

For the sake of our children globally



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Cert in Global Planetary Health

Member Royal Coll of Paed Climate change committee

Founder of WASUP (2017)

Deputy Lieutenant to Her Majesty

Consultant Paediatrician

Freeman of Borough of Walsall

Acknowledgements

- **Lancet Countdown**
- Planetary Health Alliance
- UK Health Alliance
- **Royal College of Paediatrics and Child Health**
- ISOS – International Society for Paediatrics and child Health
- **WHO**
- **UNESCO**
- Aim High Earth (climate Scientists)
- Soil Food web school



'Every child born will be affected'

Planetary Health has 9 Boundaries

Global wildlife decrease 70% 1
in 50 years.

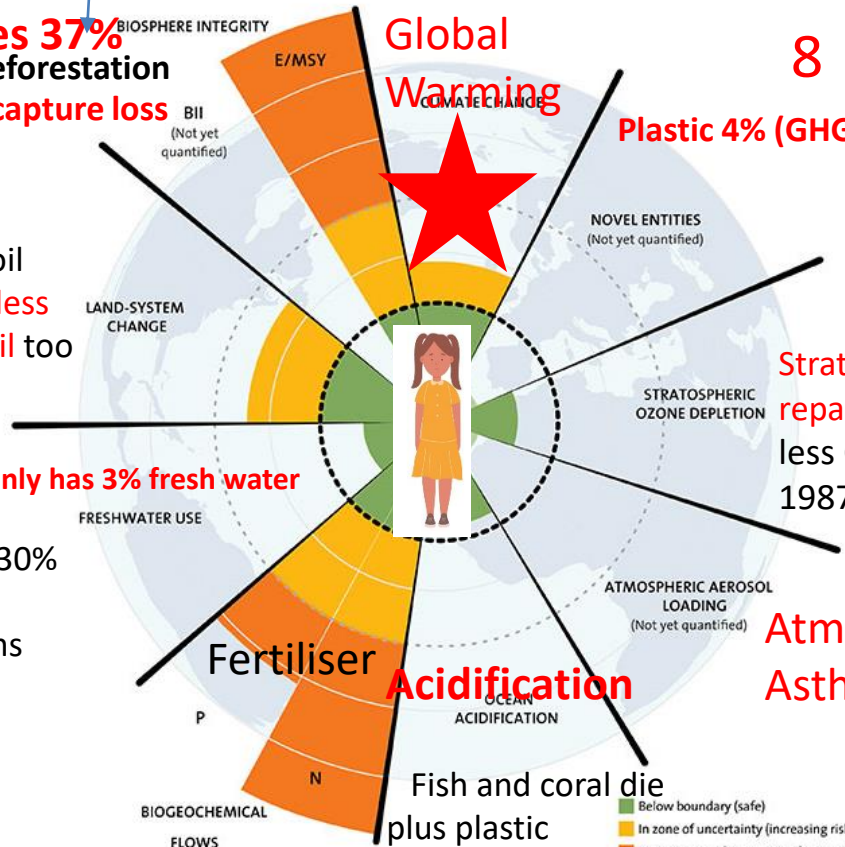
Bees 37%
Deforestation

Carbon capture loss
BII (Not yet quantified)

Deforestation - Soil
Degradation/erosion - less
carbon capture from soil too
Herbicides
/pesticides

World only has 3% fresh water
Eutrophication
70% glacier Peru -30%
gone in 10years
No water - no farms
around Lima

Fertilisers



Global Warming

8

Plastic 4% (GHG)

Safe zone

Danger Zone

Stratospheric ozone 2030 -
repaired -2030 - repaired-
less CFC's refrigeration -
1987 Montreal protocol

Atmospheric aerosols
Asthma devices/refrigeration

Acidification

Fish and coral die
plus plastic
Costal protection.

65% River Dolphins
have gone!

5

Why talk about Children

The health of children is yet not in the focus of policy makers

- Quarter population = 2.35bn - children
- Health burden of climate change on 99% of < 5 year old **in countries that produce less than 10% of gases.**
- 1m children die from respiratory problems **from indoor air pollution**
- Climate Change is also a **child's right issue** for clean Air, clean water and nutritious food

