

# UNLEASHING AFRICA'S RESEARCH EXCELLENCE

## Maximising Global Health R&I in Africa-EU Development Cooperation

### Global health research and innovation (GH R&I) is critical for Africa's prosperity

Africa represents roughly 17% of the world's population. However, it accounts for 25% of the world's disease burden. Despite this, the continent spends less than 1% of global health spending, makes less than 2% of its medicines and produces less than 1% of global research output. Health and health research are chronically underfunded<sup>2</sup>:



**Health facilities in Africa**  
Less than 50% of countries have access to modern health facilities



**Health budgets**  
Less than 10% of GDP is spent on healthcare in most African countries



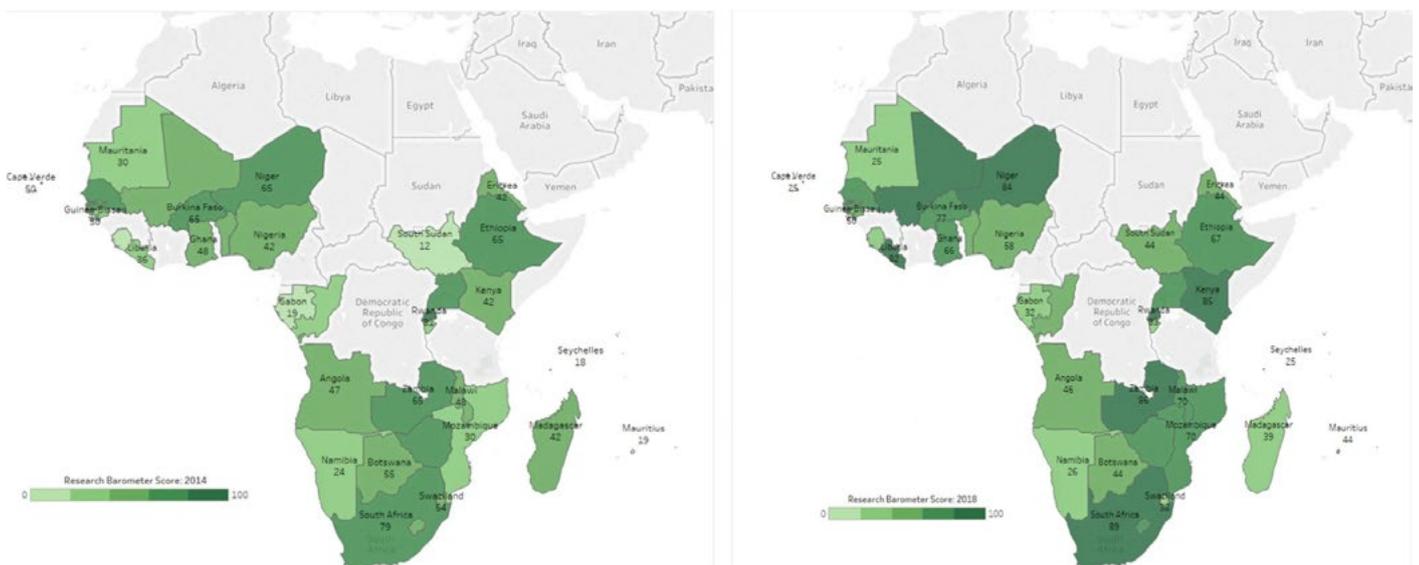
**Health workers**  
Only 2 health workers per thousand people



**Average health research capacity:** 42.3%, ranging from 6% to 81% amongst the countries<sup>3</sup>

GH R&I is the discovery and development of health technologies such as vaccines, diagnostics or drugs, as well as the development of capacity to realise those activities. **Improving the health and wellbeing of African people requires the generation of context-specific knowledge, technologies, innovations and expertise** underpinned by science-driven policies, long-term and sustainable international collaboration, and the efficient and transparent implementation of health and research programmes geared towards the realisation of the Sustainable Development Goals, the Africa Agenda 2063 and other key policies such as the Health Research and Innovation Strategy for Africa (HRISA)<sup>4</sup>.

