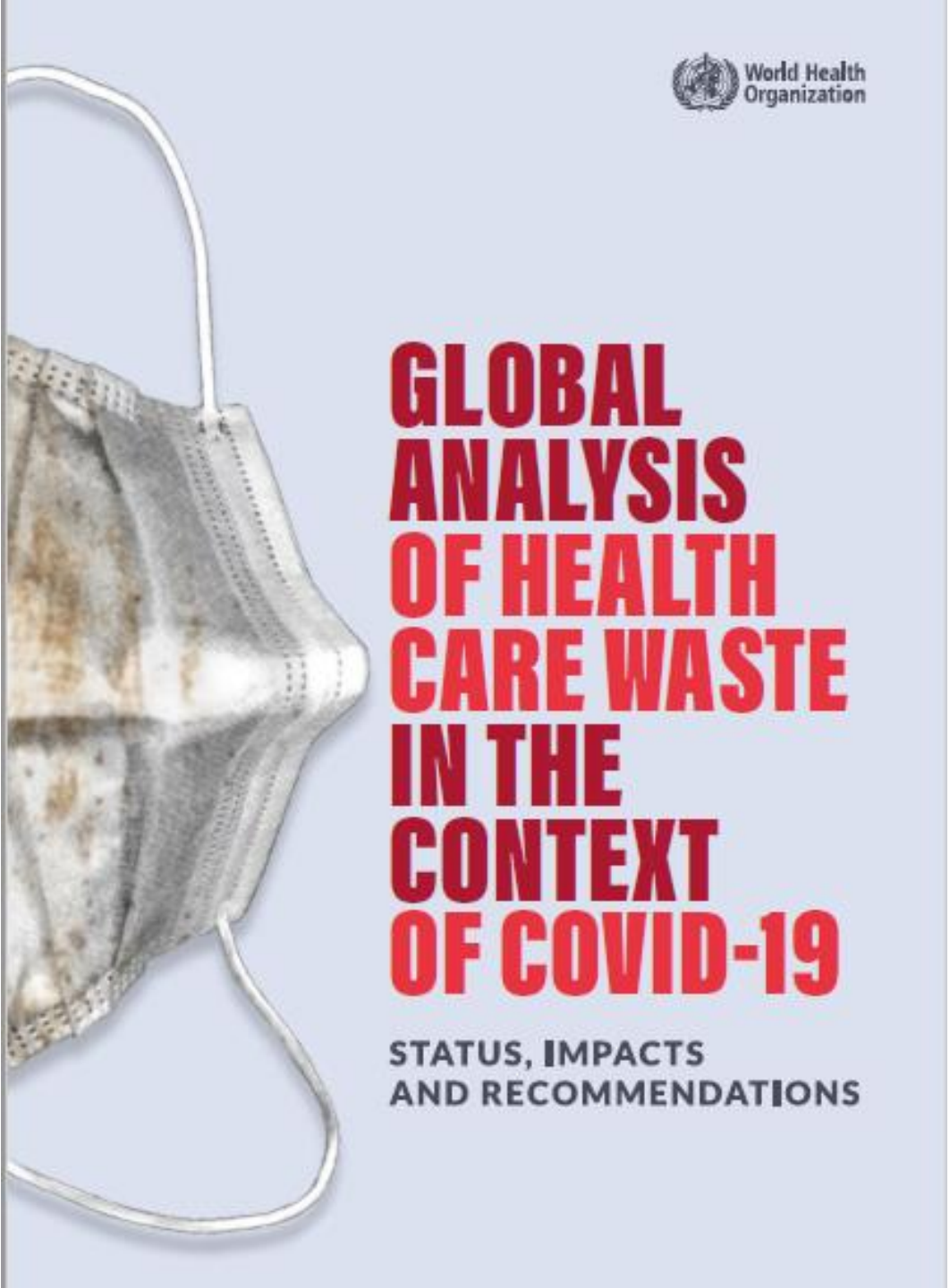


Launch

1st February 2022

washinhcf@who.int

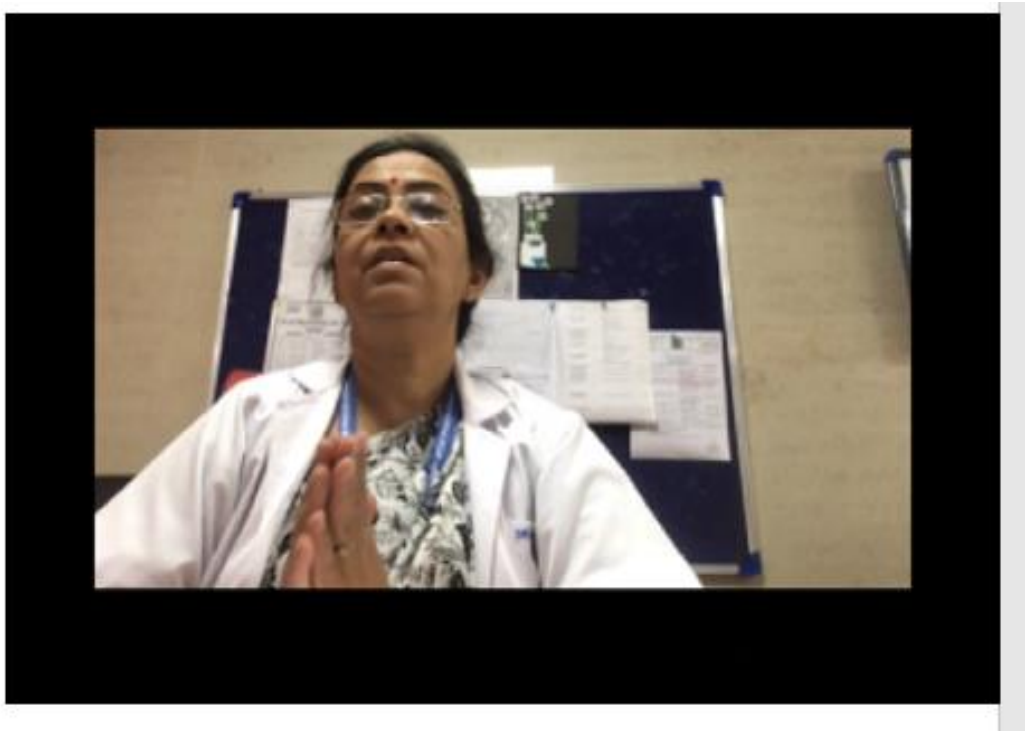
www.washinhcf.org

@WASH_for_health

Download the document at:
https://who.int/publications/i/item/9789240039612

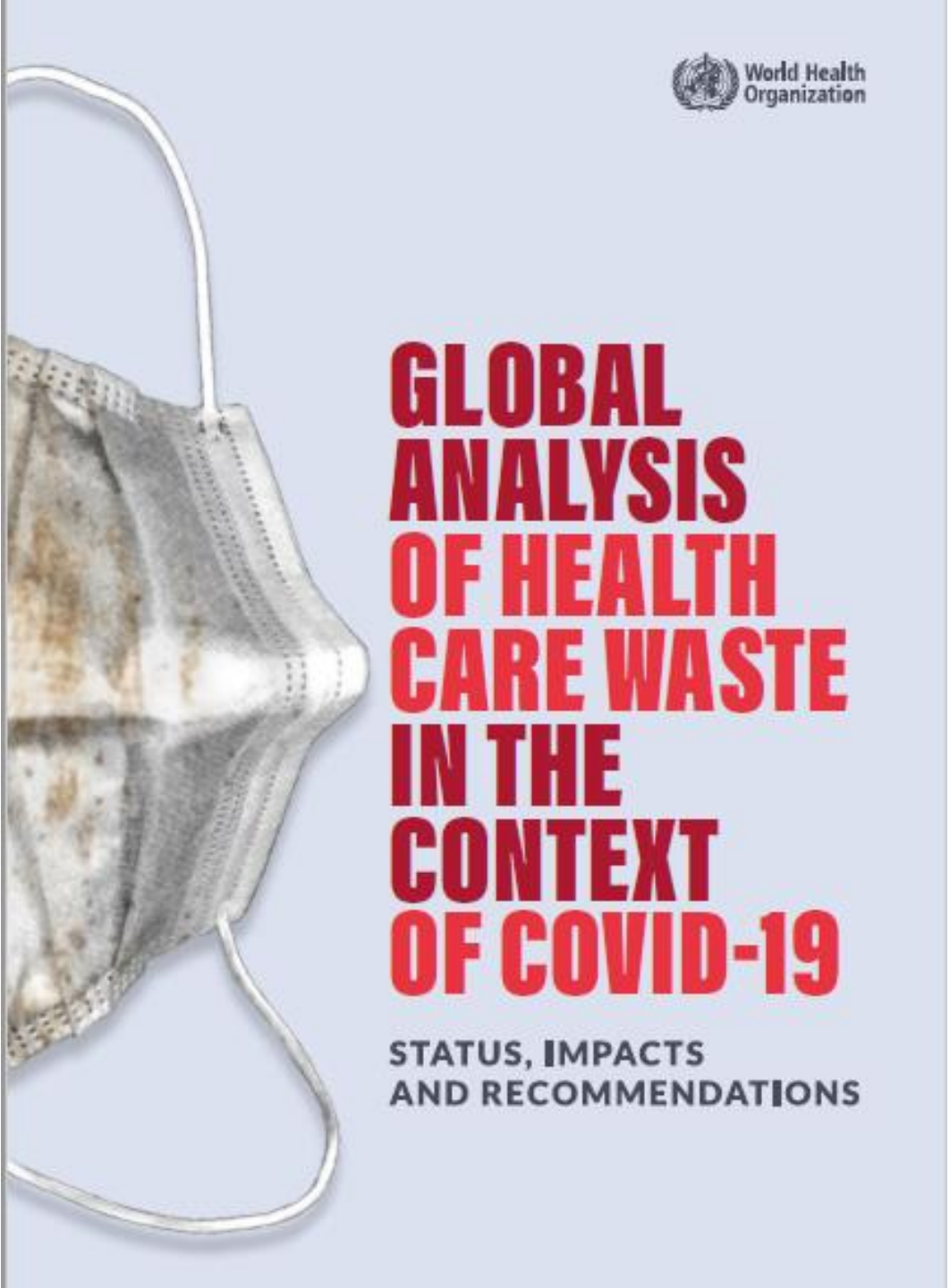
World Health Organization

Introductory videos from Health Care Without Harm (Click on images to watch)



Agenda

Introduction	Dr Anne Woolridge, ISWA Dr Maria Neira, WHO
Findings, innovations and recommendations	Dr Maggie Montgomery, WHO
Country and partner reflections	
R4H	Ms Hilary Kapoteza
Health Care Without Harm	Mr Ramon San Pascual
IFC	Dr Sinem Demir
UNDP	Dr Rosemary Kumwenda
Global Fund	Ms Juliet Bryant
WHO emergencies	Dr Ying Ling Lin