But a child does not have a voice in these environmental changes



Environmental impact on just one species



Pre-pregnancy – **disruption** of reproductive potential and pregnancy

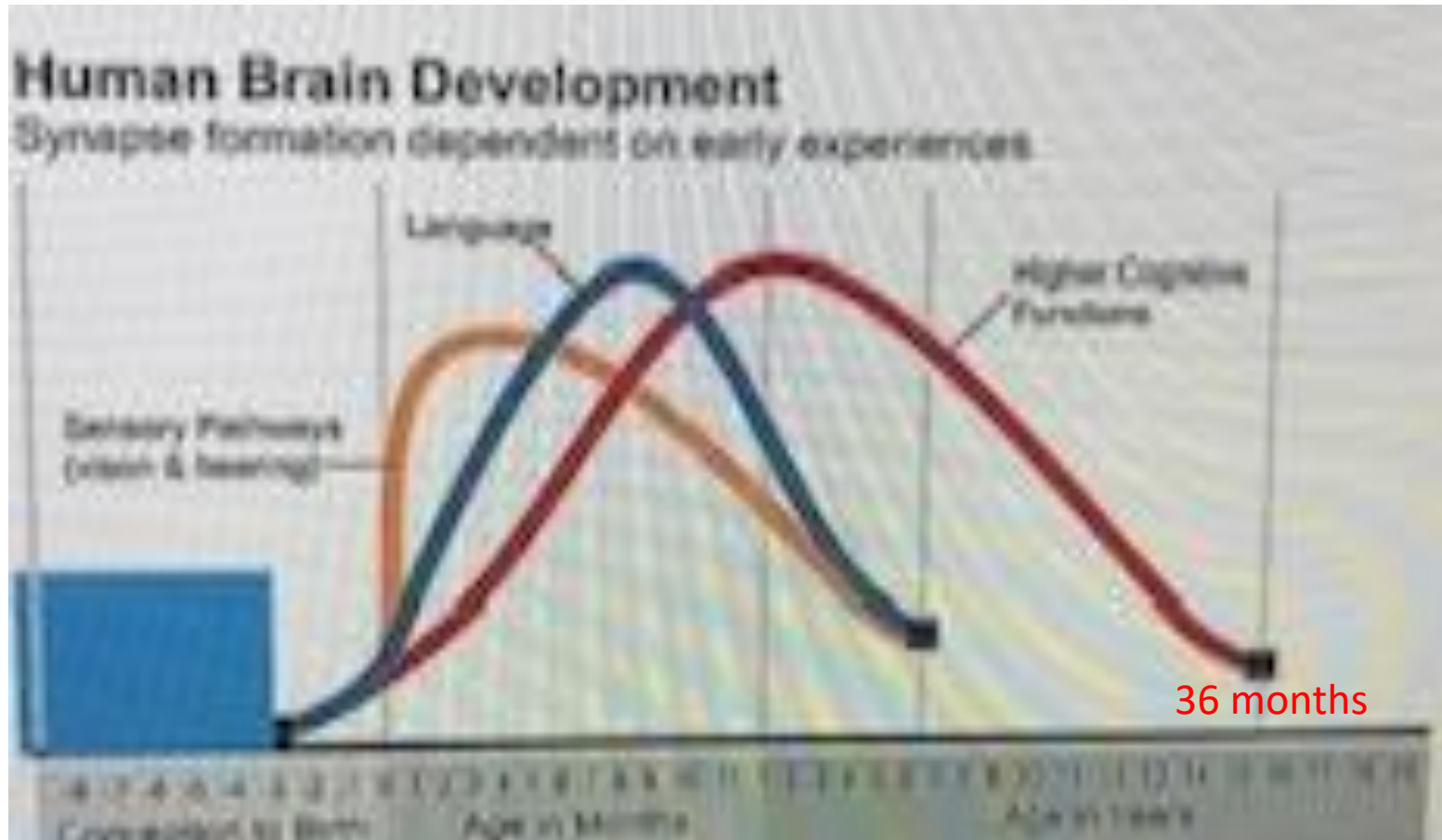


- **Ovarian dysfunction**
- Pubertal timing
- Menstruation/cyclicality
- PCOS
- Endometriosis
- Time to pregnancy loss
- **Sperm count**
- **Pregnancy outcomes**



- **Psychological** vulnerability
Traumatic events – impact on mental health
- **Physiological** vulnerability:
Suppressed immune system, impact of heat on **high output circulation/BP**. Greater impact on pregnancy related medical conditions – such as diabetes.
Once the child is born...

The first **1000 days** are of special importance –
the newborns breathe the same air



Sensory Pathways

Language development

Higher cognitive functions



What makes children more vulnerable

Life long exposure

80% of lung air sacs develop after birth

Higher metabolic rate, respiratory rate

(critical periods of development)

Running around

Immature sweating/ Large surface area -**absorb heat**/short **(car exhaust)**

Immature immune system

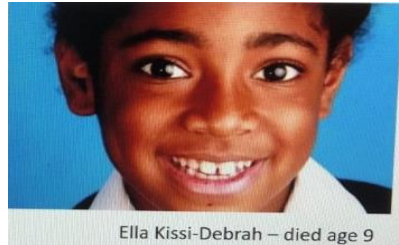
immature behaviour (**water and heat**)

