



**Alstonia
Impact**

Climate Change & Reproductive health

December 2024

Executive Summary (1/2)

This report investigates the **challenges and opportunities at the intersection of climate change and reproductive health**

- It focuses on **adaptation**. i.e. coping with effects of climate change, rather than addressing its root causes (mitigation)
- It includes the effects of both **short-term climate shocks** and **long-term changes**
- It examines effects of climate shocks and long-term changes in 2 categories **1) biological effects on health 2) effects on demand and supply of reproductive healthcare service**

Within reproductive health, we define our scope to:

- Include supply and demand of **Menstrual Health, Fecundity¹ (male and female), Contraception and Safe Abortion** services
- Exclude topics namely maternal and neonatal health, NCDs such as cervical cancer, sexually transmitted disease such as HIV

We identified **key challenge groups**:

- **Climate shocks** show a **high impact on reproductive healthcare supply and demand**: In the aftermath of a climate shock, **healthcare centres** and the **supply chains** for reproductive health products and equipment are often **damaged**. This occurs alongside with a **sharp changes** (often due to financial shock) **in demand** for services and products
- **Long-term changes have a high impact on biological aspects of menstrual health and fecundity**: Strong evidence that **long-term exposure to poor air quality** esp. particulate matter and NO₂ has been **shown to reduce fertility in men and women**, and cause Polycystic Ovary Syndrome (PCOS) in menstruating women. Short-term community displacement often translates into poor menstrual health due to poor hygiene in such settings. **More scientific evidence is needed** to establish other linkages
- **Climate shocks** show a **moderate biological effects on reproductive health**: These are mediated via physical trauma through **gender-based violence, heatwaves, or increased child marriages due to financial shocks**. Short-term air and water quality also lead to adverse impacts

1. Fecundity is defined as the potential capacity to produce a live birth, including the production of gametes, fertilization, and carrying a pregnancy to term. It differs from fertility which is the actual capacity for reproduction.

SOURCE: Team analysis

Executive Summary (2/2)

Given climate and reproductive health as a topic is in its early days, very few initiatives at scale exist. **Limited response** from stakeholders has been more generally on climate and health, **not focused on reproductive health**

- **Policy response** from countries is **limited** - very few countries have climate and health in the National Adaptation Plans, even fewer for reproductive health (38 of 119 countries)
- **Implementation** has been **limited**, and **mostly related to legacy disaster recovery efforts**. Some initiatives on implementing **early warning systems and vulnerability assessments** are taking shape. Traditional **disaster recovery/relief funding** are now starting to increase **inclusion of reproductive health services**, most prominently a **cross-UN initiative: Minimum Initial Service Package (MISP) for reproductive health**. **UNFPA purchases contraceptives** and other products **for disaster response**. Some efforts to make **healthcare facilities more disaster-resilient** (due to climate or otherwise) including the **use of renewable energy for powering facilities** during times of disruption
- Initiatives with a **co-benefit for reproductive health** were also found: cleaner indoor air via clean cook-stoves, water security and other WASH efforts help with menstrual health, food security efforts address fecundity/menstrual health, etc.
- **Most donor funding on building partnerships/alliances (not focused on reproductive health)**; some **for scientific research to understand biological links between climate change and reproductive health**; very **limited funding for implementation** in general and for discovering good operating models. Key funders include **Rockefeller Foundation, CIFF, BMGF, Wellcome Trust, and Novo Nordisk Foundation**

The report proposes **3 types of interventions** where funders and non-profits can play a role: **1) Policy and planning support** (e.g. support countries / regions to include reproductive health in National Adaptation plans, gender plans under UNFCCC and other emergency response plans) **2) Implementation** (e.g., design crisis-appropriate/migrant-friendly reproductive health services esp. for safe abortion, contraception; design gender-appropriate areas for displaced communities; capacity building for community health workers; introduce more self-care products and digital health solutions) **3) Evidence building** (e.g. several gaps in science identified), **collaboration** (e.g. set up focused collaborative on climate and reproductive health) **and advocacy**