### Health research performance in Africa (2014-2018)<sup>5</sup>: on the right track but far from reaching its potential



<sup>1</sup> Africa Renewal (2016) [Health care: from commitments to action](#), UN Department of Public Information. & Duermeijer, C. et al. (2018) [Africa generates less than 1% of the world's research: data analytics can change that](#), Elsevier. / <sup>2</sup> Pan African Parliament (2020) [African Parliamentarians aim for increased health budgets amid COVID-19 pandemic](#). / <sup>3</sup> WHO AFRO (2018) [The state of health in the WHO African Region: an analysis of the status of health services and health systems in the context of the Sustainable Development Goals](#). / <sup>4</sup> NEPAD-AUA (2018) [Health Research and Innovation Strategy for Africa 2018-2030](#), African Union. / <sup>5</sup> Simbarashe, R. Makanga, M. et al. (2019) [Strengthening national health research systems in the WHO African Region – progress towards universal health coverage](#), Globalization and Health, Volume 15:50.

## Poverty-related and neglected infectious diseases (PRNDs) are holding Africa back

PRNDs such as HIV & AIDS, tuberculosis (TB), malaria and neglected tropical diseases (NTDs) are a major cause of mortality and morbidity in sub-Saharan Africa<sup>6</sup>. They impose a heavy burden on individuals and societies, trapping millions in poverty, aggravating inequalities and hampering sustainable development<sup>7</sup>. **Despite that, huge gaps persist in the treatment and prevention of the majority of PRNDs. Where products exist, they are often poorly suited for use in Africa<sup>8</sup> or have unacceptable side effects.** Antimicrobial resistance (AMR)<sup>9</sup> is challenging the effectiveness of existing treatments, while epidemic outbreaks<sup>10</sup>, climate change<sup>11</sup>, and increased international mobility are amplifying the risks, spread, and negative impacts of these diseases.

- **Africa continues to be the most affected** by, and most vulnerable to, **infectious diseases<sup>12</sup>**, suffering from a “triple burden of disease” (non-communicable, communicable and emerging and re-emerging diseases).
- **612 million people in the continent need treatment** for at least one NTD<sup>13</sup>.
- **32 countries have worldwide successfully eliminated at least one NTD:** three of which are African. Ghana and Kenya have eliminated Guinea worm and trachoma as a public health challenge; and Togo lymphatic filariasis.
- **Vaccination led to the end of smallpox** and has put polio on the brink of eradication<sup>14</sup>.

Treatment coverage



61%

Elephantiasis

54%

Blinding Trachoma

47%

Intestinal Worms

63%

Bilharzia

71%

River Blindness



**382 MILLION PEOPLE**

received treatment in sub-saharan Africa in 2018



**230 MILLION PEOPLE**

did not receive treatment in sub-saharan Africa in 2018

### South Africa

- + Substantial progress in reducing TB and HIV&AIDS mortality in the last decade<sup>15</sup>.
- Both diseases remain among the leading causes of death<sup>16</sup>.
- Viral hepatitis, typhoid fever and cholera pose a high risk to the population<sup>17</sup>.