**So all the above are impacted by heat
and Indoor/outdoor environmental air pollution**



Climate change and air pollution caused by the same thing – burning fossil fuels

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

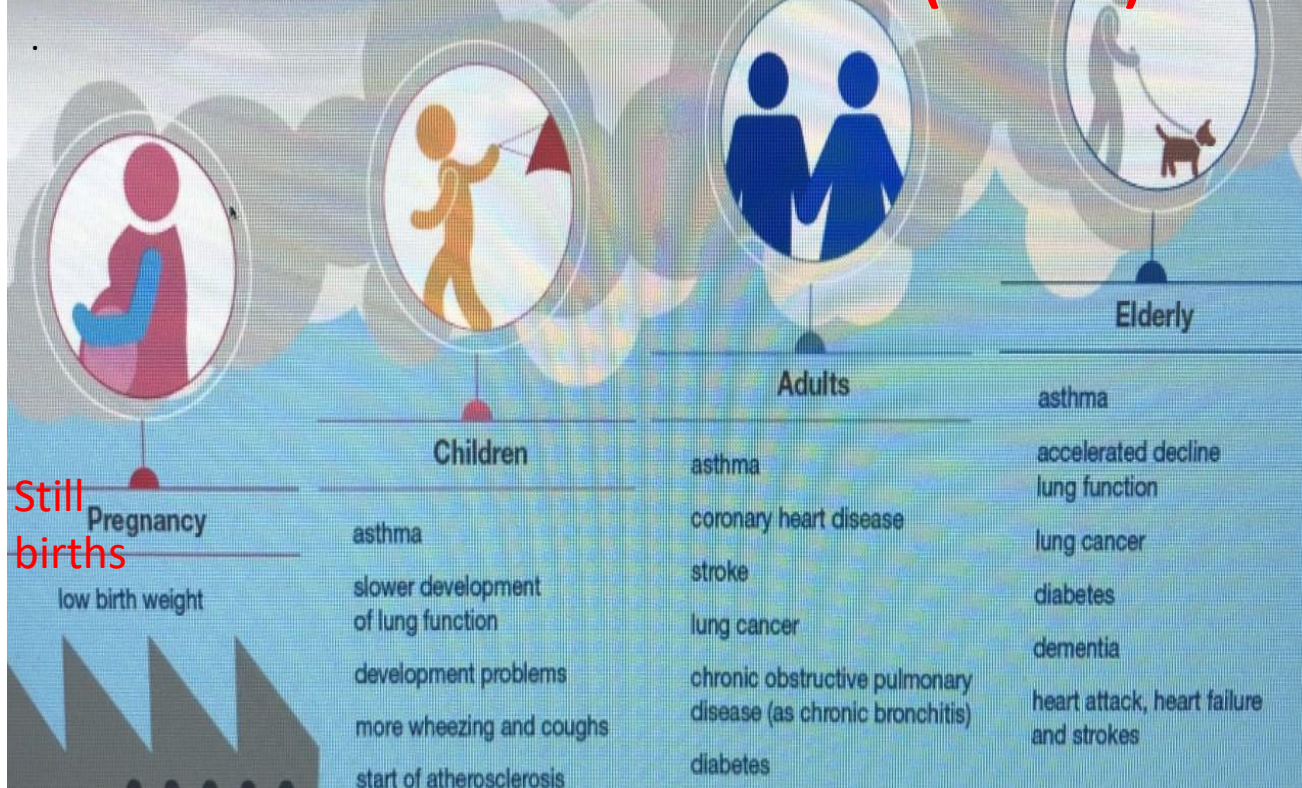


Babies breathe same air

- Nitrogen dioxide
- Sulphur dioxide
- Low level Ozone
- Carbon monoxide
- Volatile hydrocarbons
- Particulate: <2.5 microns

Air pollution affects people throughout their lifetime

NOTE: Indoor pollution is X5 outdoor pollution and can occur in non urban areas (UK too).

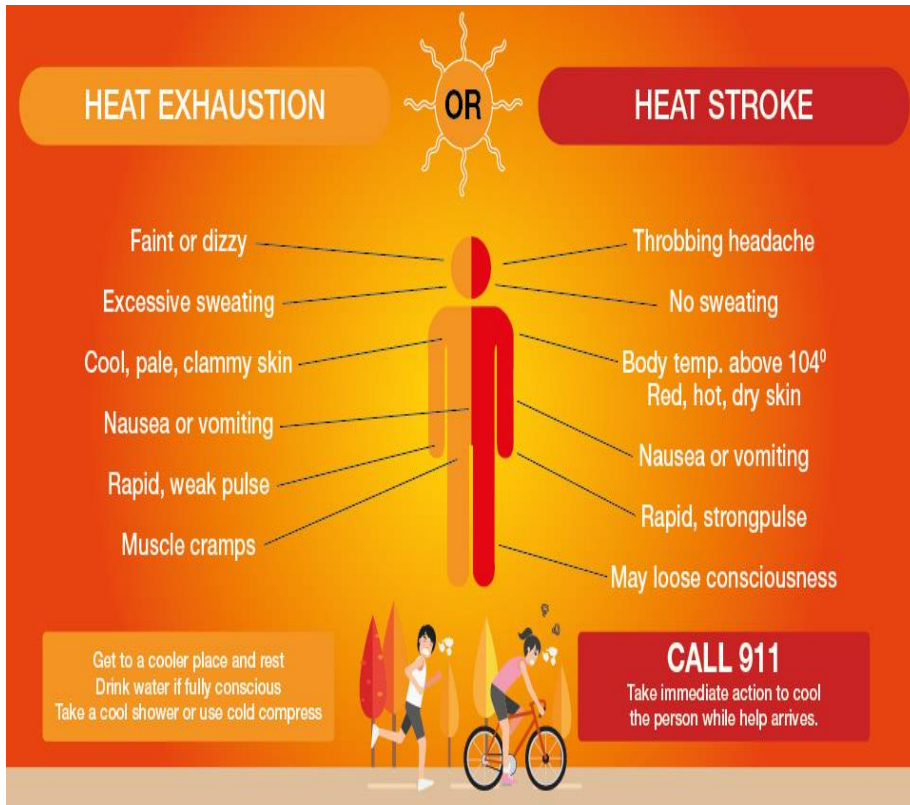


Coal and gas for cooking and heating



Impact of heat – **headaches and loss of concentration** affect schooling

Large surface area compared to weight



HEAT EXHAUSTION OR **HEAT STROKE**

HEAT EXHAUSTION symptoms:

- Faint or dizzy
- Excessive sweating
- Cool, pale, clammy skin
- Nausea or vomiting
- Rapid, weak pulse
- Muscle cramps

HEAT STROKE symptoms:

- Throbbing headache
- No sweating
- Body temp. above 104°
- Red, hot, dry skin
- Nausea or vomiting
- Rapid, strong pulse
- May lose consciousness

Get to a cooler place and rest
Drink water if fully conscious
Take a cool shower or use cold compress

CALL 911
Take immediate action to cool the person while help arrives.