Closing remarks	Mr Bruce Gordon, WHO

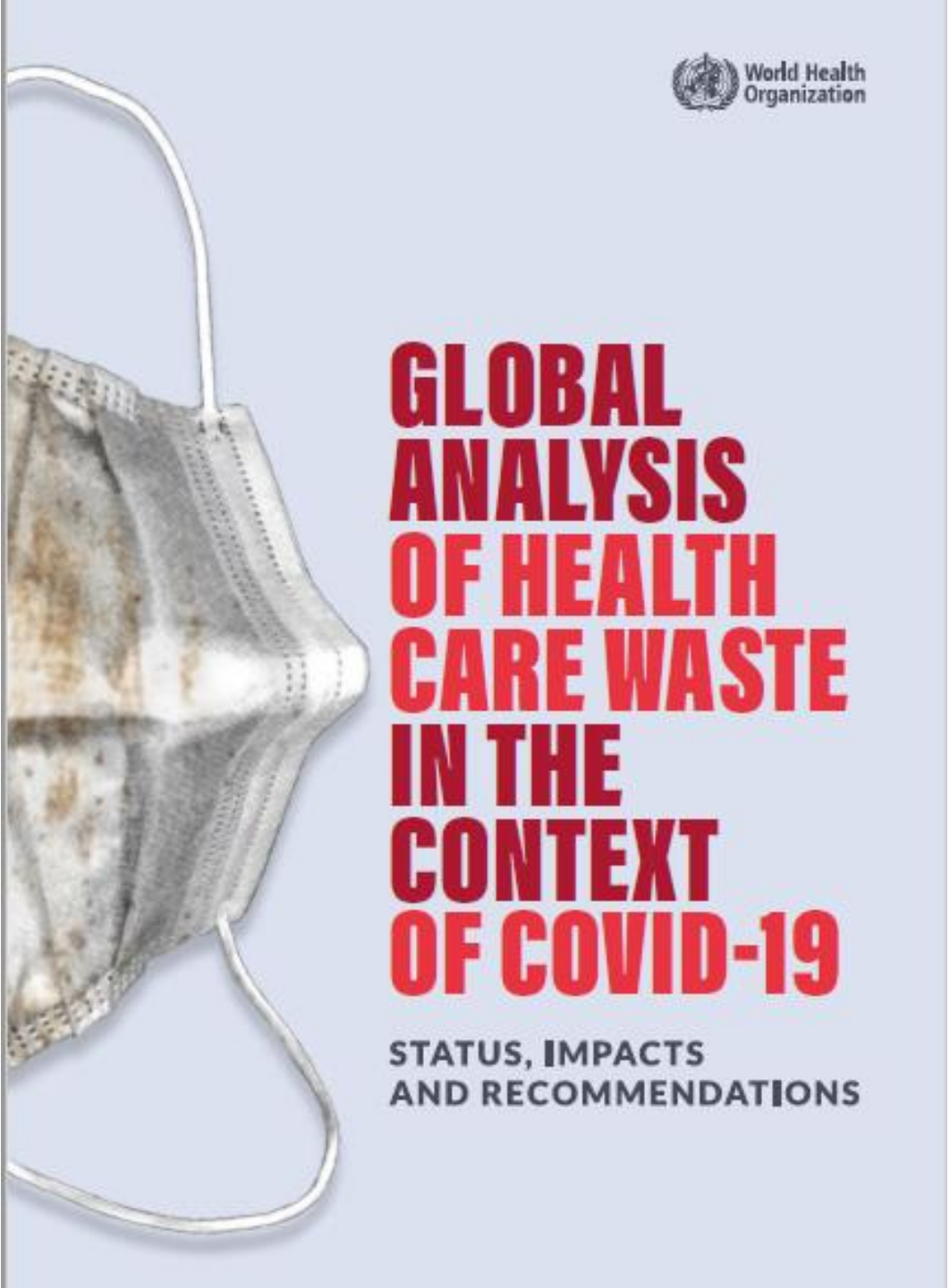


Introduction

Dr Maria Neira,

Director Environment, Climate and Health, WHO

World Health Organization



Findings, solutions & recommendations

Maggie Montgomery, WHO

World Health Organization

Background - the challenge

- Health care waste problematic before the pandemic; **2 in 3 health care facilities** in least developed countries lack means to segregate or safely treat waste
- Double burden of COVID-19 waste increases (**on average 3-4x and up to 10x** where waste not segregated) + overstretched health workers
- **Consequences**: needlestick injuries, spread of infectious pathogens, release of furans/dioxins, microplastics in environment