### Kenya

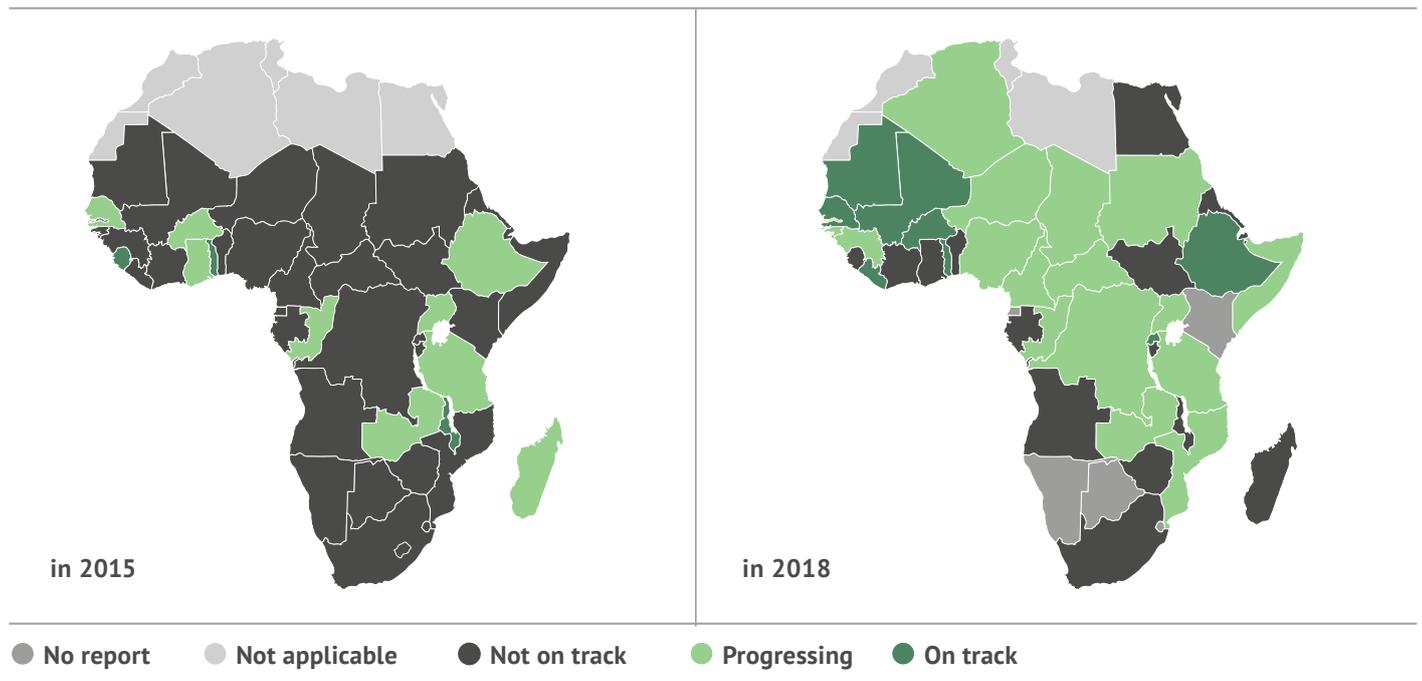
- + Substantial progress in reducing HIV & AIDS mortality and infection rate<sup>18</sup>.
- HIV & AIDS is still estimated to be the main cause of mortality (≈17%) and morbidity (≈15%)<sup>19</sup>.
- 25 million people at risk of malaria<sup>20</sup> and over 5 million of leishmaniasis<sup>21</sup>.

### Ethiopia

- + Remarkable progress against malaria<sup>20</sup>.
- Neonatal disorders, diarrhoea, lower respiratory diseases, and TB are the main causes of mortality<sup>23</sup>.
- Around 0.7 million people live with HIV<sup>24</sup>.
- Over 3 million people are at risk of visceral leishmaniasis<sup>25</sup>.

<sup>6</sup> WHO (2014) *The African Regional Health Report: The Health of the People* & Simon, G. (2016) *Impacts of neglected tropical disease on incidence and progression of HIV/AIDS, tuberculosis, and malaria*. International Journal of Infectious Diseases Vol. 42. / <sup>7</sup> Alleyne, G. and Cohen, D. (2002) *Health, Economic growth and poverty reduction*. WHO. / <sup>8</sup> DSW (2020) *Filling the global health gaps: where could EU R&I funding contribute* & Policy Cures Research. *R&D Needs for Global Health*. / <sup>9</sup> Goldberg, D. et al. (2012) *Outwitting Evolution: Fighting Drug Resistance in the Treatment of TB, Malaria and HIV*. Cell Review Vol. 148. / <sup>10</sup> Friends of The Global Fund (2020) *How COVID-19 is affecting the global response to AIDS, tuberculosis and malaria*. / <sup>11</sup> Malaria Consortium (2010). *Leishmaniasis control in eastern Africa: Past and present efforts and future needs. Situation and gap analysis*. / <sup>12</sup> Unless specified otherwise, data comes from the Institute for Health Metrics and Evaluation (2017) *Global Burden of Disease*. / <sup>13</sup> Uniting to Combat NTDs (2018) *Africa and neglected tropical diseases - profile* / <sup>14</sup> WHO AFRO (2020) *Africa is one-step away from wild polio eradication verdict* / <sup>15</sup> UNAIDS (2018) *South Africa* / <sup>16</sup> Loveday, M. et al. (2019) *Figures of the dead: a decade of TB mortality in South Africa*. South African Medical Journal. 109(10) / <sup>17</sup> South Africa (2017) *Country Cooperation Strategy*. WHO. / <sup>18</sup> UNAIDS (2018) *Kenya* / <sup>19</sup> Institute of Health Metrics (2017). *Kenya* / <sup>20</sup> Sultana, M. et al. (2017) *Prevalence and associated determinants of malaria parasites among Kenyan children*. Tropical Med Health. 45:25 / <sup>21</sup> Tonui, W.K. (2006). Situational analysis of leishmaniasis research in Kenya. African journal of health sciences vol. 13. / <sup>22</sup> Girum, T. et al. (2019) *Burden of malaria in Ethiopia, 2000-2016*. Trop Dis Travel Med Vaccines. 5:11. / <sup>23</sup> Institute of Health Metrics (2017). *Ethiopia*. / <sup>24</sup> UNAIDS (2017). *Ending AIDS progress towards the 90-90-90 targets*. Global aids update. WHO. / <sup>25</sup> Mohebbi, M. and Yimam, Y. (2020) *Prevalence estimates of human immunodeficiency virus (HIV) infection among visceral leishmaniasis infected people in Northwest Ethiopia*. BMC Infectious Diseases 20.