OBSESITY / DIABETES

DIABETES

• Temperature increase by 5C increase admission of diabetic patients by 6%

• Air pollution leads to an increased diabetes prevalence

• Heat waves reduce physical activity of children and result in diminished glycemic control

• Heat influences insulin medication

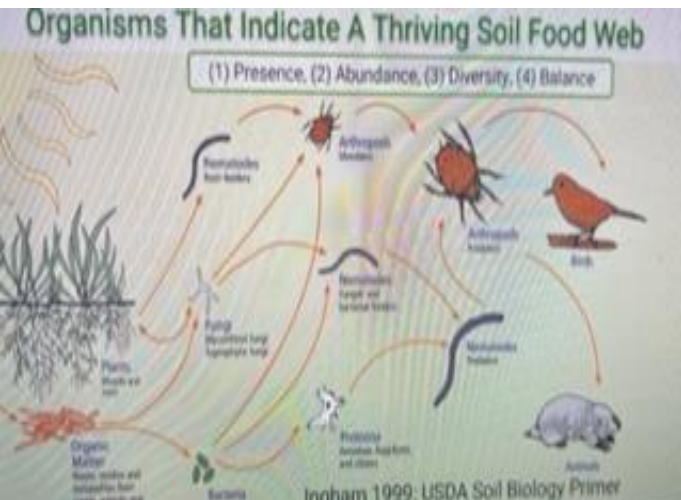


Soil degradation and water eutrophication

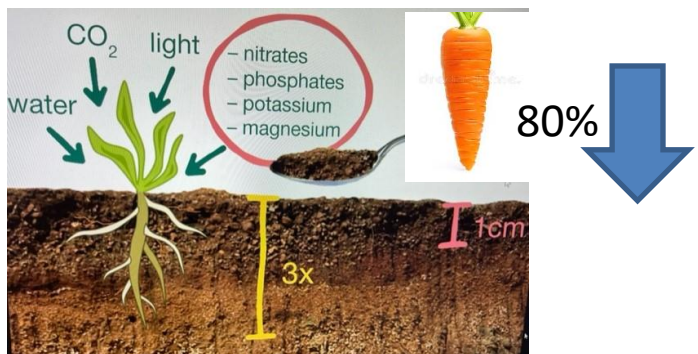
(800 children die per day) 2019 WHO

**Protozoa bacteria fungi
nematodes destroyed**
by monocropping/floods
soil erosion/Excessive ploughing

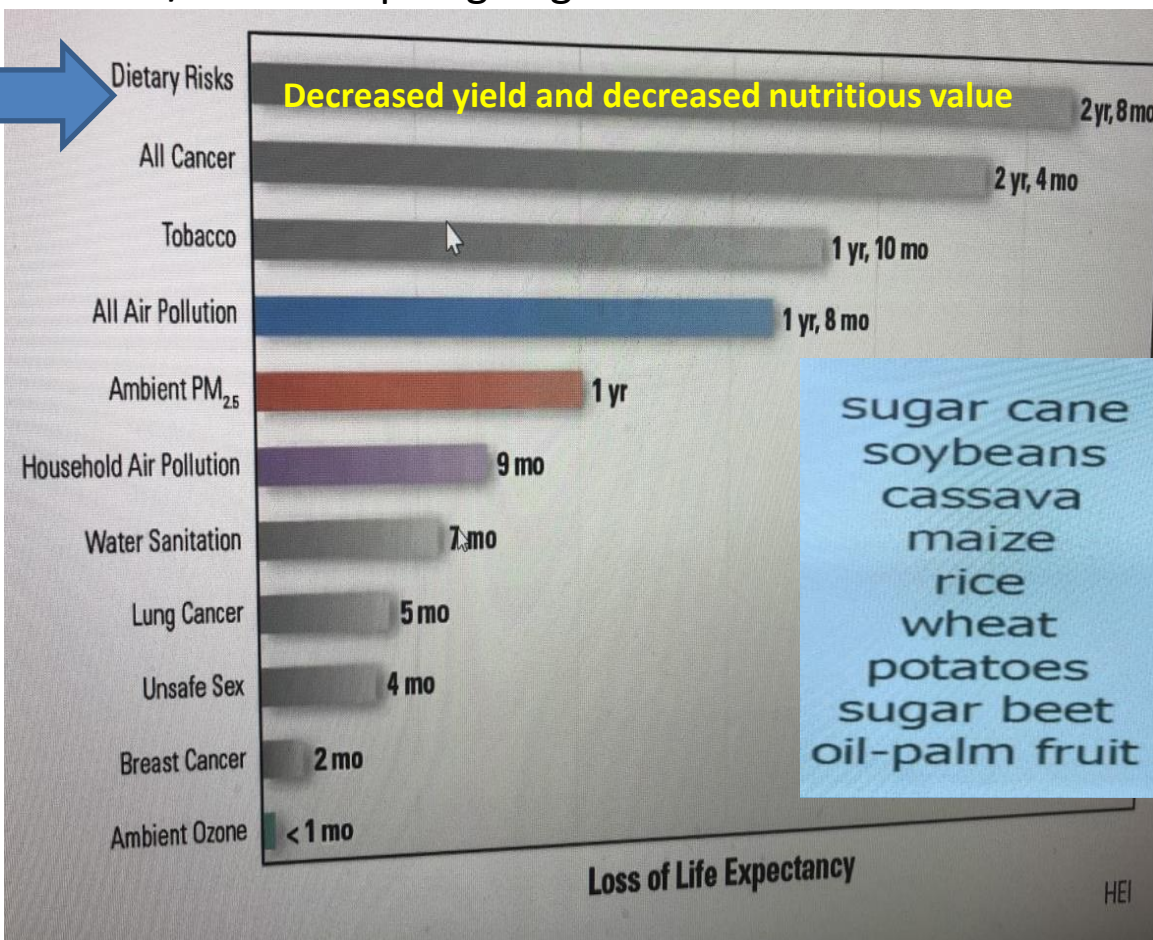
From 1981-2019 crop yield potential for **maize** (5.6%), **wheat** (4.8%), **soyabean** (4.8%) and (1.8%) **rice** has consistently followed a downward trend