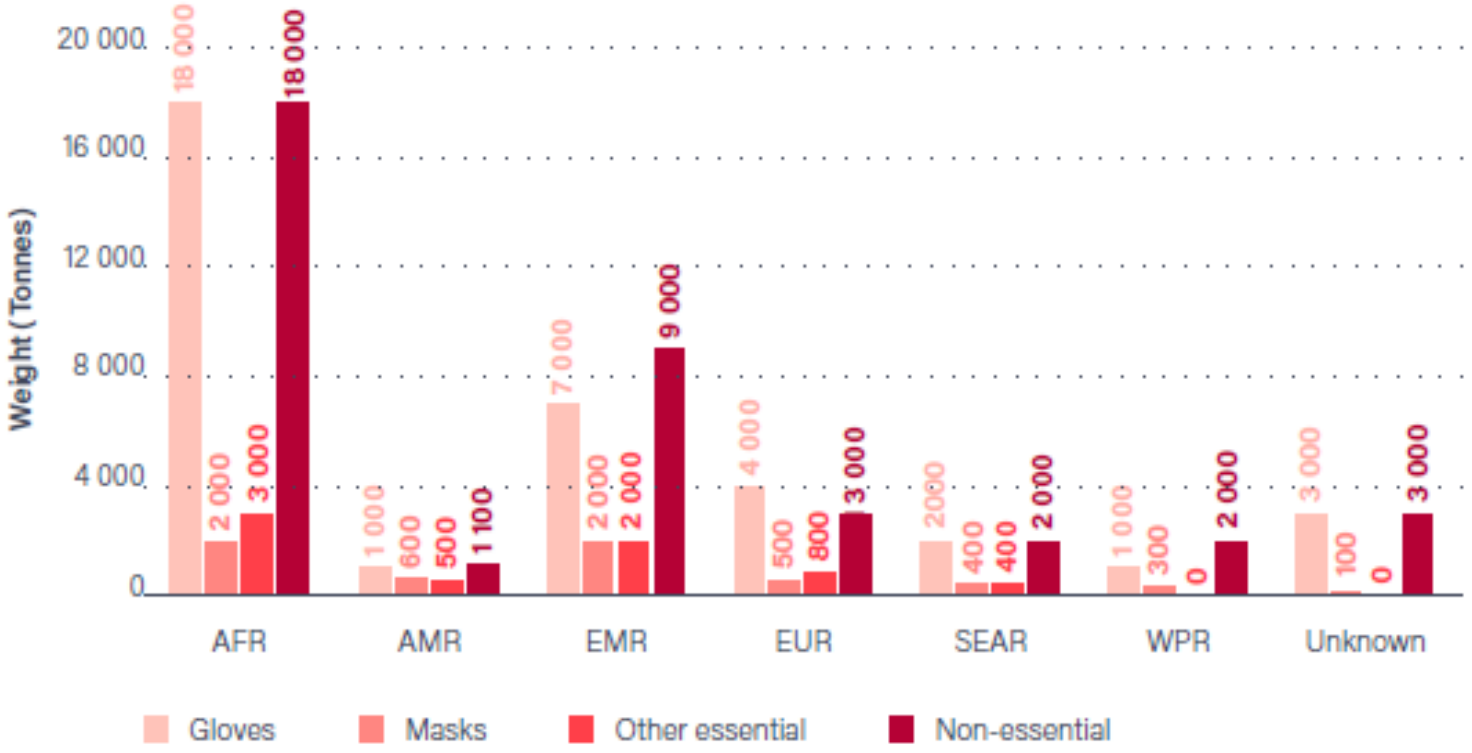
COVID-19's unsustainable waste management

TABLE 1 — Main types of COVID-19-related healthcare waste

Item	Type of waste	Requires safe handling and treatment
Mask	Infectious	Yes
Gloves	Infectious	Yes
Gown	Infectious	Yes
SARS-CoV-2 rapid antigen test	Nonhazardous	Most components are recyclable; a very small volume of reagent may require safe handling and disposal if dealing with large numbers of tests.
PCR testing cartridge	Chemical	Yes (contains guanidinium thiocyanate)
Vaccine vial	Nonhazardous	No
Vaccine needle	Sharps	Yes (packaging material is recyclable)
Plastic packing and containers	Nonhazardous	No

UN procurement - gloves and masks

FIG. 1 — **Volume of COVID-19 gloves and masks shipped to regions, as of November 2021**

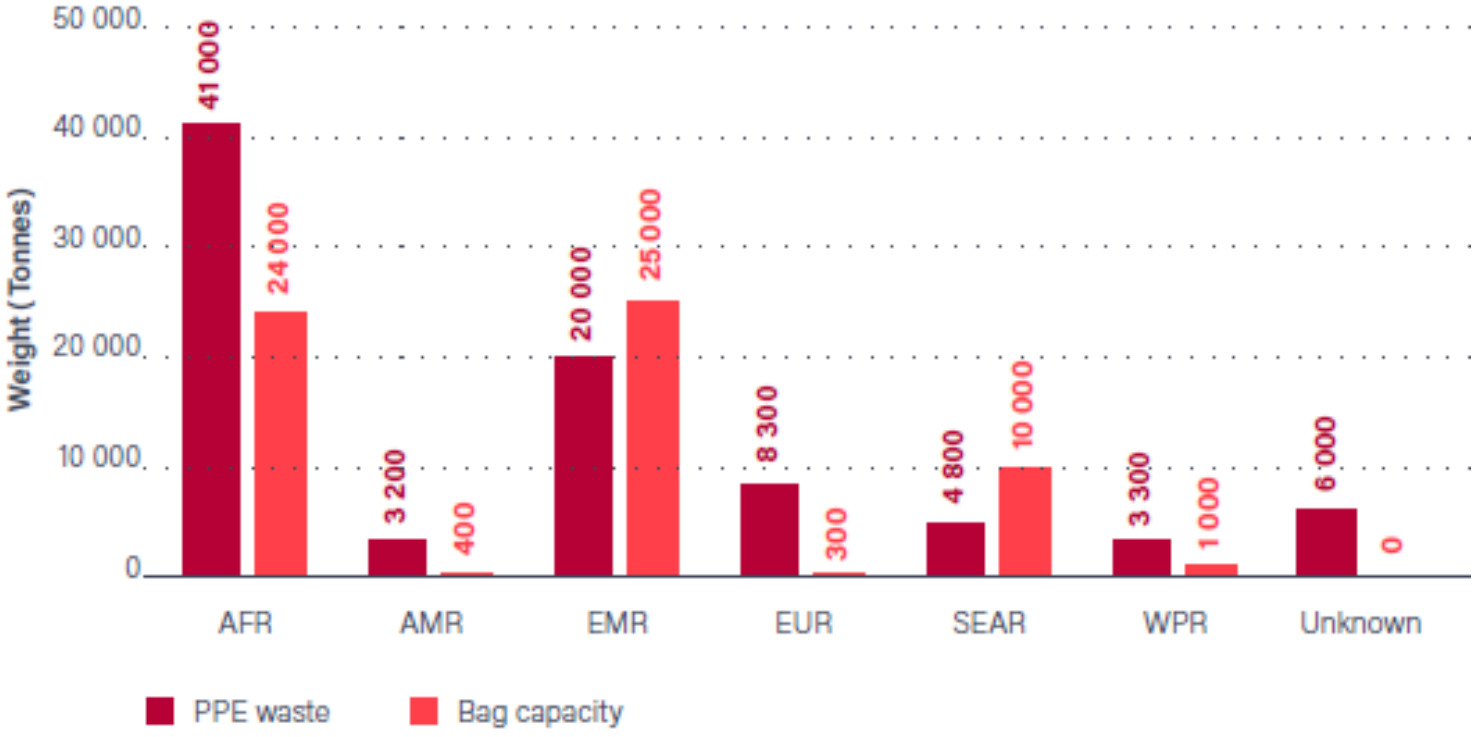


- Total quantity of masks shipped = 5,900 tonnes
- Total quantity of gloves shipped = 36,000 tonnes

AFR: WHO African Region; AMR: Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asian Region; WPR: WHO Western Pacific Region.