## Progress against NTDs<sup>21</sup>



Most African governments have improved their budget allocations to health in line with the Abuja Declaration<sup>27</sup>. There has also been some - albeit uneven - progress towards the Bamako commitment of allocating 2% of national health budgets to health R&I<sup>28</sup>, with a number of promising initiatives launched in recent decades<sup>29</sup>. However, the elimination of PRNDs remains slow due to a major disconnect between commitments and their implementation (e.g. limited data on funding and project implementation), remaining important product and knowledge gaps to prevent and treat PRNDs, insufficient human and financial resources, and the need for additional international support<sup>30</sup>.

### The benefits of Africa-EU cooperation on GH R&I: lessons learned and success stories

Global health requires global solutions, especially in the area of infectious diseases which do not respect borders. No country or region alone can crack the challenge of eradicating PRNDs and achieving better health for all. Hence international cooperation is fundamental to address the persisting research and product gaps. Moreover, GH R&I cooperation is beneficial for all parties involved: it creates health and social benefits such as quality jobs<sup>31</sup> and better educational and economic outcomes<sup>32</sup>, and it also has positive effects on the public opinion of citizens and public trust between parties<sup>33</sup>.

### Covid-19 shows the need for a more effective and deeper collaboration on GH R&I between Europe and Africa.

GH R&I cooperation is beneficial for all parties involved: it improves health and produces social benefits such as quality jobs and better educational and economic outcomes<sup>32</sup>. It also has positive effects on the public opinion of citizens and public trust between parties<sup>33</sup>. The European Union (EU) and the African Union (AU) committed in 2017 to strengthening preparedness to disease outbreaks, e.g. by supporting the Africa Centres for Disease Control and Prevention (Africa CDC), and to increase efforts in R&I for sustainable development<sup>34</sup>. The EU's new leadership recognises the strategic importance of Africa-EU relations, and with the new EU programmes to be launched in 2021, now is the perfect time to take GH R&I cooperation to the next level<sup>35</sup>.

#### People with Covid-19 and People with with TB in global fund eligible countries WHO AFRO Region / as of 25 June 2020



#### TB and Covid-19 deaths in global fund eligible countries WHO AFRO Region / as of 25 June 2020



Source: STOP TB Partnership

<sup>26</sup> <https://unitingtocombatntds.org/africa/> / <sup>27</sup> Health Systems Governance and Financing Unit (2016) *Public Financing for Health in Africa: from Abuja to the SDGs*. WHO. / <sup>28</sup> Kirigia, J.M. et al. (2015) *National health research systems in the WHO African Region*. Health Research Policy Systems. Vol. 13. / <sup>29</sup> ANDI (2016) *Facilitating Health Innovation in Africa Strategic Plan: 2016-2020*. / <sup>30</sup> AFRO (2019) *Report on the second joint programme managers' meeting on case management and preventive chemotherapy neglected tropical diseases, in the WHO Africa Region*. / <sup>31</sup> Wagner, Z. Barofsky, J. and Sood, N. (2015) *PEPFAR funding associated with an increase in employment among males in ten sub-Saharan African countries*. Health Affairs. 34(6):946-953. / <sup>32</sup> Barofsky, J. et al. (2015) *Malaria eradication and economic outcomes: Evidence from Uganda*. Journal of Health Economics. Vol. 44. / <sup>33</sup> Daschlem, T. and Frist, B. (2015) *The case for strategic health diplomacy: A study of PEPFAR*. Washington, DC: Bipartisan Policy Center. / <sup>34</sup> Council of the EU (2017) *AU-EU Summit 2017 declaration*. / <sup>35</sup> DSW and ECDPM (2020) *International collaboration in Horizon Europe. A new approach to partnering with Africa*.

