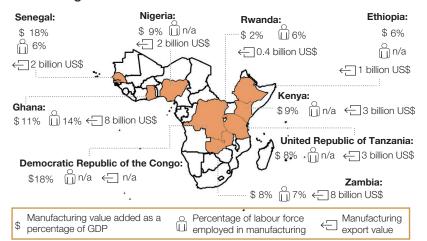


# Sustainable Manufacturing and Environmental Pollution Programme

## **Sub-Saharan Africa**

#### **SMEP** target countries



Averages of available data since 2015. n/a = no data available

Manufacturing in sub-Saharan Africa is promoted through national and regional development policy and championed by the African Union's Agenda 2063. In 2018, the industry contributed on average 10% to Gross Domestic Product (GDP) in SMEP target countries. However, international manufacturing data and academic literature in this region are limited. Furthermore, a significant proportion of the industry is informal meaning it is not captured in formal databases.

Information from international data sets, academic literature, and stakeholder engagement can be combined to identify a number of manufacturing industries of concern that could be causing human health and well-being impacts (as well as degradation of ecosystem services) across the region.



The impact caused by manufacturing pollution is dependent on production processes, the treatment of waste, contaminant pathways of pollution (by air, water and soil), as well as the characteristics of the exposed population, such as their occupation, age, gender and socio-economic status.

### Industry

# types



Food and beverages bleaching agents, air pollutants, noise



Textiles & wearing apparel



Chemicals & chemical products



Electrical equipment

# **Key pollutant**



Potentially toxic metals, dyes



Potentially toxic metals, dyes bleaching agents, air pollutants, noise



Potentially toxic metals, dyes bleaching agents, air pollutants, noise



Potentially toxic metals, dyes

# **Human health** effects



Cardiovascular & respiratory effects, carcinogenic, neurotoxic effects



Cardiovascular & respiratory effects, irritation & inflammation, carcinogenic, neurotoxic effects



Cardiovascular & respiratory effects, irritation & inflammation, carcinogenic, neurotoxic effects



Cardiovascular & respiratory effects, carcinogenic

# **Key pollutant** pathways





Water pollution, soil pollution



Water pollution, air pollution, soil pollution



Water pollution, air pollution



Air pollution. soil pollution

#### Interventions

### Food and beverages

- Physio-chemical effluent treatment
- · Improved energy efficiency of boilers and furnaces through insulation

# **Textiles and wearing** apparel

- · Effluent treatment plants
- Cleaner production techniques e.g. efficient water usage or chemical substitution
- Personal protective equipment

# Chemicals and chemical products

- Effluent treatment plants
- Personal protective equipment and training on occupational exposure
- Noise control technology (costly)

# **Electrical equipment**

- Emission regulations and pollution standards
- Minimum production capacities to ensure cleaner production
- · Cost-effective technologies for soil remediation