Nearly 1/3 of PPE cannot be safely bagged or stored because of too few biohazard bags

FIG. 3 — **Capacity of biohazard bags versus PPE quantity**



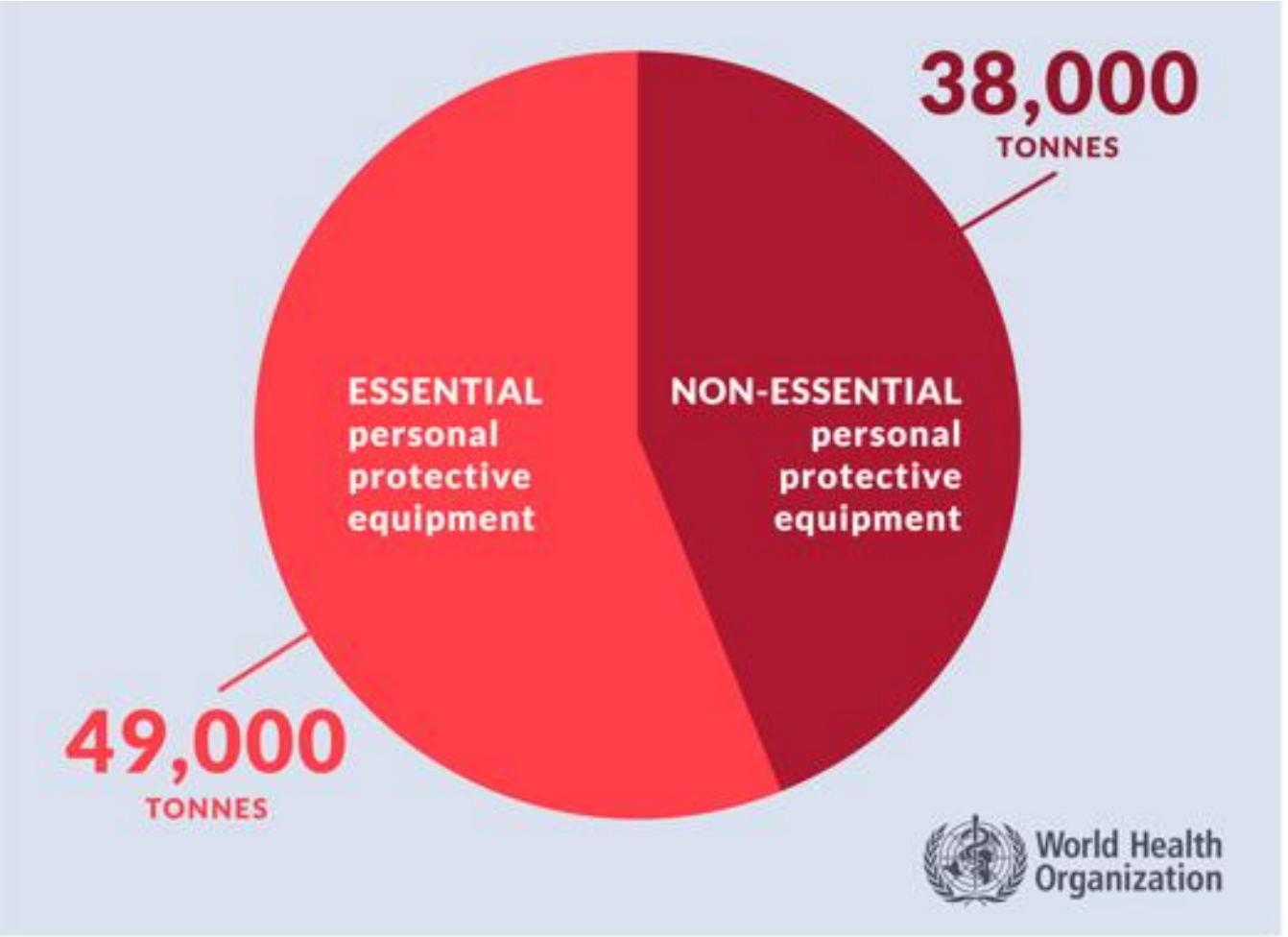
AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asian Region; WPR: WHO Western Pacific Region.Add

Notes: Unknown are items shipped but for which the ultimate destination was not recorded in the database.

- Total of 87,000 tonnes of PPE shipped
- Biohazard bag capacity of 61,000 tonnes

Almost ½ of volume of waste items are "non-essential"

Essential: medical masks, gowns, apron protection, some gloves.



Non-essential: hair and shoe covers, some gloves (not needed many COVID-19 interactions),

Innovative solutions exist at every level of the waste hierarchy

United Kingdom "Gloves Off Campaign"

Transforming masks into road materials in Australia

Solutions - innovation

- **Packaging**: less and more sustainable materials - cornstarch foam (instead of polystyrene), less secondary packaging
- **Vaccines**: increase vaccine stability (less wastage), needle-less delivery through microarray patches and orally
- **Safe re-usable medical masks**: use of silicon frame and washable/discardable N 95 filter
- **Re-usable FFP-2:** masks for public (up to 5 layers)
- **PPE with more biobased materials**: hemp, cellulosic fibers
- **Reverse logistics + use of non-burn treatment technologies:** Autoclaves

The United States would have saved nearly **USD 5 billion** in first 6 months of pandemic (and **69,000 tonnes of waste**) with safe, re-usable masks.

Country case studies: change is possible

Columbia

- Implemented sustainable purchasing - consider economic and socio-environmental impact of consumables + limit plastic
- Strengthened training about proper PPE use and safe waste management
- National guidelines include more sustainable products and practices for cleaning

Lao PDR

- Since 2017, ongoing national efforts to strengthen policies and monitoring of climate resilient WASH, waste and energy
- Rapidly scaled up existing climate smart and sustainable health care facility improvements
- Secured 2 million USD in national COVID-19 financing, implemented non-burn technologies (autoclaves) and training

SUMMARY OF KEY THEMES ILLUSTRATED BY CASE STUDIES

Countr(ies)	Monitoring	Standards and training	Waste reduction, recycling and reuse	Centralized and non-burn treatment technologies
Colombia	✓	✓		
United Kingdom	✓		✓	
Ghana	✓	✓	✓	✓
India	✓	✓	✓	
Lao People's Democratic Republic		✓		✓
Liberia	✓	✓		
Madagascar		✓		✓
Malawi				✓
Nepal			✓	✓
Philippines	✓	✓		

Low-cost autoclaves in Lao PDR
© WHO Lao PDR

Recommendations - global

- Strengthen **coordination** among logistics, infection prevention and control, vaccine, laboratory, and environmental actors on sustainable waste management
- Promote and invest in **more sustainable PPE** and waste systems
- Support **behaviour change**: move away from single use and overuse of PPE
- Invest in and promote high quality **regional** and **national PPE manufacturers** and shipping

Alcohol based hand rub in Ghana; © *UNDP*

Recommendations - national and local

- Implement and regulate sustainable health care waste **standards** and practices
- Implement multimodal strategy for hand hygiene and **reduce unnecessary glove use**
- **Budget** and **finance** waste management (staff and technologies) and invest in **recycling**
- **Regularly monitor and report on** waste practices

