

Part 1 | Opening & context (0:00–7:00)

[0:03–1:44] Host intro & speaker bio

- UCL Lunch Hour Lecture: “From threat to opportunity: putting health at the centre of our response to climate change.” Host **Prof. Audrey Prost** introduces **Dr Marina Romanello** (Executive Director, **The Lancet Countdown**). Q&A via Slido at the end. Romanello is joining live from the **COP venue**.

[1:50–6:18] Romanello's opening & what the Lancet Countdown is

- This talk draws on the **latest annual report released weeks ahead of COP**. The Countdown started in **2016** (post-Paris), extending the Lancet Commission's judgement that **climate change is “the largest global health threat of the 21st century,”** yet a “**largest health opportunity**” if addressed through a health lens.
- **Why a yearly report?** To measure how mitigation/adaptation affect **health and wellbeing**, and to maximise **health co-benefits** in policy.
- **Who and what is tracked?** An independent international collaboration (about **57 institutions, 6 regional hubs**), led by **UCL IGH** and working with **WHO**, reporting **before each COP** on **150+ indicators**: climate **hazards** → **exposures** → **health impacts, adaptation readiness** (health-system preparedness, protection of vulnerable groups), **mitigation & co-benefits, health economics**, and **societal attention** to a **health-first narrative**.

[6:38–7:00] This year's top signal

- Across the “hazards–exposures–impacts” indicators, **about two-thirds** hit **worrying new records in 2023**.
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Part 2 | Heat, physical activity, labour & income (9:44–16:33)

[9:44–10:20] Heat-related mortality in older adults

- Since the 1990s, **heat-related deaths among people ≥65** have increased by **167%**, driven predominantly by **warming** rather than demographics alone.

[10:35–12:11] Shrinking window for safe physical activity

- In **2023**, people faced **1,512 hours/year** when even **light outdoor activity** carried **at least moderate heat-stress risk** (\approx **+30% vs 1990**). Impact: higher injury risk during exercise and a **compressed safe-activity window**.

[12:19–15:35] Lost labour capacity & income

- In **2023**, **512 billion potential work-hours** were lost to heat exposure (\approx **+50% vs 1990s**), with **agriculture** hardest hit as workers must rest more or halt outdoor tasks.
- This cascades into **local food supply** and **household livelihoods**: estimated **US\$ 835 billion** potential income lost in 2023; **low-HDI countries** lose **~7.6% of GDP** on average.

[15:54–16:33] Worsening food insecurity

- Compared with 1981–2010 baselines, by **2022** there were **151 million** more people experiencing **moderate/severe food insecurity**.

Part 3 | Extremes: precipitation, floods & drought; infectious diseases (16:43–21:49)

[16:43–17:41] More extreme-precipitation days

- Over the past decade, **~61% of global land** saw an **increase in extreme-precipitation days**, amplifying flood risk and straining infrastructure (with examples such as Valencia, southern Brazil dam failures, and events across Asia/Africa).

[17:47–19:49] Floods and droughts co-occurring

- **Floods**: direct mortality (drowning), contamination-related **infectious disease**, and **toxic exposures** rise.
- **Droughts** are also increasing: in **2020**, **34.8% of land** experienced **at least one month of extreme drought** (vs **~15% in the 1950s**); the Horn of Africa's drought and famine have been **attributed to climate change**.

[19:56–21:37] Shifting infectious-disease geography

- **Dengue** suitability (Aedes vectors) has risen **+46.3% since the 1950s**.
- **Vibrio** (coastal waters) suitability has expanded; for **2023** an estimated **692,000** Vibrio infections are cited.
- Crucially, these risks **stack** with heat and extremes in the **same places at the same time**, overloading **health systems**.

Part 4 | Why the “fire keeps being fuelled”: forests/agriculture/diets (22:41–25:37)

[22:41–23:47] Loss of natural carbon sinks (tree cover)

- Since **2001**, the world has lost **459 million hectares of tree cover** ($\approx 11.5\%$). Forest loss undermines **carbon uptake** and **temperature control**, worsening **health risks**.

[24:01–25:37] Agriculture & diets

- **2016→2021**, agricultural emissions rose **+2.9%**, driven by **red meat and dairy**. **Deaths from excess red-meat intake** increased (from **14** → **16** per 100,000).
 - A **healthy, low-carbon diet** could **avoid ~11.2 million deaths per year**.
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Part 5 | Energy system, energy poverty, household air pollution; fossil subsidies (25:57–33:55)

[25:57–27:53] Energy system & access

- The energy sector generates **> two-thirds of GHGs**; **2023** energy-related emissions hit an **all-time high** ($\approx +1.1\%$ vs 2022).
- Meanwhile **~2.4 billion** people still rely on **dirty fuels/inefficient stoves**; **~30%** of households burn **biomass**; in **low-HDI** settings **~92% of energy** comes from **biomass**.

[28:26–29:55] Energy poverty → household air pollution

- Energy poverty harms cold chains, medicines, safe food storage, education and connectivity. **Household PM2.5 from solid fuels** caused **~2.3 million deaths in 2020** (65 countries), with **rural burden** higher.

