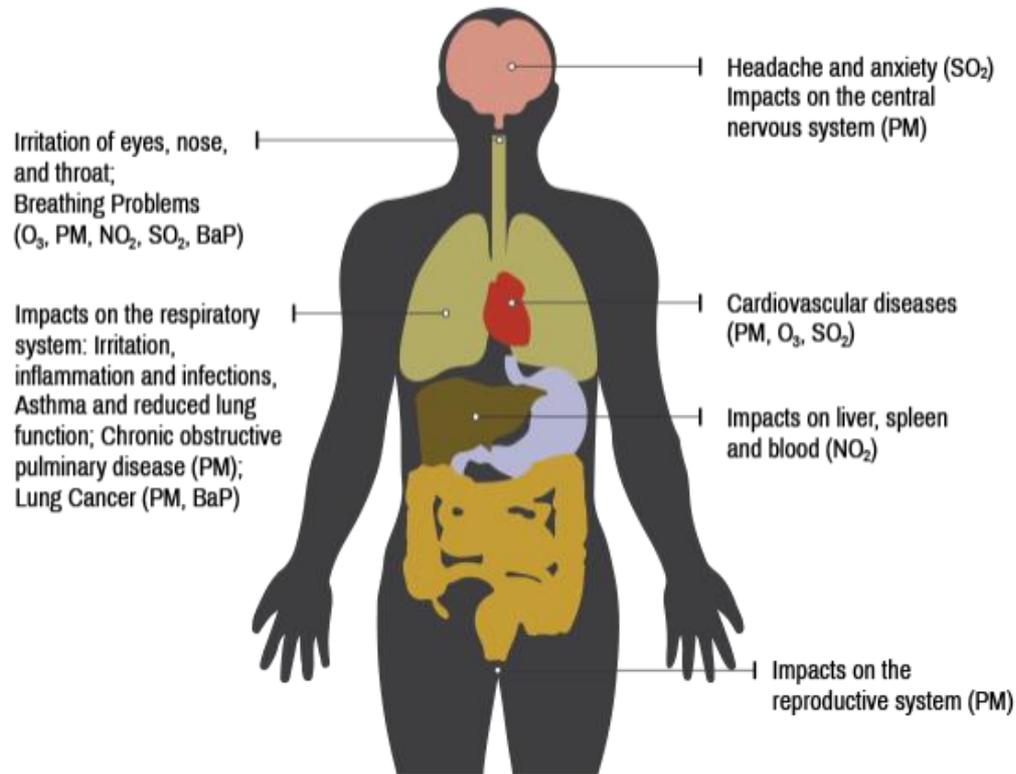
Fine particles

PM = particulate matter



Sources: French national health agency, inVS, European Environment Agency

HEALTH EFFECTS OF AIR POLLUTION



Ambient air pollution accounts for all deaths and diseases from:

29% - lung cancer

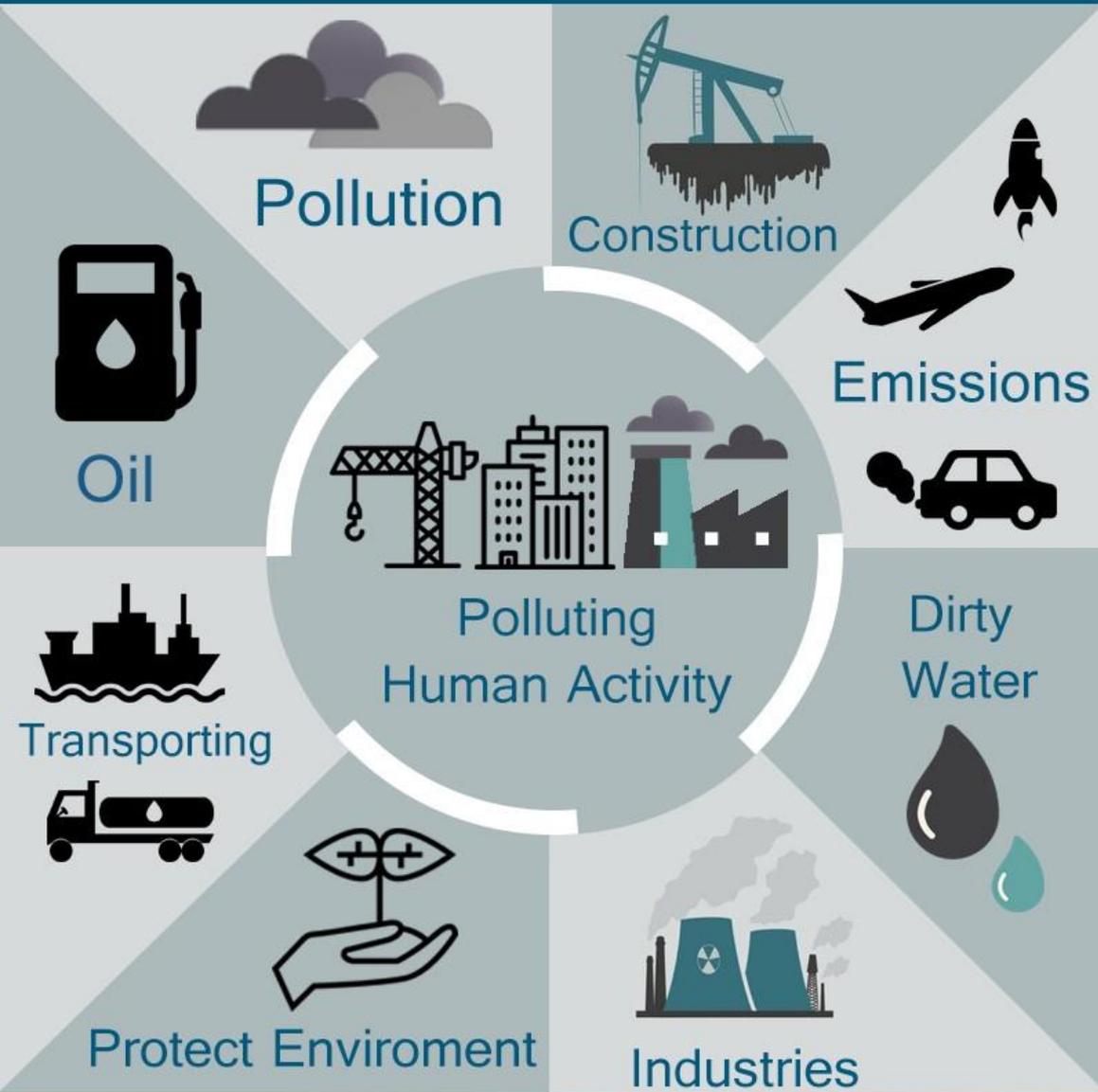
17% - acute lower respiratory infection

24% - stroke

25% - ischaemic heart disease

43% - chronic obstructive pulmonary disease

"Stopping **Pollution** is The Best **Solution**"



What Can
WE
Do?



The most basic **solution** for **air pollution** is to end its root causes:
quit coal and move away from fossil fuels,
replacing them with clean, renewable energy.

In the short-term,
there are many intermediate **solutions** for **air pollution**.

However,
all of these **solutions** require immediate action

Outdoor

Improve energy efficiency to reduce fossil fuel use

Rely more on lower-polluting natural gas

Rely more on renewable energy (especially solar cells, wind, and solar-produced hydrogen)

Transfer energy efficiency, renewable energy, and pollution prevention technologies to developing countries

Indoor

Reduce poverty

Distribute cheap and efficient Cook stoves or solar cookers to poor families in developing countries

Reduce or ban indoor smoking

Develop simple and cheap tests for indoor pollutants such as particulates, radon, and formaldehyde

Positive effect of improved air quality

POLLUTION DOWN, LUNG HEALTH UP

Air quality in the Los Angeles basin, as measured in five cities by USC researchers, improved over two decades. That provided a more healthful environment for children's growing lungs.