## Africa-EU cooperation on GH R&I is a success story.

One of the best examples is the European and Developing Countries Clinical Trials Partnership (EDCTP), a partnership of European and African countries and the EU to support the clinical development of effective, safe, accessible, suitable and affordable medical interventions for HIV & AIDS, TB, malaria and other PRNDs. Between 2014 and 2019, EDCTP awarded 605 million euros in grant funding<sup>36</sup> contributing to collaborative clinical research, strengthening epidemic preparedness, training hundreds of African researchers, and supporting research ethics review and regulatory affairs in 24 sub-Saharan African countries.<sup>37</sup> Africa-EU cooperation was also critical to produce essential tools such as a vaccine against Ebola.<sup>38</sup>

The potential of Africa-EU collaboration on GH R&I remains however largely untapped. Africa-EU R&I collaboration has decreased in recent years and the lack of an overall strategy to support R&I through EU development funds has undermined the effectiveness of EU investments in this area.<sup>40</sup>

## A call for action: reaching the potential of Africa-EU cooperation on GH R&I

**ENDORSE** a EU-AU Science, Technology and Innovation Roadmap that puts health at its core at the AU-EU summit on October 28–30, 2020, and that identifies urgent global health R&I priorities and funding gaps and puts forward a robust governance, implementation and evaluation framework.

**CREATE** a task force on NTDs in the African Union and scale up support to the Africa CDC to enable greater African leadership, ownership and accountability, and epidemic preparedness and response.

**STEP UP** EU and African cash and in-kind investments and cooperation on R&I on PRNDs to move products through costly late stage clinical trials. Support an ambitious successor programme to the EDCTP and additional funds via Horizon Europe and the Neighbourhood, Development and International Cooperation Instrument (NDICI).

**FACILITATE** the accessibility and availability of health research data across continents; report the progress on implementing GH R&I policies (e.g. HRISA) and promote the use of research data in policy-making.

**ENCOURAGE** the creation of information platforms hosted by the AU on human resources for health to facilitate employment and training opportunities, and job creation and cooperation across the continent.

**ENHANCE** the participation of African researchers and innovators in EU bottom-up funding initiatives and promote the mobility of African and EU researchers within and between continents.

**SUPPORT** the strengthening and harmonisation of health systems in Africa, including research, regulatory and ethical systems. Support Africa's medicine manufacturing and distributing capacities.

**STRENGTHEN** the mechanisms for a meaningful participation of civil society in the design, implementation and evaluation of Africa-EU GH R&I policies, in particular, in the AU-EU High Level Policy Dialogue on Science, Technology and Innovation.

## In cooperation with



African Population and Health Research Center



Facilitating health R&I, innovation, and access



Deutsche Stiftung Weltbevölkerung



Translating science into global health impact



KENYA PROGRESSIVE NURSES ASSOCIATION



KENYA TREATMENT ACCESS MOVEMENT



Building Capacities, Changing Lives



Partnerships for Advancing Health



Stop TB Partnership KENYA



Champions for Health

<sup>36</sup> European Commission (2020) EDCTP factsheet. For more information, see [www.edctp.org](http://www.edctp.org) / <sup>37</sup> EDCTP (2018) Tackling infectious disease in sub-Saharan Africa / <sup>38</sup> European Commission (2020) Vaccine against Ebola: Commission grants new market authorisations / <sup>39</sup> ECDPM (2019) Refresh and Reload / <sup>40</sup> Mackie, J. et al. (2016) Evaluation of the EU Support to Research and Innovation for Development in Partner Countries (2007-2013)