**Soil food web part of
Wood Wide Web: WWW**



Excessive Ploughing



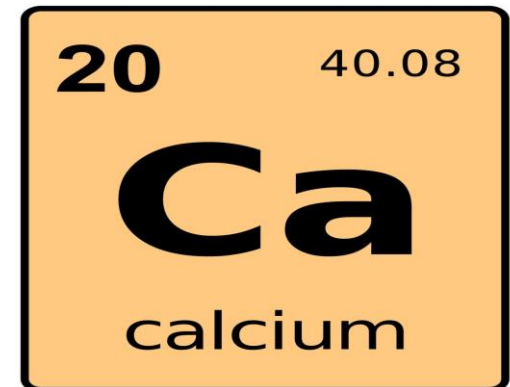
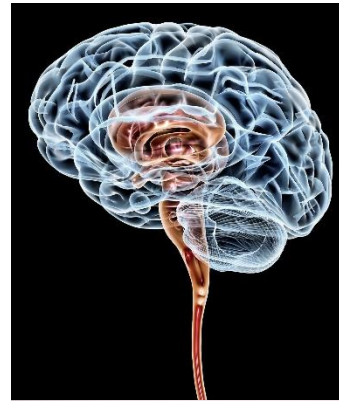


In addition to Soil degradation impacting on **nutritional value** and decreased yield fish nutritionally important **2bn people survive on fish daily globally:**

>80% of fish in the Nile have microplastic

Key nutrients in Seafood affected by toxins and plastic:

- 1. Long chain Omega 3 Fats-**
- 2. Iodine-** thyroid function.
- 3. Vitamin D-** immune system and bones.
- 4. Iron-** for blood/development
- 5. Calcium, Zinc etc -** other bodily functions



Floods/Fires.

Drought, land degradation

SYSTEM DISRUPTION

- Fresh water Contamination
- Sewage, industrial waste,
- salt water
- Electricity ; Transport
- Community disruption
- Health care overwhelmed

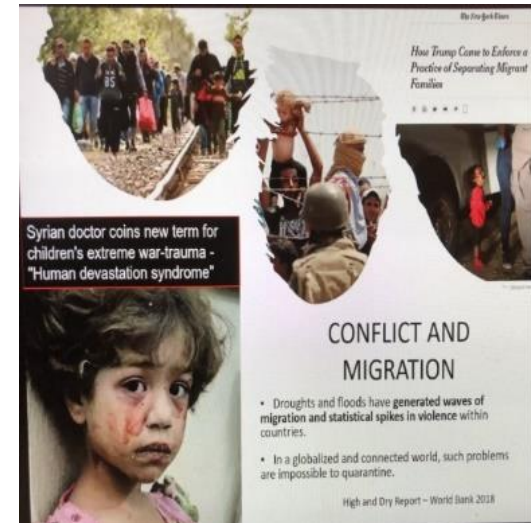
Food insecurity

Loss of land -> a

**Solastalgia -
Eco distress –
children and parents**

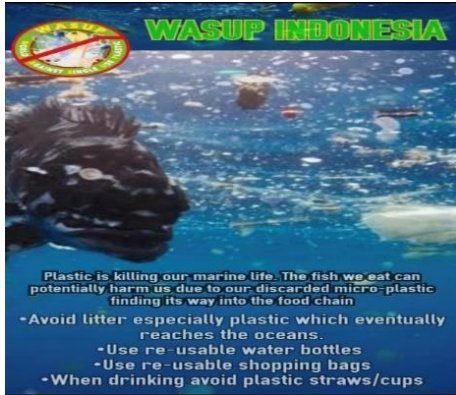
Suicide of some adults impacting on lives of the children

Example 2022 Pakistan floods



Flight and **migration and urbanisation. 3m children starving** after 2022 floods in Pakistan

WASUP – Goes Global – 56 countries



Sierra Leone

LOCAL NEWS

By Alhaji Haruna Sani

The Chief Pan African Ambassador of World Against Single-Used of Plastic (WASUP), who also doubles as Executive Director, Advocacy Network Against Irregular Migration, Sheku Bangura has launched an awareness raising campaign against the use of single-used plastic, which he said remains a serious threat to humans, animals and environment in Sierra Leone.