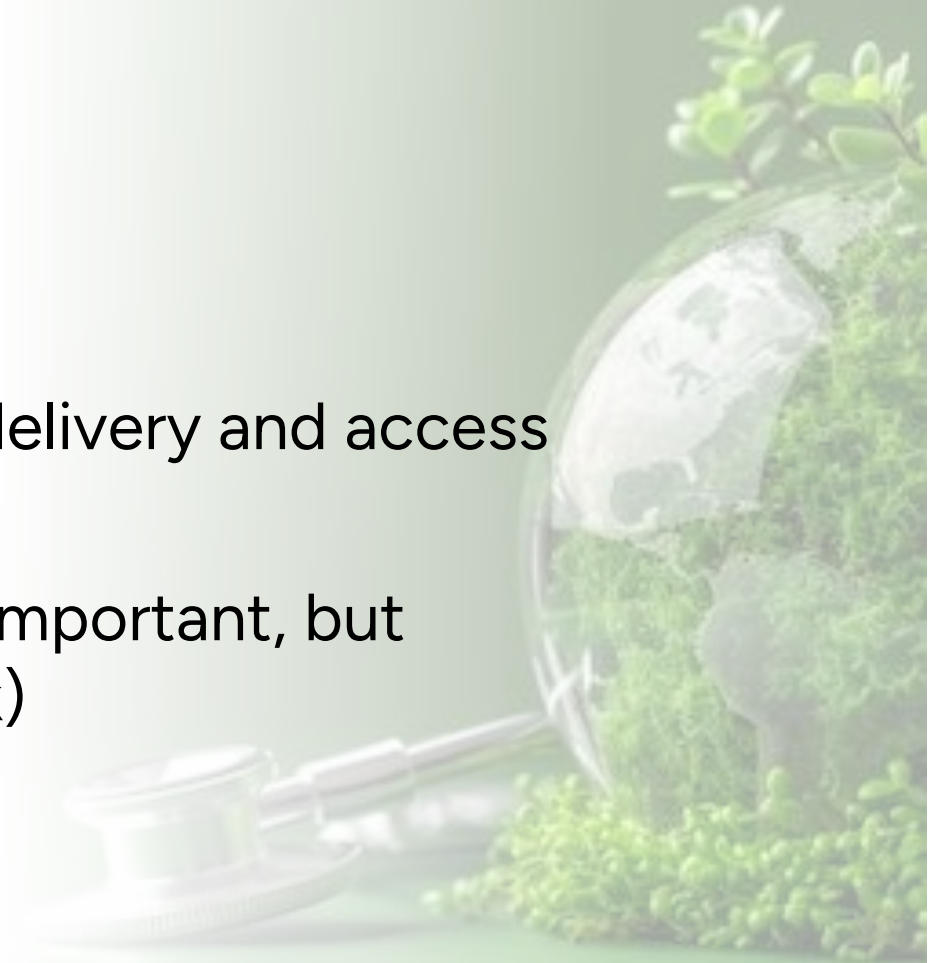
Agenda

- **General framework for Climate & Health**
- Deep dive on Reproductive Health
- About Alstonia Impact



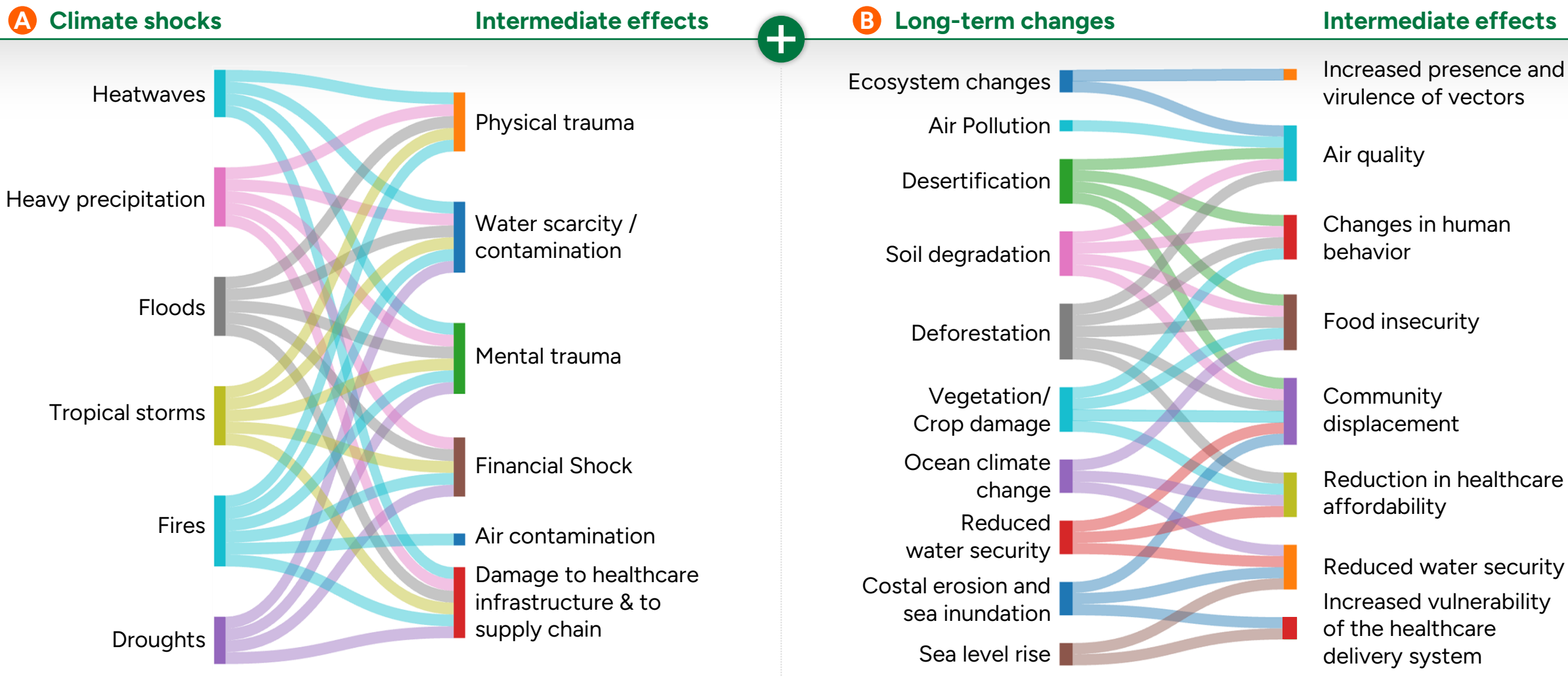
What we mean when we say “Climate and Health” – We are focused on adaptation

- ✓ Climate change affects human health
- ✓ Climate change affects healthcare service delivery and access
- ✗ Healthcare contributes to climate change (Important, but mitigation efforts not the focus of this work)



We defined “intermediate effects” through which different climate shocks and long-term changes can affect health and healthcare

PRELIMINARY



Note: For simplicity, links are shown with no account of the magnitude of the effect

We suggest the following high-level framework to tackle the Climate & Health challenge

Suggested framework

	i Biological effects on human health	ii Healthcare delivery and access
A Climate Shocks		
B Long-term changes		

Further articulation of our framing methodology in our dedicated publication [available here >>](#)