We can protect against COVID-19 AND protect the environment

Learn

- WHO/UNICEF Global WASH in HCF portal(www.washinhcf.org)
- Health Care Without Harm (https://noharm.org/)
- UNDP Green health care waste (www.greenhealthcarewaste.org)

Share

- This report!
- Examples of sustainable waste management - e.g. IFC report on *Innovation in Manufacturing Personal Protective Equipment*

Act

- Support and hold to account 51+ countries committed to low carbon and sustainable health systems
- **WHO will**
  - Review and include more sustainable PPE and packaging in *guidelines*
  - Consider socio and environmental costs in all procurement
  - Technical support to Ministries of Health on safe and sustainable waste management

Thank you

- Core WHO writing team: **Joyce Klu, Ute Pieper, Arabella Hayter, Constance Mc Donough-Thaye**
- Partner contributions: **UNDP, HCWM, Global Fund, ISWA**
- Countries that submitted case studies: **Colombia, England, Ghana, India, Lao PDR, Liberia, Madagascar, Malawi, Nepal, Philippines**
- All technical reviewers and contributors
- Financial support: **Public Health Agency of Canada, UK FCDO**
- All waste and health workers everywhere

UNDP

ISWA

Health Care Without Harm

THE GLOBAL FUND

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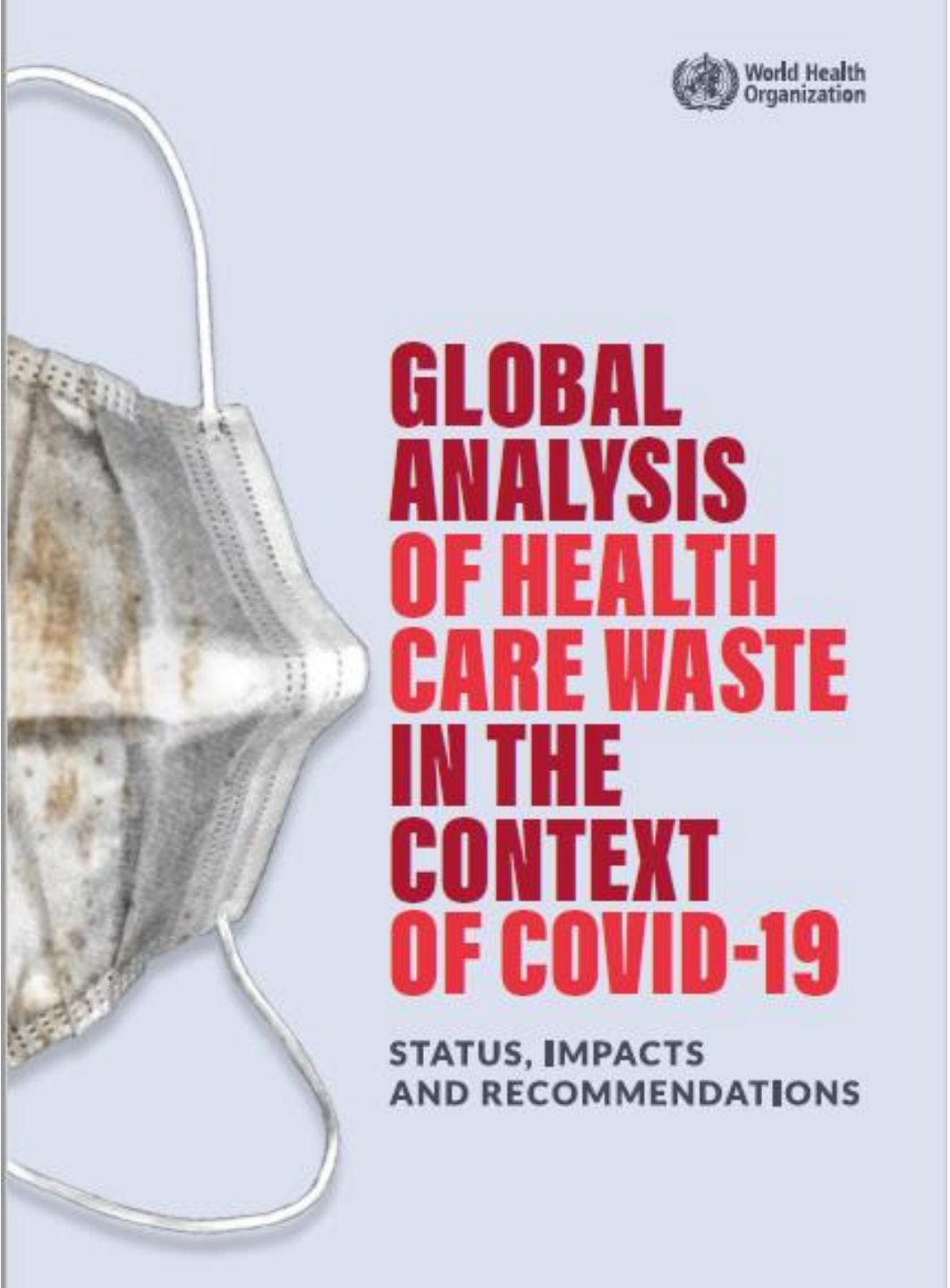


Partner reflections

R4H

Health Care Without Harm

UNDP

IFC

Global Fund

WHO emergencies

World Health Organization

COVID-19 Healthcare Waste Management at the Last Mile: The Reverse Logistics Perspective

Hilary Kapoteza, Mphatso Kachule and Ruth Rensburg

Activities and Impact

- R4H implements health care waste management and to date has safely disposed of **5.3 tonnes** in 2 years.

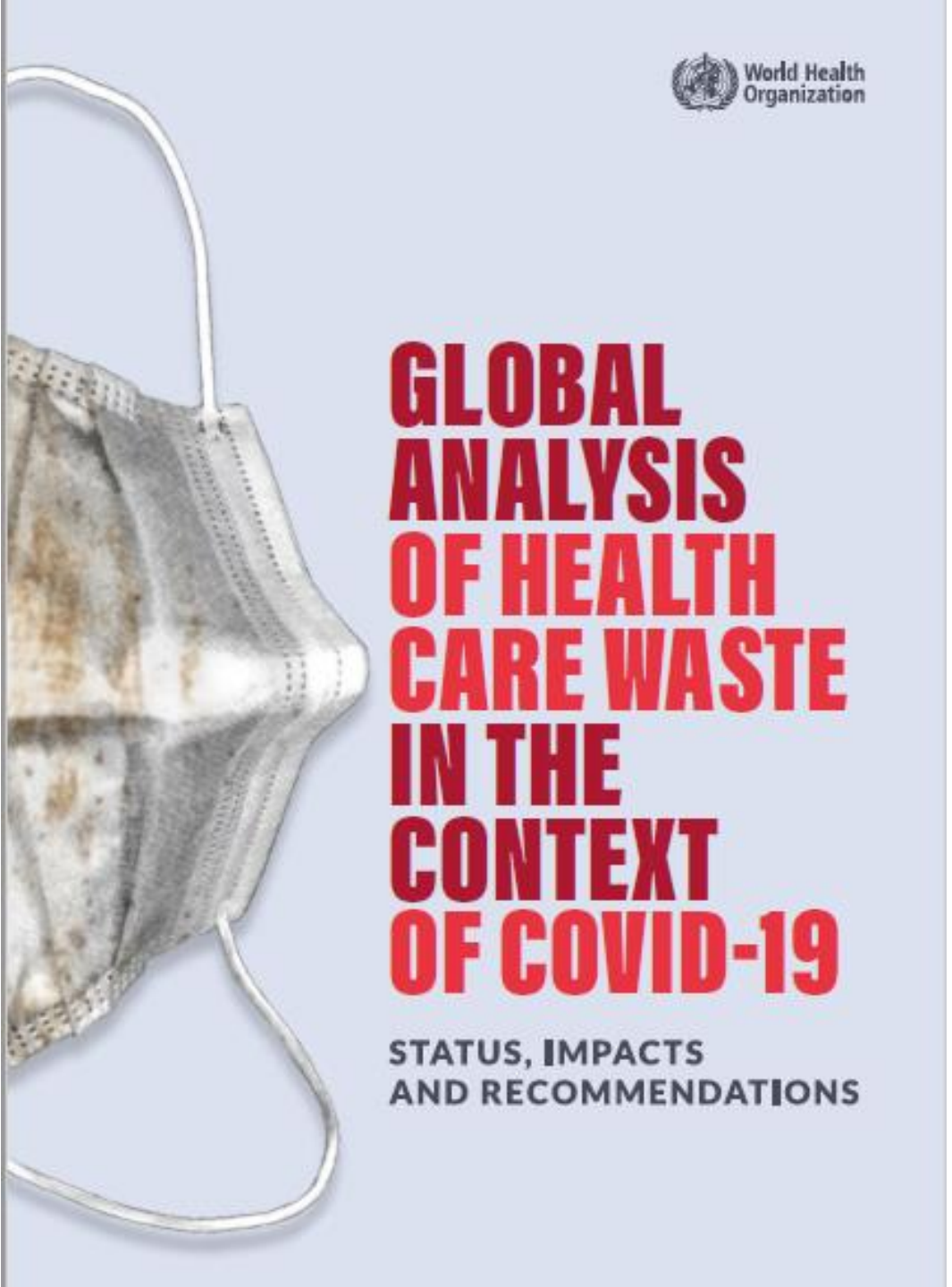
- Reverse logistics undertaken with improved waste segregation, biosafety and road safety adherence.