WASUP launched the awareness campaign on Thursday April 19, 2022, during a press conference organized at their head office, 3 Bai-Bureh Road – Ferry Junction in Freetown.

The event attracted the presence and participation of newsmen, some local Non-Governmental Organizations (NGOs) and other international partners via zoom meeting.

Giving a background about WASUP, Wurie Mamadu Tamba Barrie, Pan African Secretary and Communications Lead, said WASUP is a British organisation founded by Professor Abdul Rashid Gatrad OBE in 2017 and was launched on the 23rd January 2019 at Mano Hospital.

He added that WASUP is about educating, raising awareness through

WASUP mounts awareness on the dangers of single-used plastic

meetings, animation productions, posters, videos talks, community cleaning, tree planting and more.

He said Africa is going to use the following among others to raise awareness in all sectors of the community-schools, businesses, places of worship etc. through talks events and the social media, educate children in schools about the dangers of plastic and teach them about recycling, litter picking both in streets and the waterways by all sectors of the community, putting pressure on manufacturers and supply chains to use less plastic in their packaging.

He said 22 African countries platforms have been set up including Sierra Leone, South Africa Zimbabwe, Lesotho, Ghana Liberia, Guinea, Nigeria, Cote D-voire, Kenya, Zambia, Algeria, Togo, Uganda Tanzania, Ethiopia, DR Congo, Congo Brazzaville, Gambia and Burkina Faso Burundi and Senegal.

The Chief Pan African Ambassador of WASUP, Sheku Bangura said they will be launching WASUP Africa through introduction letters to MDAs, embassies, donors, resource mobilization, awareness raising & education, policy advocacy & dialogue. He said by 2025 plastic in the ocean



Sheku Bangura, Chief Pan-African Ambassador of WASUP and Wurie Tamba Barrie Secretary General WASUP

will double and that by 2050 plastic in ocean will weigh more than fish - a 500 increase in weight of plastics.

The Chief Pan African Ambassador explained to newsmen that worldwide over 300 million tons of plastic is produced every single year, half of which is single-used plastics.

"Plastics do not fully decompose and instead just continually break down into smaller and smaller pieces called micro plastics. These micro plastics pose a huge risk to wildlife as they are extremely difficult to clean up. Every piece of plastic ever created still exists on our planet today," he said.

He said their campaign is pegged on four principles which included reduce - reduce the use of single-used plastic refuse - choose to use re-usable plastic refuse - avoid the use of single-used plastics and recycle - use plastic that can be recycled.

He alluded that not only is plastic estimated to kill millions of marine animals and seabirds each year, but it's also contaminating seafood that humans have relied on for millennia.

"Plastics are found in the lungs of animals' guts. He affirmed that addition to plastic also has negative impacts on the climate.

22 African countries



پلاسٹک کے خلاف اعلان جنگ

پلاسٹک کے نقصانات

- پلاسٹک کے ان پیرسٹیکبل ٹکڑوں کی وجہ سے ماحول پر ہرجا ہرجامی
- پلاسٹک کی آلودگی سے ہمارے ماحول پر ہرجا ہرجامی ہے
- زمین پر پڑے ہوئے پلاسٹک کی ٹکڑوں سے جانوروں کو آلودگی ہوتی ہے
- اس کے نتیجے میں جانور مر جاتے ہیں

انسانی نقصانات

- پلاسٹک کے ٹکڑوں کی وجہ سے ماحول پر ہرجا ہرجامی ہے
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ماہرین کا کہنا ہے کہ پلاسٹک کی آلودگی سے ماحول پر ہرجا ہرجامی ہے۔
پلاسٹک کے ٹکڑوں سے ماحول پر ہرجا ہرجامی ہے۔