Considerations about framework design

- The **driver of climate change** is the increase of **greenhouse gases** (GHGs) in the environment which, per se, does not have any direct impact on health
- Nevertheless, the consequences of GHG increase can cause events with significant impact on health. We split those events into 2 groups:
 - **Climate shocks**: major disruptive events with clear end and a relatively short duration
 - **Long-term changes**: changes in the environment that, in the short term, seem minimal, but can add up and have major consequences in the medium to long term
- The impact on health can be framed along those 2 dimensions:
 - **Biological Effect**: Effects on the physical and physiological aspects of a concerned health area, including the diffusion and impact of the diseases
 - **Healthcare delivery and access**: Effects on the organisation, coordination, and management of healthcare services, including the distribution of medical supplies and access to healthcare facilities and professionals. We also include changes in demand for services
 - Within this domain, **damage to healthcare infrastructure & to supply chain** is worth a special consideration, given its importance for several health areas
- For the sake of simplicity, these dimensions will be **addressed separately**, but, **in reality, they are all interlinked**, e.g., climate shocks can cause damage with a long-term impact, and damaged healthcare delivery can contribute to spreading new diseases

Agenda

- General framework for Climate & Health
- **Deep dive on Reproductive Health**
 - **Scope definition**
 - Challenges in the Climate & Health intersection
 - Current ecosystem & initiatives
 - Opportunities to intervene
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The following scope was used for our deep dive on reproductive health



What is in

- **Health areas**
 - **Menstrual Health:** Factors that impact the hygiene and physical health in all matters relating to menstruation
 - **Fecundity¹ (male and female):** Factors affecting reproductive health before conception, influencing the probability of conception and successful pregnancy. On the flip side, ability to contracept/abort and post-abortion care is also considered
- Topics affecting these, notably **gender-based violence**, are included
- **Healthcare delivery and access**
 - **Supply:** all that is related to providing healthcare services and information to patients (e.g., abortion services, contraception) and including all required components such as consumables, equipment, etc.
 - **Demand** for services: all that affects the willingness and the ability to access services and products, including their demand



What is out



- **Health areas**
 - **Maternal health:** Factors that impact the health of pregnant women and their fetuses during pregnancy, child-birth, and the postpartum period
 - **Neonatal and infant health:** Factors that impact infants, neonates and young children, encompassing their physical, mental, and developmental needs
- **Specific diseases**
 - **Cervical Cancer**
 - **HIV and other STIs**
- Another angle that we have not considered is that **sound family planning** is mentioned as a **mitigation strategy** in some documents (fewer kids lead to reduced burden on resources)

- We have **excluded maternal health and infant health as well as STIs** from the scope of our study due to their extensive and complex nature, which merit dedicated studies of their own
- Our primary focus in this exercise is to explore the climate **implications on health, leading up to conception**

1. Fecundity is defined as the potential capacity to produce a live birth, including the production of gametes, fertilization, and carrying a pregnancy to term. It differs from fertility which is the actual capacity for reproduction.

SOURCE: Team analysis

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Summary: We identified two priority challenge groups: impact of climate shocks on supply and demand of key services, and long-term biological effects of climate effects

 Higher impact

Climate effects	i Biological effects on menstrual health and fecundity	ii Healthcare delivery and access for reproductive health
A Climate shocks	<p>Lower </p> <ul style="list-style-type: none"> Water contamination can cause infections and affect male and female fertility Some evidence of early marriage which can lead to adverse health outcomes Gender based violence can affect reproductive health Even short-term air pollutant exposure leads to complications in menstrual health and male fertility (see long-term changes for details) 	<p>Medium-Higher </p> <ul style="list-style-type: none"> Reduced or impaired supply of healthcare products and services after climate shock (contraceptives, quality abortion services, menstrual pads, etc.). Overall energy insecurity at healthcare facilities, may affect cold chain Due to financial shock, reproductive health could be deprioritized by couples vs other areas and suppress demand. In other cases, there could be an increased demand for abortion services or contraception.
B Long-term changes	<p>Medium </p> <ul style="list-style-type: none"> Air pollutant exposure leads to complications in menstrual health (PCOS) and male fertility (low sperm motility and morphology) Short-term community displacement often translates into poor menstrual health outcome due to poor hygiene in such settings Limited scientific evidence in many areas 	<p>Medium-lower </p> <ul style="list-style-type: none"> Displaced/refugee communities struggle to access reproductive health services esp. long-term and permanent contraception, esp. when community-sensitive services are not provisioned

Cross-cutting: Limited planning and preparation through national and regional mechanisms

Details of connections between climate change and reproductive health (1/2)

Legend for qualitative scores		○: No / negligible impact		◐: Minor impact	●: Major impact	XX: Stronger evidence	XX: Weaker or non-specific evidence
Aspect of climate change	Intermediate effect	i Biological effects		ii Healthcare delivery and access			
		Menstrual Health	Fecundity	Supply ¹	Demand		
A Climate Shocks	Physical trauma	◐	◐	◐	◐		
	Water scarcity / contamination	◐	◐	◐	◐		
	Mental trauma	◐	◐	◐	○		
	Financial shock	N/A	◐	N/A	●		
	Air Contamination	◐	◐	○	○		
	Damage to healthcare infrastructure & to supply chain	N/A	N/A	●	○		
B Long-term change	Increased presence and virulence of vectors	○	○	◐	○		
	Air quality	●	●	○	○		
	Changes in human behaviour	○	◐	○	◐		
	Food insecurity	◐	◐	○	◐		
	Community displacement	●	◐	◐	●		
	Reduction in healthcare affordability	N/A	N/A	○	●		
	Reduced water security	○	◐	◐	○		
	Increased vulnerability of the healthcare delivery system	N/A	N/A	◐	N/A		

1. Including supply of products, consumables, spare parts, and services (including abortion services)

SOURCE: Team analysis post-literature review

Details of connections between climate change and reproductive health (2/2)