- Hub and spoke model employed resulting in increased efficiency. R4H receives confirmation of
demand to increase efficiency and avoid wastage in the system.

- Medical Laboratories able to comply to ISO15189, Good Clinical Labor Practice and manage environmental impact.

Lessons Learned:

- Substantial healthcare waste management work undertaken by R4H with little support.
- Gap in the management of different types of waste. Liquid waste for instance is currently not taken care of.
- Need for long term planning and resource allocation to improve infrastructure, availability and type of health care waste management services.
- Ensure sustainable and context relevant solutions to manage hazardous waste in Malawi building local capacity to do so.



Ramon San Pascual

Executive Director, Health Care Without Harm, Southeast Asia

World Health Organization

HCWH Initiatives on Medical Waste Management during the Pandemic.

- COVID resource webpage
- Convening with partners including UN agencies
- Streamline responses to COVID waste management expert input for publications
- GGHH members experiences in single use PPE waste reduction
- Conduct of COVID Waste audit in hospitals
- Waste work integrated into sustainable procurement

Without Harm

MOBILIZING HEALTH CARE TO PREVENT PLASTIC POLLUTION: A PLASTICS TOOLKIT FOR HOSPITALS

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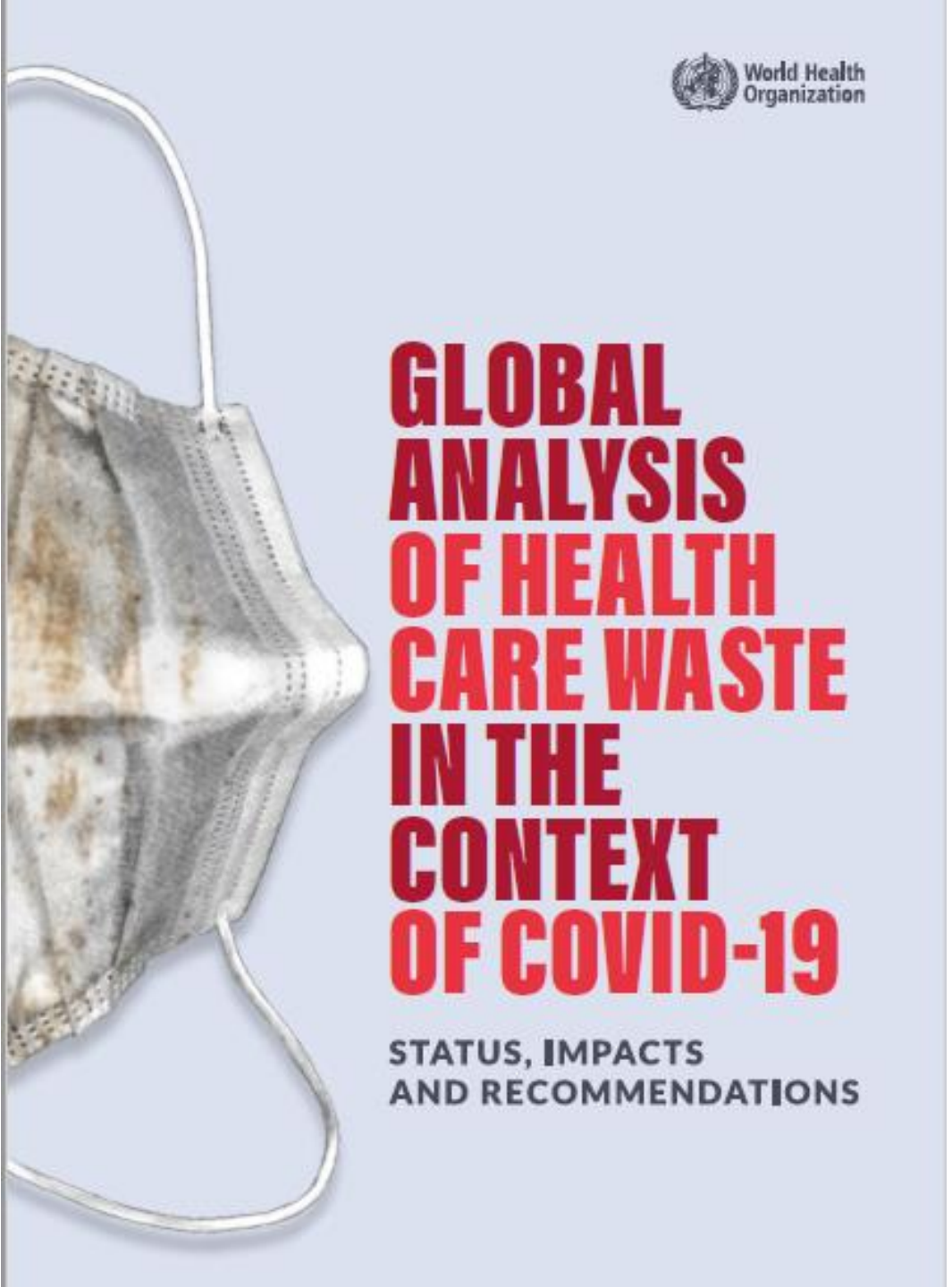


Sinem Demir

Operations Officer, International Finance Cooperation/World Bank Group

World Health Organization

INNOVATION IN MANUFACTURING PERSONAL PROTECTIVE EQUIPMENT

CONTENTS

- The waste challenge caused by COVID-19 PPE
- Engaging in circular economy approaches
- Companies with innovative circular economy approaches in PPE manufacturing
- Collective action toward sustainability and circularity in PPE manufacturing

Report released on 8th November 2021

DOWNLOAD

https://www.ifc.org/wps/wcm/connect/9c307ecf-b68d-4638-9a0c-df3a65f65c3b/IFC+PPE+FA+v2_WEB.pdf?MOD=AJPERES&CVID=nQ0WWOj

IFC International Finance Corporation WORLD BANK GROUP

Creating Markets, Creating Opportunities

Sinem Demir Duru
Operations Officer, IFC
sdemir@ifc.org

Reflections from UNDP – Health care waste management

Dr Rosemary Kumwenda EECA Regional Team Leader

Reflections from UNDP – Health care waste management

Launch of new WHO publication Feb 2022

Dr Rosemary Kumwenda EECA Regional Team Leader

UNDP is an important partner in addressing safe and sustainable health care waste, especially considering the thought leadership for Governance and integrated Sustainable Development role that UNDP plays at the country level

UNDP supports over 80% of all developed Nationally Determined Contributions (NDCs) and Voluntary National Reviews (VNRs) SDG attainment reports – an opportunity for operationalizing the WHO report recommendations to feed into the .