WASUP Queen MISS THE EDUCATORS

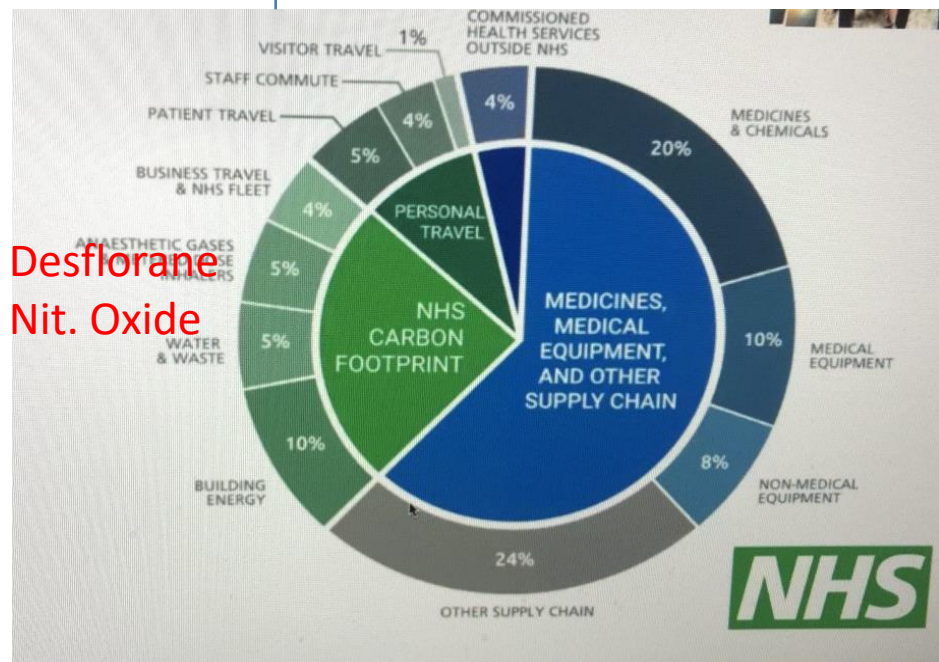
میس جینیفر

G.P.I NEWS

NHS 5.6% emissions. Now NHS Net zero programme

Sustainability in the **medical curriculum**

Sources of emissions in the NHS



WATER SHORTAGES AND DROUGHT



96 Patients **dialysed**. **500 litres per person**
 Goal to recover 75% of water through suitable technology



HFC gas in the cannister

73m asthma inhalers used in the UK

One device: carbon footprint=200miles of an average petrol car



World has only 3% Fresh water

HEAT

They have no chance!!

HEAT

HEAT

Pollen allergenicity

Air pollution (eg: Ozone)

Deforestation

High rainfall events

Sea level rise

Plastics and fertilizers increased temperature

Increasing Vector borne diseases

Headaches/loss of concentration

Respiratory disease
Organ growth

Bacterial disease
Diarrhoea

Injury

Water Chemically poisoning

Malaria/dengue

Deforestation

Ecosystems collapse

Soil degraded

Heatwaves

Drought

Fires

Poverty

Mental health impacts

Reduced physical work capacity
Obesity/Diabetes

Injury

Starvation

Mass migration

Abuse/trafficking

WAR

Poverty

Loss of habitation

Loss of crops



No where to run – WHAT about PANDAMICS

PANDEMICS

75% OF ALL EMERGING INFECTIOUS DISEASES ARE ZOO NOTIC

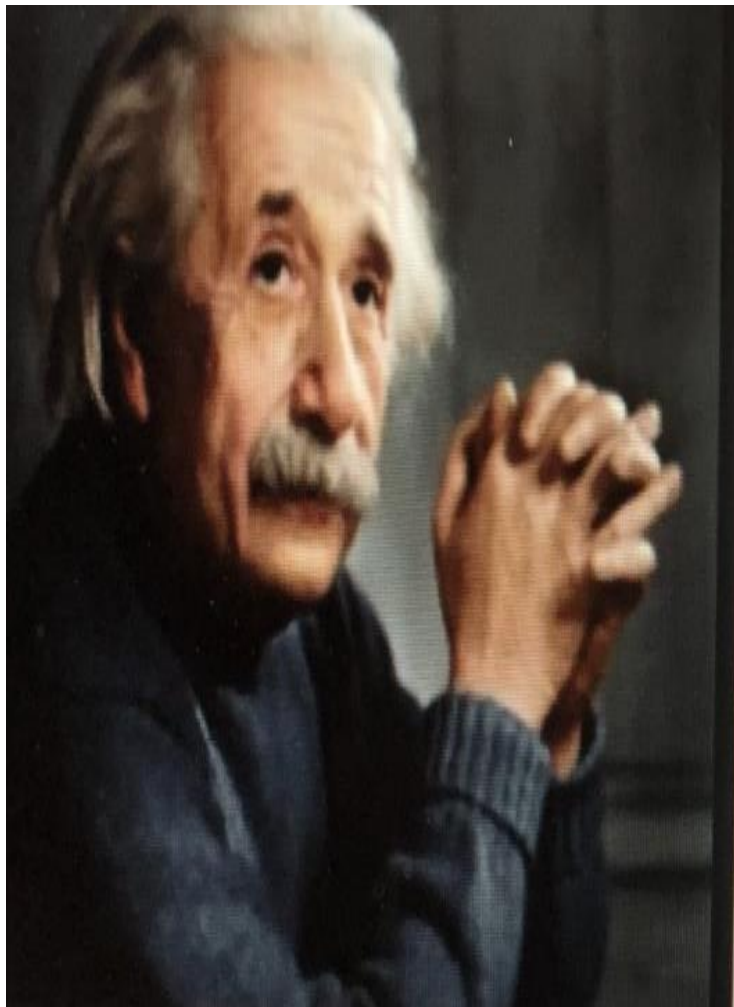
Why?
Why?
Why?
Why?
Why?