Aspect of climate change	Intermediate effect	i Biological effects		ii Healthcare delivery and access	
		Menstrual Health	Fecundity	Supply ¹	Demand
A Climate Shocks	Physical trauma	⊖	⊖	⊖	⊖
	Water scarcity / contamination	⊖	⊖	⊖	⊖
	Mental trauma	⊖	⊖	⊖	⊖
	Financial shock	N/A	⊖	N/A	⊖
	Air Contamination	⊖	⊖	⊖	⊖
	Damage to healthcare infrastructure & to supply chain	N/A	N/A	⊖	⊖
	Increased presence and virulence of vectors	⊖	⊖	⊖	⊖
B Long-term change	Air quality	⊖	⊖	⊖	⊖
	Changes in human behaviour	⊖	⊖	⊖	⊖
	Food insecurity	⊖	⊖	⊖	⊖
	Community displacement	⊖	⊖	⊖	⊖
	Reduction in healthcare affordability	N/A	N/A	⊖	⊖
	Reduced water security	⊖	⊖	⊖	⊖
	Increased vulnerability of the healthcare delivery system	N/A	N/A	⊖	N/A

- Climate shocks show a **high impact on healthcare delivery**: In the aftermath of a climate shock, **healthcare centres** and the **supply chains** for medical products and equipment are often **damaged**. This occurs simultaneously with a **sharp increase/decrease** (due to financial shock) **in demand** for services and products
- Climate shocks show a **moderate biological effects on reproductive health**: **Biological effects on menstrual health and fecundity** due to physical trauma faced via **gender-based violence, heatwaves, or increased child marriages due to financial shocks**. Short-term air and water quality also lead to adverse impacts
- Long-term changes have a **high impact on biological aspects of menstrual health and fecundity**
 - Strong evidence that long-term exposure to **poor air quality** esp. particulate matter and NO2 has been shown to reduce fertility in men and women, and cause Poly-cystic Ovary Syndrome (PCOS) in menstruating women
 - Short-term community displacement often translates into poor menstrual health outcome due to poor hygiene in such settings
- Long-term changes also somewhat affect **healthcare access and delivery via community displacement**
 - Community displacement** severely impacts quality of life and access to commodities including **menstrual products** (sanitary napkins, tampons), **contraceptives** (injectables, condoms, birth control pills, IUDs), and **medical equipment** (ultrasound machines, speculums) and **services** (fertility treatments, safe abortion, or emergency/routine medical consultancy) essential to maintain sexual and reproductive health
 - In addition to these, being **displaced** or **not being able to afford healthcare** products or services might lead people to **de-prioritize reproductive health**, thus decreasing demand

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Summary: Climate and reproductive health as a topic is in its early days: very few initiatives at scale exist

- **Limited response** from stakeholders has been more generally on climate and health, **not focused on reproductive health**
- **Policy response** from countries is **limited** - very few countries have climate and health in the National Adaptation Plans, even fewer for reproductive health.
- **Implementation** has been **limited**, and **mostly related to legacy disaster recovery efforts**
 - Some initiatives on implementing **early warning systems and vulnerability assessments** are taking shape
 - Traditional **disaster recovery/relief funding** are now starting to increase inclusion of reproductive health services, most prominently a **cross-UN initiative: Minimum Initial Service Package (MISP) for reproductive health. UNFPA purchases contraceptives** and other products **for disaster response**
 - Some efforts to make **healthcare facilities more disaster-resilient** (due to climate or otherwise) including the **use of renewable energy for powering facilities**
- Initiatives with a **co-benefit for reproductive health** were also found: cleaner indoor air via clean cook-stoves, water security and other WASH efforts help with menstrual health, food security efforts, etc.
- **Most funding on building partnerships/alliances (not focused on reproductive health)**; some **for scientific research to understand biological links between climate change and reproductive health**; very **limited funding for implementation** in general and for discovering good operating models.
 - Key funders include **Rockefeller Foundation, CIFF, BMGF, Wellcome Trust, and Novo Nordisk Foundation**
- **Overall, no one is really driving the climate and reproductive health conversation**, and no best practice guides/playbooks exist

Several organizations are increasing their focus on the Climate & Health, but not necessarily on reproductive health (1/2)

XX: Focus on/connection with reproductive health








NOT EXHAUSTIVE

Type	Organizations	Selected major initiatives (not necessarily focused on reproductive health)
Donor		<ul style="list-style-type: none"> Committed \$100 million to test and scale climate and health solutions globally and working with global donors, development banks, country leaders, and stakeholders to ensure frontline communities receive financial assistance >>
	 CHILDREN'S INVESTMENT FUND FOUNDATION	<ul style="list-style-type: none"> Prioritizing grantmaking in climate change mitigation through local solutions, focusing on sectors critical for children's health such as air quality and food systems >>
	BILL & MELINDA GATES foundation  	<ul style="list-style-type: none"> Support scientific R&D to advance climate data, sustainable agriculture, and food systems, especially in LMICs >>
		<ul style="list-style-type: none"> Funding research into the impacts of climate change on human health and using the evidence to advocate for change >>
Bi-/Multilateral	 	<ul style="list-style-type: none"> Increase funding for climate and health by aligning funding, supporting countries to assess needs and access financing, and building evidence of effective interventions >>
		<ul style="list-style-type: none"> Leads the Alliance for Transformative Action on Climate and Health (ATACH), to support countries to build climate-resilient and low carbon health systems >>
		<ul style="list-style-type: none"> Announced a new project to help countries assess climate and health vulnerabilities and boost investments in climate-resilient health systems >>
	 ASIAN DEVELOPMENT BANK	<ul style="list-style-type: none"> Prioritized climate and disaster resilience in agenda and aims to deliver \$100 billion in cumulative climate finance from its own resources in 2019-2030 >>
		<ul style="list-style-type: none"> Supporting young and female researchers addressing the impact of climate change on women and girls' health, especially sexual and reproductive health >> Supporting post-crisis contraception (e.g. Haiti) using the MISP approach
		<ul style="list-style-type: none"> Funding the creation and deployment of climate-health smart products; focused on access to innovation in LMICs >>