AIR POLLUTION

Nitrogen dioxide Fine particles



33%



47%

CHILDREN'S LUNGS

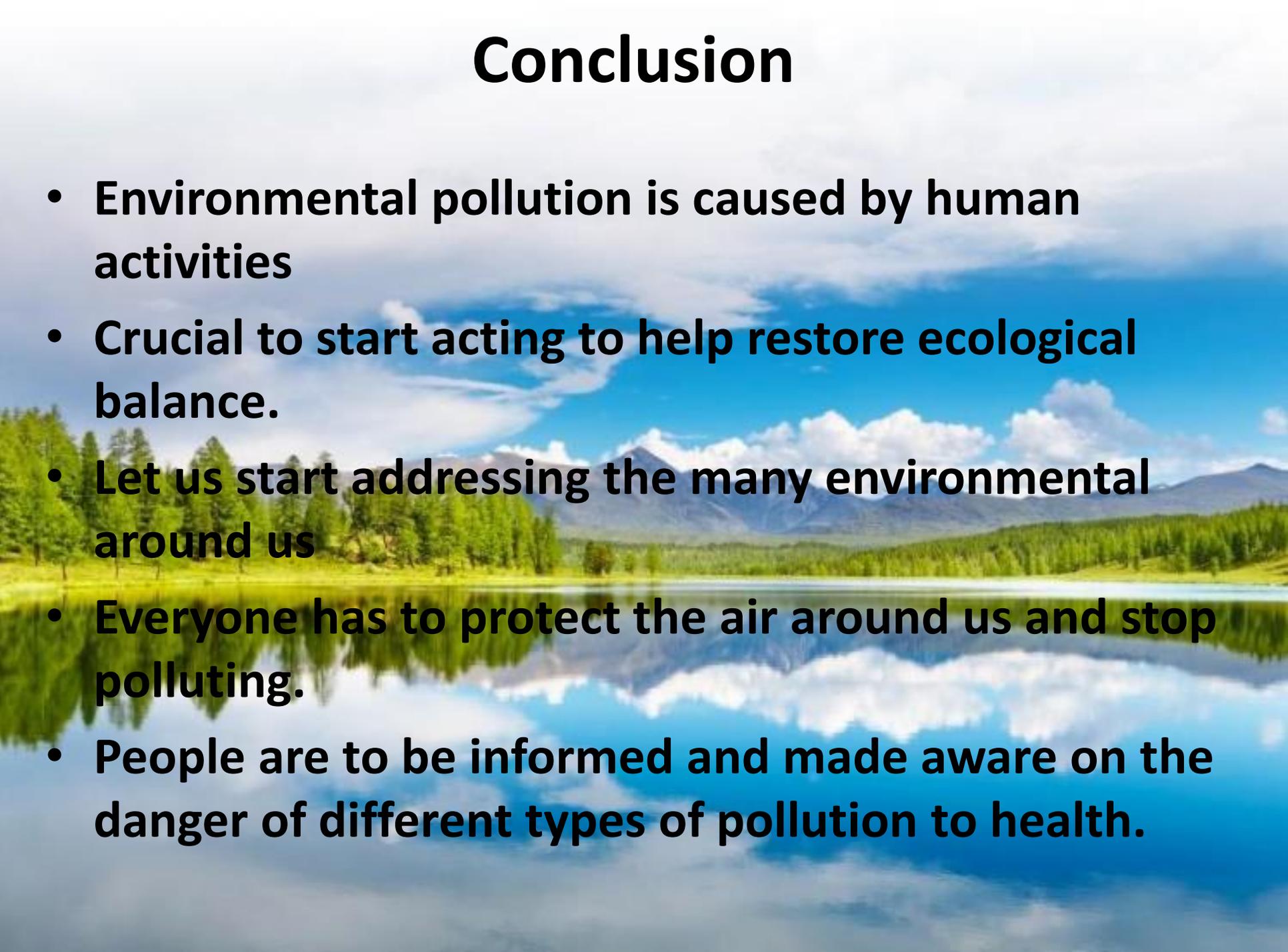
In 1998, nearly eight of 100 15-year-olds had significant lung deficits.



By 2011, only about 3 1/2 of 100 15-year-olds had significant lung deficits.



Conclusion

- **Environmental pollution is caused by human activities**
 - **Crucial to start acting to help restore ecological balance.**
 - **Let us start addressing the many environmental around us**
 - **Everyone has to protect the air around us and stop polluting.**
 - **People are to be informed and made aware on the danger of different types of pollution to health.**
- 
- A scenic landscape featuring a calm lake in the foreground that perfectly reflects the sky and the surrounding environment. The sky is a vibrant blue, filled with soft, white clouds. In the middle ground, there is a dense forest of green trees. In the background, a range of mountains is visible, with one prominent peak. The overall scene is peaceful and natural, serving as a backdrop for the text.

Glimpse of a Polluted Future

*Where are the birds that used to dot the sky?
They're not here anymore, and I have to wonder why.*

*Where are the fish that used to swim in this stream?
I can't see them anymore. What does that mean?*

*Where are the frogs that used to croak around this lake?
I can't hear them anymore. There must be some mistake.*

*I wish there was a clock whose hands I could rewind.
We might have saved these creatures if we'd just had more time.
Time to make people see how we're damaging our Earth,
Time to realize what it all was truly worth.*

*But the animals are disappearing at an alarming rate.
If we don't finally band together, it may really be too late.*



*Let us be committed
and start to take steps
to protect
the water we drink,
the air we breathe,
and
the soil we use
to grow our food.*

Thank you