1. Climate Change
2. Intensive Agriculture
3. Land Use Change
4. Increased demand for meat
5. Population increase
6. Globalization
7. Exploitation of wildlife

Animals and humans coming closer – hunger poverty then eating of unusual animals

So – in summary Climate Change
impacting on us and our future
generations in 10 words

- **It's real ----- Happening now**
- **It's us ----- We have created this through burning fossil fuels**
- **Scientists agree --- 99% do**
- **It's catastrophic ---Harming health food water land air**
- **There's hope----- clean renewable energy is the answer/ reforestation**



*The world will not be
destroyed by those who
do evil, but by those who
watch them without
doing anything.*

-Albert Einstein

BUT we still have ink in the pen to change the ending.

www.wasupme.com

www.miatwalsall.org.uk

profgatrad@wasupme.com



Super Typhoon Haiyan



PAKISTAN

INDONESIA

INDIA



**ایلا بسٹک کے خلاف
اعلان جنگ**

پلاسٹک کے نقصانات

- پلاسٹک کے ذریعے ہونے والی آلودگی کو روکنے کے لیے
- پلاسٹک کی اشیا کی سیدھے ہمارے ہیٹھ لے جاگ ہے چاہے
- ہیں جو کہ صرف انسانوں بلکہ جانوروں پر تیروں اور کھیتوں
- کے لئے بھی ہوا ہیں۔

احتیاطی تدابیر

- پلاسٹک کے ذریعے ہونے والی آلودگی کو روکنے کے لیے
- استعمال کرنے والے پلاسٹک کی اشیا کو سیدھے
- پلاسٹک سے بچنے کے لیے پلاسٹک استعمال کرنے سے بچنا
- پلاسٹک کے ذریعے ہونے والی آلودگی کو روکنے کے لیے
- پلاسٹک کے ذریعے ہونے والی آلودگی کو روکنے کے لیے

ماہیاتی اعلیٰ چیمپئن ایسوسی ایشن W.A.S.U.P پاکستان
ڈائریکٹر برائے ماحولیات پاکستان ایسوسی ایشن W.A.S.U.P



WASUP INDONESIA

Plastic is killing our marine life. The fish we eat can potentially harm us due to our discarded micro-plastic finding its way into the food chain

- Avoid litter especially plastic which eventually reaches the oceans.
- Use re-usable water bottles
- Use re-usable shopping bags
- When drinking avoid plastic straws/cups



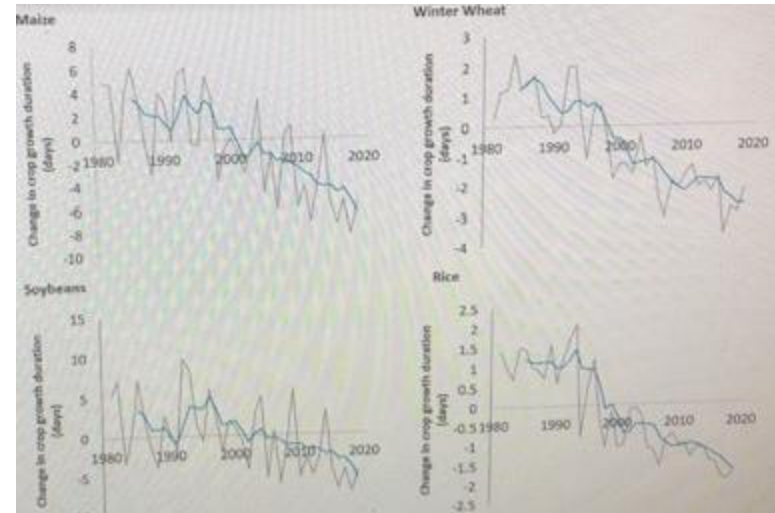
Food security – nutritional deficiencies and yield

sugar cane
soybeans
cassava
maize
rice
wheat
potatoes
sugar beet
oil-palm fruit

9 commonest foods feeding the world



From 1981-2019 crop yield potential for **maize** (5.6%↓), **wheat** (4.8%↓), **soyabean** (4.8%↓) and **rice** has consistently followed a downward trend

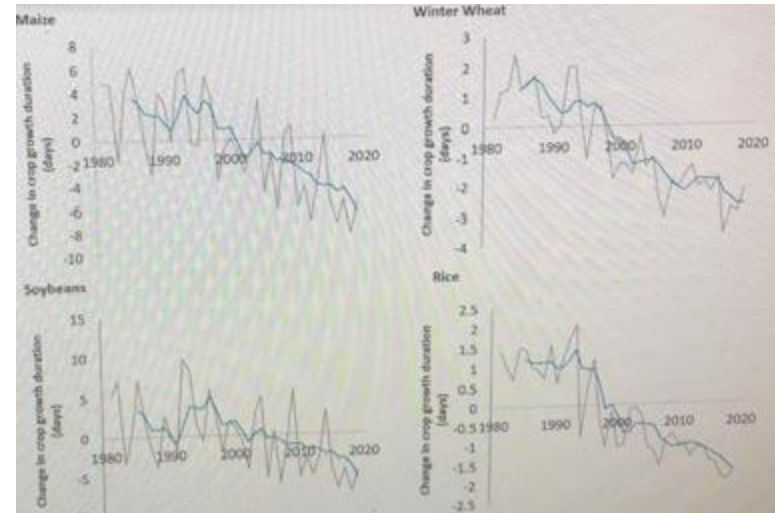


• Maize and soybean down <82% in next 80

Food security – nutritional deficiencies and yield

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