Several organizations are increasing their focus on the Climate & Health, but not necessarily on reproductive health (2/2)

XX: Focus on/connection with reproductive health

NOT EXHAUSTIVE

Type	Organizations	Selected major initiatives (not necessarily focused on reproductive health)
NGOs/Social enterprises		<ul style="list-style-type: none"> Started the Sustainable Action for Climate Health (SACH) initiative brings together key ecosystem stakeholders to promote climate adaptive health facilities >>
		<ul style="list-style-type: none"> Bolstered humanitarian support and strengthening health systems in communities severely impacted by climate change >>
		<ul style="list-style-type: none"> Providing reproductive healthcare to women and girls without access, including those on the frontline of the climate crisis >>
		<ul style="list-style-type: none"> Conducted qualitative research in LMICs on how women's reproductive health is impacted by climate change >>
Partnerships	WHO-Civil Society Working Group	<ul style="list-style-type: none"> Increase engagement of the health sector in climate change mitigation and adaptation through advocacy and policy engagement >>
		<ul style="list-style-type: none"> Provide resources and training to health professionals, and work with governments to develop climate and health policies >>
		<ul style="list-style-type: none"> Developing evidence to address the gaps in the climate and health landscape and using network to incentivize climate and health investment >>
		<ul style="list-style-type: none"> Increasing advocacy for climate and health through strong leadership, collective action, policy and research

Some initiatives are already being implemented, either with a specific focus on reproductive health, or with more general targets, with a side-benefit in the area (1/3)

NOT EXHAUSTIVE

Type ¹	Initiatives	Dimensions of impact
Directly reproductive-health focused	Inclusion of Sexual and Reproductive Health in National Adaptation/Climate Plans <ul style="list-style-type: none"> UNFPA: Only 38 of 119 countries integrate SRHR in national climate plans as of Aug 2024 >> 	<ul style="list-style-type: none"> Helps recover from climate shocks: Ensures some level of healthcare access for sexual and reproductive issues in disaster-struck areas
	Development and implementation of Minimum Initial Service Package (MISP) for SRH services by multiple UN agencies incl. UNFPA	<ul style="list-style-type: none"> Helps recover from climate shocks: Defines minimum standard for for sexual and reproductive services in disaster-struck areas
	Distribution of products after climate shocks <ul style="list-style-type: none"> Low-cost / free menstrual products by Moroccan Red Crescent Society in Morocco in 2023 >> Low-cost / free lubricants, contraceptives like condoms UNFPA in Haiti in 2020 >> 	<ul style="list-style-type: none"> Helps recover from climate shocks: Prevents infections women may contract from using unsafe alternatives when they cannot afford or access proper products due to financial insecurity or restricted supply. Prevents unwanted pregnancies and spread of infections, crucial in scenarios where healthcare access is disrupted
	Disaster risk management projects led by women <ul style="list-style-type: none"> Women's forums in Bangladesh to discuss and address issues such as reproductive health and pregnancy >> 	<ul style="list-style-type: none"> Prepare for climate shocks: Use community structures to prepare for emergencies

Some initiatives are already being implemented, either with a specific focus on reproductive health, or with more general targets, with a side-benefit in the area (2/3)

NOT EXHAUSTIVE

Type ¹	Initiatives	Dimensions of impact
Indirect efforts	<p>Adopt agricultural that can withstand climate shocks and change like cover cropping or crop varieties that are more tolerant to heat, drought, pests, and diseases</p> <ul style="list-style-type: none"> ▪ <i>Drought-tolerant, early maturing cultivars introduced in Maharashtra villages in 2021 >></i> 	<ul style="list-style-type: none"> ▪ Prevent disruptions from climate shocks: Reduces food insecurity and malnutrition which can perturb the timing of menstruation in young women ▪ Prevent disruptions from climate shocks: Prevents community displacement, which affects menstrual health and fertility
	<p>Invest in resilient buildings, emergency power supplies, and water storage systems to withstand extreme weather</p> <ul style="list-style-type: none"> ▪ <i>Floating hospital in Bangladesh since 1999 >></i> 	<ul style="list-style-type: none"> ▪ Prevent disruptions from climate shocks: Ensures uninterrupted healthcare services even during climate shocks, when patient loads are likely to peak
	<p>Water, Sanitation and Hygiene (WASH) initiatives that ensure availability of clean water and hygiene facilities</p> <ul style="list-style-type: none"> ▪ <i>UNICEF helped develop disaster-resilient toilets in Assam and Gujarat in India >></i> 	<ul style="list-style-type: none"> ▪ Prevent disruptions from climate shocks: Prevents menstrual or fertility health-related problems caused by contaminated water
	<p>Provide financial assistance to nations most vulnerable and impacted by the effects of climate change</p> <ul style="list-style-type: none"> ▪ <i>Loss and Damage Fund established at COP27 >></i> 	<ul style="list-style-type: none"> ▪ Helps recover from climate shocks: Help affected people bounce back financially and afford the healthcare products and services they require, especially after climate shocks
	<p>Build climate resilient healthcare infrastructure</p> <ul style="list-style-type: none"> ▪ <i>SEforAll's Powering Healthcare programme supports governments and partners with solutions to achieve universal electrification of health facilities >></i> 	<ul style="list-style-type: none"> ▪ Prevent disruptions from climate shocks: Prevents disruption to energy in healthcare facilities