Challenges, Lessons learnt and Recommendations

Challenges and lessons encountered during COVID pandemic

- Waste management service disruptions
- Insufficient PPEs for waste collectors
- Waste cross contamination
- Illegal HCW dumping
- Inadequate budget allocation for waste management

HOW UNDP supports HCWM

- With WHO and HCWH developed legal regulatory and policy guidance and assessment tools
- Has Good practice countries such as Ghana, Madagascar, Tanzania and Zambia
- Support to HCWM through GF C19RM where UNDP is PR..

WHO Global report has excellent implementable recommendations for various levels

How UNDP can further useWHO report recommendations

- At Global level through the UN Sustainable Procurement in the Health Sector initiative and One planet health interest Group coordinated by UNDP – scale up HCW advocacy among stakeholders
- Support National multisectoral waste coordination mechanisms including legal, regulatory and policy issues
- Support Research into social/economic return on investment (investing in waste management)
- Ensure that health sector carbon footprint is captured in the NDCs and Voluntary National Reviews on SDGs

Global Fund perspectives on Health Care Waste Management

Launch webinar for WHO analysis of Covid-19 waste

January 2022

Global Fund expenditures on HCWM: insufficient allocations relative to volume of health products

- **HCWM expenditures increased from $3.5mln to $8.1mln over last 2 funding cycles; then jumped to ~$61mln for Covid response in 2021.**
- **Nearly 60% (74 of 125) eligible COVID-19 funded countries requested support for HCMW.**
- **Compared to overall spending, allocations for HCWM remain low (approx. 0.3% of all funds disbursed).**

Main risks issues identified in 2019 'Landscape Analysis':

- **Lack of awareness of waste volumes/ hazards, and lack of trained personnel**
- **Lack of equipment for incineration/non-burn disposal, and insufficient resources for transport costs**
- **Lack of high-level governance to manage and coordinate**

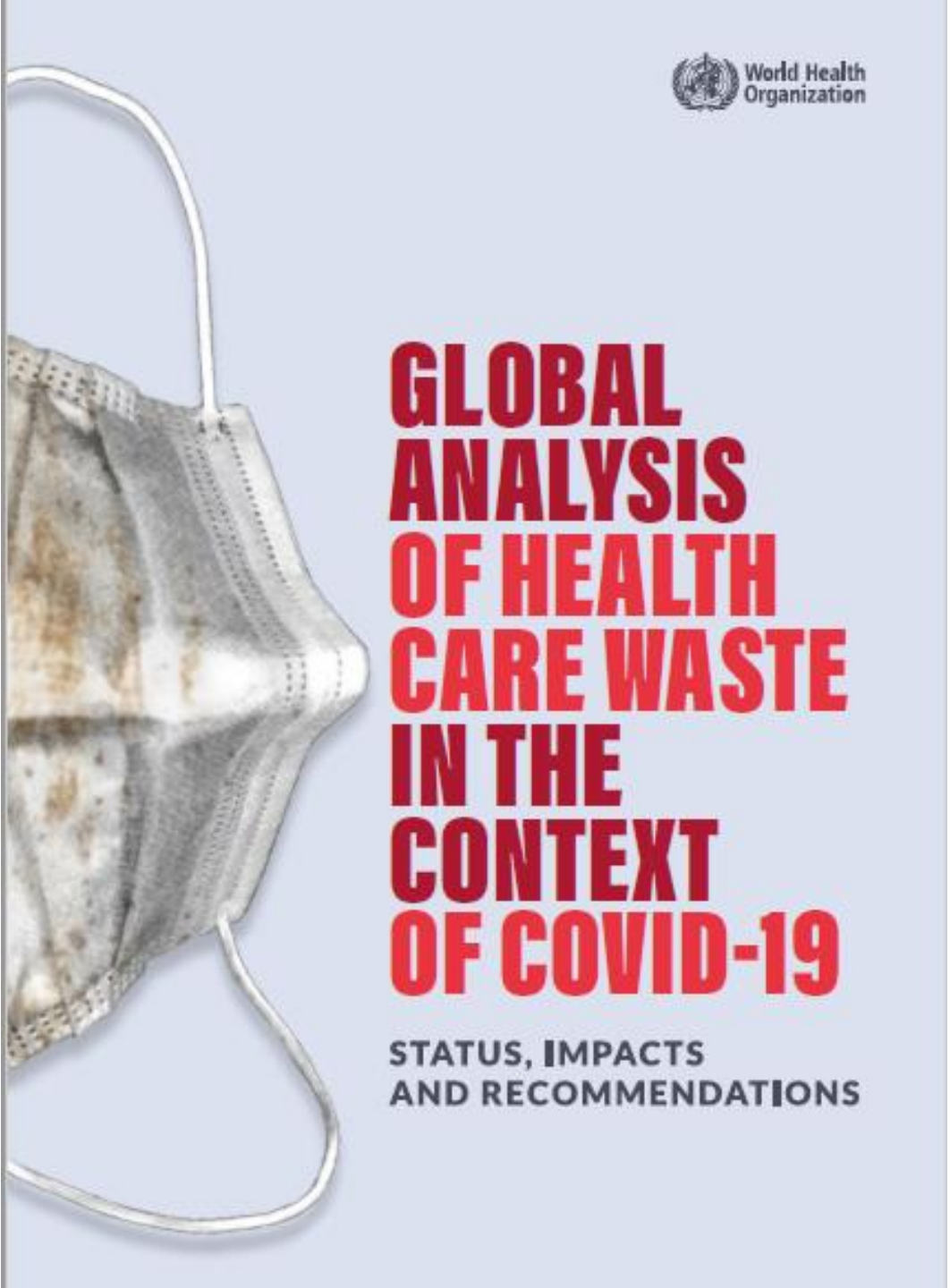
In 2019, GF developed the National Waste Management Capacity Tool

Internal webinars; trainings for Local Fund Agents; HCWM addressed with Technical Information Notes and guidance on Funding Request applications

Recommendations to institutionalize improved HCWM within GF operating model

- **Urgent need to adopt Waste Management tools & indicators:**
  - Stronger monitoring, clear expectations on accountability
  - More obvious and prominent section within grant application on HCW
  - Recommend two new indicators, 'Environmental KPIs':
    - Proportion of unused health products sent for disposal (%)
    - Proportion of Proportion of used healthcare products collected as part of a formal waste management system (%).