[30:27–32:23] Fossil subsidies “crowd out” health

- In **2022**, **84% of 86 countries** subsidised fossil fuels, totalling **US\$ 1.4 trillion**; in **~30%** of countries, **subsidy totals exceeded the entire annual health budget**. These funds **can and should** be **redirected** to clean-energy, **health-positive** measures.
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Part 6 | Fossil expansion, stranded assets, declining political attention (33:01–37:06)

[33:01–34:16] Expansion plans incompatible with 1.5 °C

- **114 major oil & gas companies** plan further expansion; their **to-2040 emissions** are **incompatible with 1.5 °C** (about **189%** of a 1.5-consistent

pathway).

[34:32–35:31] Stranded assets & mis-investment

- **Coal power stranded assets** projected at **US\$ 164 billion (2025–2034)**; in **2023**, **37%** of global energy investment still went to **fossil fuels**. **Readiness for a just transition** is weakest in **low-HDI** countries.

[36:26–36:57] Political salience slipping

- At the **UN General Assembly**, leaders referencing **health–climate** links **fell** from **~50% (2022)** to **~35% (2023)**.
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Part 7 | Positive signals: clean energy, jobs, air pollution, health systems, education/research (37:06–41:58)

[37:19–38:31] Energy & jobs are shifting

- **Clean-energy adoption** is accelerating; **direct jobs in low-carbon energy** now exceed those in fossil fuels.

[38:04–39:00] Air-pollution mortality declines & rapid health gains

- **2016–2021**, **air-pollution deaths from fossil fuels** fell by **~7%**; **59%** of that decline came from **coal reductions**. Faster fossil phase-down and clean-energy scale-up could **avoid ~4 million** additional premature deaths (**indoor + outdoor**).

[39:14–41:58] Health-sector mobilisation & knowledge systems

- More countries are joining **WHO ATACH**; **health vulnerability/adaptation assessments** rose from **11 (2022)** → **50 (2023)**; countries with **health adaptation plans** jumped from **~4%** → **~43%**.
 - Research output is at a high (but **geographically uneven**, led by high-income countries/China/India). **Public-health education** increasingly embeds climate content.
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Part 8 | Her action list (42:01–44:22)

[42:01–44:22] Concrete asks for negotiations & policy

- Put **health** explicitly at the top of **2025 NDCs**.

- **Redirect fossil-fuel subsidies** (e.g., **US\$ 1.4 trillion**) to measures with **health gains**.
 - Make **health & equity** the core of a **Just Transition**.
 - Build **low-carbon, climate-resilient health systems**.
 - Drive **healthy low-carbon diets, clean-energy adoption** and **health-protective air-quality standards**, plus **safe active travel**. Call for visible advocacy at COP.
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Part 9 | Q&A (1): Mental health, children; “co-benefits” vs core negotiations; net-zero without harming health (44:38–52:03)

[45:05–46:42] Mental health

- This is where **data and surveillance are weakest**, leading to **systematic underestimation**. Health systems are **least prepared** in **mental/psychosocial** support and early warning. An Australian study suggests **+1.2%** in adolescent emergency visits and suicide/attempts **per +1 °C**.

[47:00–48:34] Children & intergenerational equity

- Existing indicators are **not child-sensitive enough**. Risks such as **food insecurity/malnutrition, air pollution**, and **infections** (e.g., **Zika**) affect **children and fetuses** disproportionately. **Today’s decisions** set **lifelong health risk trajectories**—an **intergenerational justice** issue.

[49:46–51:37] Political traction of “health co-benefits” & a health-safe net-zero

- In venues like the **Health Pavilion**, co-benefits are well understood; in the **core negotiations**, they’re **not yet central** (e.g., productivity gains, reduced pressure on health systems).
 - **Paths to net-zero must be health-led**—not “emissions at the expense of health.”
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Part 10 | Q&A (2): Is a “people-centred” narrative appropriate? Costs of inaction & jobs (52:07–56:41)

[52:14–54:08] Should the narrative be people-centred? Yes.

- Romanello **rejects** the claim that a people-centred narrative is unnecessary.

Historically the discourse has been **insufficiently human-centred** (public imagination as a “polar-bear problem”). Placing **health & wellbeing** at the centre **unlocks negotiations** and avoids the false dichotomy of “environment vs people.”

[54:09–56:31] Economics & jobs: inaction costs dwarf action

- The **cost of inaction** is measured in **tens of trillions per year**. The real choice is “**massive losses**” vs “**minimised losses with prosperity**.” Decarbonisation requires **labour-market transition**; expanding fossil is like investing in **Blockbuster—outdated** and building **stranded assets**. She also references a **World Bank** analysis underscoring the **high cost of inaction**.
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Part 11 | Q&A (3): Loss & Damage; large-scale research collaboration; close (56:41–1:00:20)

[56:41–58:02] Loss and Damage (L&D) and “health”

- **Health** is often treated as “**non-economic loss**,” but its **prominence is rising**, especially pushed by the most **vulnerable countries** (e.g., SIDS, parts of Africa). Still **undervalued**, it needs **greater weight** in L&D.

[58:14–59:21] How a 300-researcher network keeps going

- The engine is **impact-oriented science**—data that **translate into action** and conversation with negotiations/policy. That real-world traction sustains motivation and cohesion.