Some initiatives are already being implemented, either with a specific focus on reproductive health, or with more general targets, with a side-benefit in the area (3/3)

NOT EXHAUSTIVE

Type ¹	Initiatives	Dimensions of impact
Indirect efforts	Replacing woodfired stoves with biogas stoves <ul style="list-style-type: none"> ▪ <i>UNFCCC in selected Indian districts in 2012</i> >> 	<ul style="list-style-type: none"> ▪ Reduces effects of long-term climate change: Reduces women’s exposure to NO_x and PM_{2.5} from wood burning, which cause menstrual health and fecundity problems
	Invest in building surveillance systems to detect early warning signs <ul style="list-style-type: none"> ▪ Strengthen health systems to predict, detect, prepare, and respond to climate risks and disasters >> 	<ul style="list-style-type: none"> ▪ Prevent disruptions from climate shocks: Ensures reduced impact of climate shocks on provision of healthcare services and reduce the health care impacts of climate shocks
	Identify and map climate and health vulnerabilities <ul style="list-style-type: none"> ▪ World Bank’s project to map vulnerabilities and support development of climate resilient healthcare systems >> 	<ul style="list-style-type: none"> ▪ Prevent disruptions from climate shocks: Ensures reduced impact of climate shocks on provision of healthcare services

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We identified the possible opportunities to intervene, which are probably not getting the level of interest or funding they deserve (1/2)


VERY PRELIMINARY

Aspect	Description
1 Policy and planning support	<ul style="list-style-type: none"> ▪ Support countries and regions to include reproductive health in National Adaptation plans, Gender plans under UNFCC and other emergency response plans ▪ Ensure financial accessibility to basic reproductive services: people subject to a financial shock might need to de-prioritize paying for reproductive-related services; making them free or subsidized could keep the accessible to those in need
2a Implementation (directly focused on reproductive health)	<ul style="list-style-type: none"> ▪ Design crisis-appropriate/migrant-friendly reproductive health services: investigate how design of reproductive services should be adjusted and be culturally appropriate for migrants / displaced populations (e.g., in refugees' camps), including to access to community health workers <ul style="list-style-type: none"> – Ensure safe abortion and contraception procedures remain available during periods of crises – Invest in resilient supply chains for provision of contraceptives or menstrual products through necessary resources – Design and plan for frontline community health worker deployment structures in crisis settings – Emphasize appropriate information campaigns: Design information and counselling programs that are suitable for long-term or short-term displaced populations. Ensure that GBV and early marriage related information is covered ▪ Telemedicine and digital health solutions: These can be quickly rolled out during crises and can reduce some workload from local staff ▪ Increase self-care products including self-tests in portfolio: These can reduce the burden on the healthcare system, especially in times of crises ▪ Design safe spaces for displaced communities: Temporary or long-term accommodations for displaced people are known to have high-risk of sexual violence; there needs to be intentionality about building safety for all genders in these spaces, for example, by ensuring that bathrooms have adequate privacy and are well-lit. ▪ Capacity building for community health workers: training and education programs, selection of female volunteers can help increase the capacity of delivery systems to respond appropriately to reproductive health impact of climate shocks and long-term changes

We identified the possible opportunities to intervene, which are probably not getting the level of interest or funding they deserve (2/2)

 Deep dive on next page

VERY PRELIMINARY

Aspect	Description
2b Implementation (determinants of reproductive health)	<ul style="list-style-type: none">Invest in Early warning systems for climate shocks, consider the female lens while designing themAccount for women’s hygiene in clean water initiatives: ensure any initiatives account of access to clean water for personal hygiene, specifically for women, in addition to drinking waterPromote and distribute fortified foods: climate change can affect the quality and diversity of food people have access to. Using fortified food can compensate for it, providing vitamins, iron, and other important nutrientsClean cooking stoves and heating: air pollution generated at home affects women disproportionately. Cleaner convenient options for heating in winter and cooking and should be made available
3 Evidence building, collaboration and advocacy	<ul style="list-style-type: none"> Establish focused collaboratives in climate and reproductive health: This can be stand-alone collaborative or part of an existing climate and health collaborativeFill evidence gaps: identify areas where additional research might be needed to inform decision making regarding prioritization of initiatives. Maternal health has been studied much more, while limited evidence is present for reproductive health (especially quantitative research) <i>[see next page for additional details]</i>Advocacy: use emerging evidence to inform and shape opinions among policymakers and general public with a view to drive investments to address climate related adverse effects on reproductive health

Several evidence gaps were uncovered in during our deep-dive. Funders can consider providing funding to address these

Part of initiative group: **3**

Aspect	Possible research questions
Climate shocks	<ul style="list-style-type: none"> What are the effects of mental trauma post climate shock on menstrual health and fecundity? How do these vary by gender? How do these vary by type of climate shock (e.g., impact of heatwave vs impact of flood)? What is the biological impact of short-term air / contaminated water exposure on menstrual health and fecundity? How do these vary by gender? How do reproductive choices vary post-disaster? E.g. <ul style="list-style-type: none"> What happens to the number of pregnancies in crisis settings? Which services are demanded more (or less) in climate shock scenarios? <ul style="list-style-type: none"> Effect on abortion services? Effect on contraception? How does the contraceptive mix change in couples in climate shock settings? What are good models of health care service resilience (esp. on safe abortion, contraceptives? Information provision and comprehensive sexuality education in displacement settings?) What are examples (and best practices) of resilient community health workers and facility-based services?
Long-term change	<ul style="list-style-type: none"> How does long-term community displacement affect reproductive health care delivery in the sites of relocation? How does long-term food insecurity affect menstrual health and fecundity? How does increased staff absenteeism affect service delivery? (e.g., through more vector-borne diseases)
Cross	<ul style="list-style-type: none"> Conduct analyses on climate and reproductive health linkages for key demographic segments (e.g. adolescents) and regions What is the magnitude of the impact of climate change on reproductive health vs other health areas? Where is the priority? What is the current state of understanding of this specific issue (climate impact on reproductive health) among policymakers at country-level? How does this vary by region?