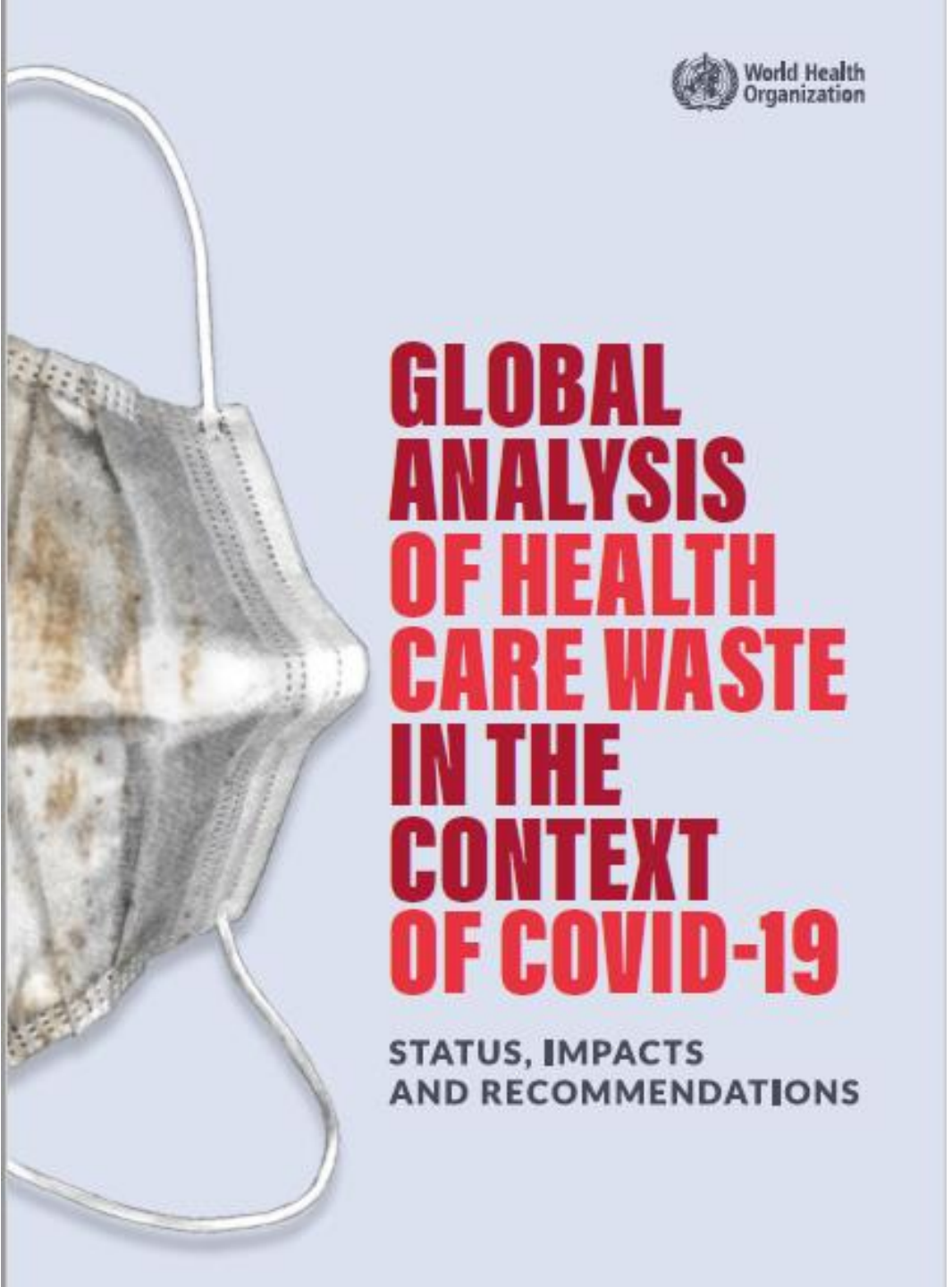
- **Clarify roles/ responsibilities within GF for championing HCWM**
  - Support countries to develop and operationalize National HCWM Plans
  - Explore innovative solutions with Private Sector, e.g. Take-Back schemes for old equipment
  - Digital health solutions: Focus on supply chain mngt to reduce wastage, overstocking, expiries
  - Consider a 'tax' embedded within Funding Requests, to ensure adequate allocations towards WM
    - *Develop consensus on appropriate target 'benchmarks' (%) for WM budget allocations relative to total spend*
  - Strengthen external partnerships and interagency advocacy



Ying Ling Lin

WHO Emergencies, Operations/Medical Devices Team

World Health Organization

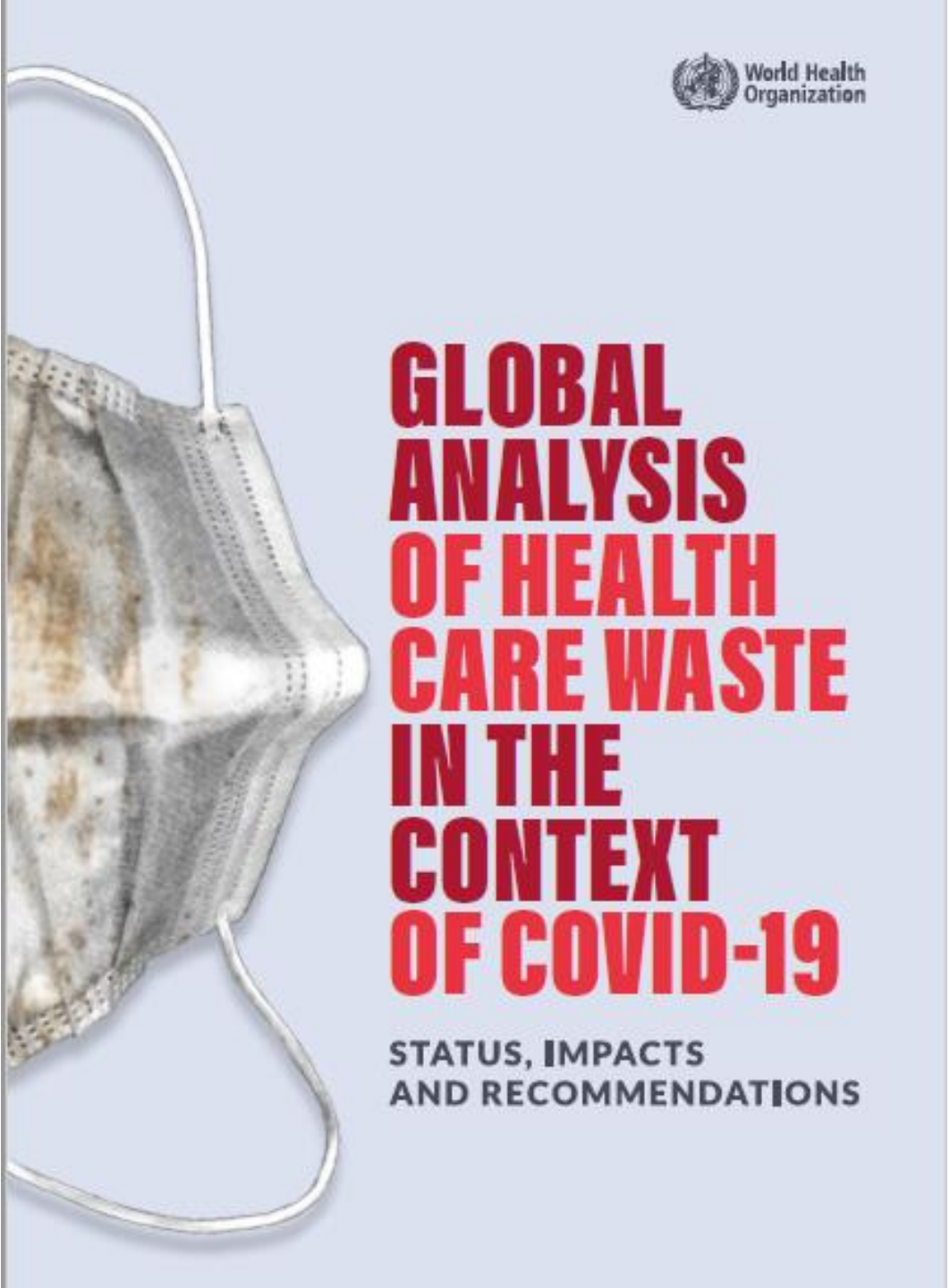


Closing remarks

Bruce Gordon,

Coordinator, Water, Sanitation, Hygiene and Health Unit, WHO

World Health Organization



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