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Analyst,
Alstonia Impact

We are also grateful for the helpful discussions with a number of experts from Packard Foundation, PATH, Global Development Incubator, AVPN, and The Blended Finance Company

Agenda

- General framework for Climate & Health
- Deep dive on Reproductive Health
- **About Alstonia Impact**



Alstonia Impact is a global impact-focused consulting firm

About Alstonia Impact

- Set-up in 2018, headquartered in New Delhi by professionals with previous donor-side experience
- Multi-sectoral + global expertise: health, gender, education, climate, financial inclusion, property rights
- Three verticals:
 - 1. Strategy consulting and landscaping services** for philanthropists and impact investors, and their portfolio organizations: Building investment/ organizational strategies, market expansion and sector building, identification of blended finance opportunities
 - Example clients: BMGF, Omidyar Network
 - 2. Quantitative/Qualitative research:** Performing quantitative and qualitative research and market advisory services
 - Example clients: Prevail/One Acre Fund, BMGF, World Bank
 - 3. Operational excellence:** Support on setting up and improving indigenous production and supply chain in LMICs through our network of partners
 - Example clients: MPP, Sanofi
- Lean core team with a network of global experts



Our network

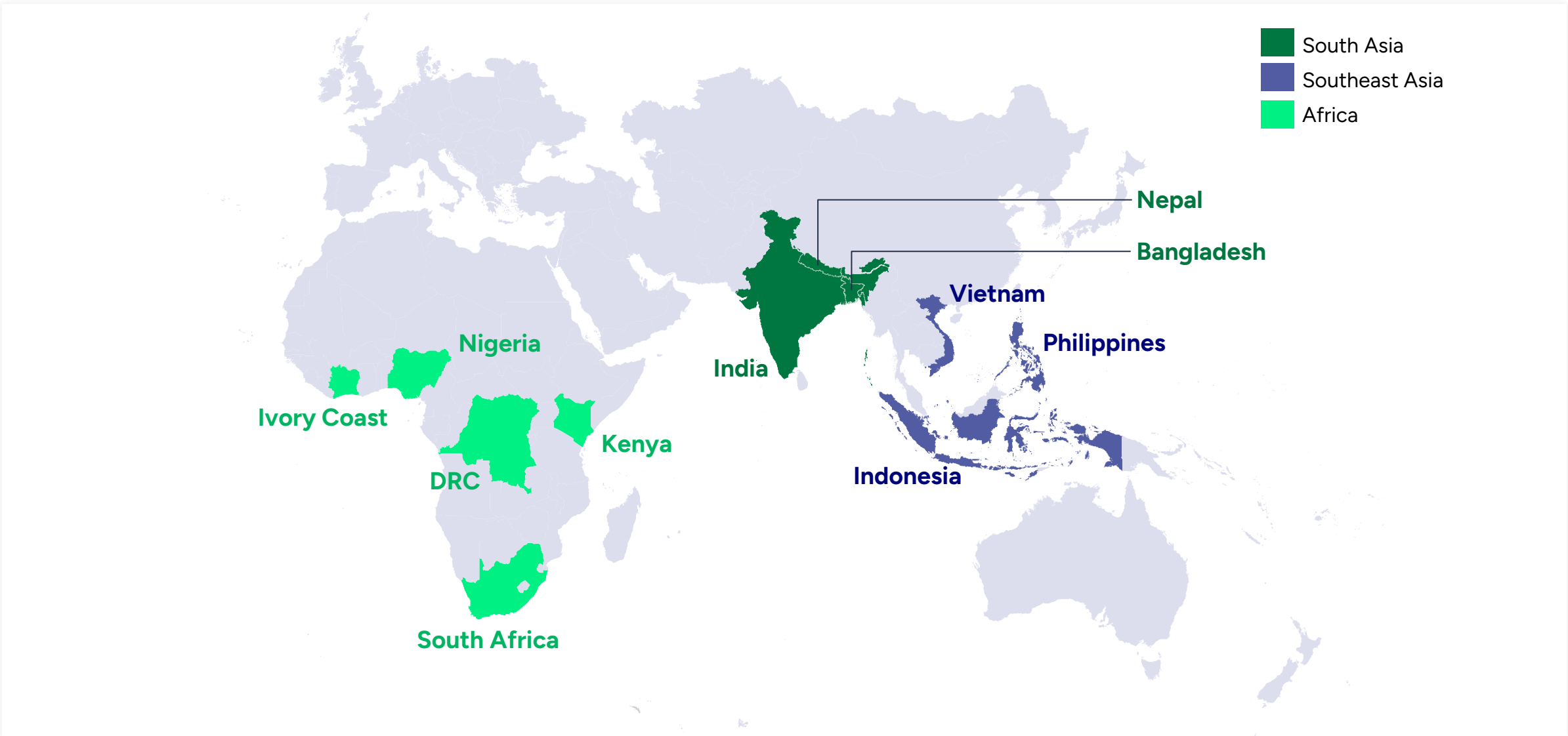
Our clients ...



... and where we come from

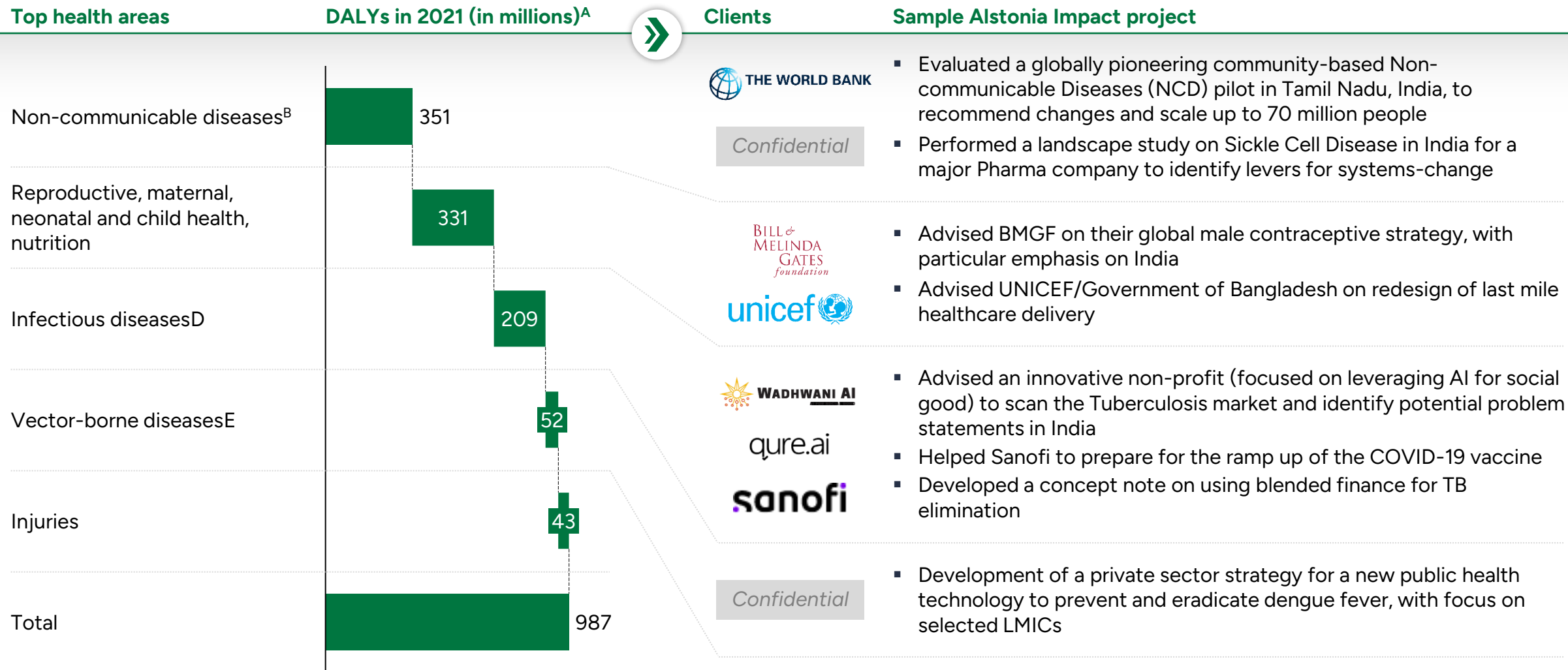


We have worked directly in most large LMICs across Africa and Asia



Alstonia Impact team has worked on nearly all public health areas that lead to significant DALYs in LMICs

NOT EXHAUSTIVE



A. Data extracted from the WHO: Global health estimates: Leading causes of DALYs [7] - Aggregated considering the top 20 causes for DALY in 2021 in low-income and lower middle-income countries; B. Including Ischemic heart disease, COPD, Stroke, Diabetes; C. Including Preterm birth complications, diarrheal diseases, lower respiratory infections, iron deficiency; D. Including Tuberculosis & COVID; E. Including Malaria

... and its global experience covers all WHO building blocks of health systems

WHO building blocks

Examples of projects

Service Delivery

- Evaluated a globally pioneering community-based Non-communicable Diseases (NCD) pilot in Tamil Nadu, India, to recommend changes and scale up to 70 million people
- Interim Director on advisory engagement to UNICEF/Government of Bangladesh on redesign of last mile healthcare delivery

Human Resources

- Identified key challenges and opportunities to improve medical and nursing education in India
- Evaluated a globally pioneering community-based Non-communicable Diseases (NCD) pilot in Tamil Nadu, India
- Interim Director on advisory engagement to UNICEF/Government of Bangladesh on redesign of last mile healthcare delivery (Diagnostic of performance, motivations of key frontline staff such as CHCP, FWA, FWV, and HAs)
- Analyzed drivers of performance of ASHAs and staff nurses in Uttar Pradesh

Financing

- Developed a private sector strategy for a new public health technology to prevent and eradicate dengue fever, with focus on selected LMICs (private sector financing of public health tech)
- Interim Director on advisory engagement to UNICEF/Government of Bangladesh on redesign of last mile healthcare delivery
- Developed blended finance transactions for TB in India to attract private sector financing

Medicines and Diagnostics

- Advised BMGF on their global contraceptive research funding strategy
- Advised a US-based philanthropic initiative to increase access to patented medicines in LMICs
- Landscaped the use of frontline insights by global/national decision makers for informing market decisions for mature health products
- Helped a major Pharma company to prepare for the ramp up of the COVID-19 vaccine
- Started and sustained lean transformational program at a Pharma campus, leading to >20 M€ savings p.a. in a major production site

Information systems

- Advised an innovative non-profit (focused on leveraging AI for social good) to scan the TB market and identify potential problem statements
- Defined the digital implementation roadmap in manufacturing for a major Pharma company

Supply chain

- Developed, piloted and rolled out an end-to-end flow improvement program to reduce product cycle times and inventory levels
- Supervised the introduction of an end-to-end digital control tower to support daily execution and supply chain decision-making

Contacts for the Alstonia Impact Team



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**Alstonia
Impact**

Thank you!