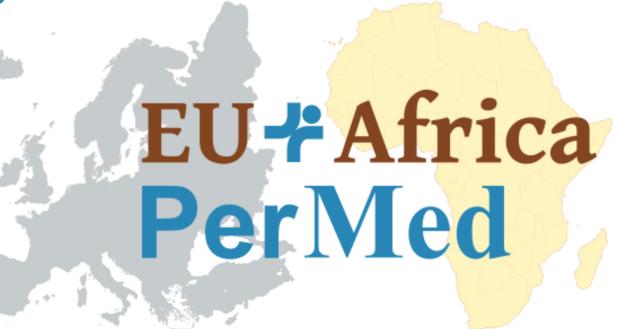
Personalised Medicine Gaps and Needs analysis in African regions:

The East Africa Region



Teresia Nyawira – NACOSTI, Kenya Cape Town, South Africa February 21, 2023



BUILDING LINKS BETWEEN
EUROPE AND AFRICA IN
PERSONALISED MEDICINE

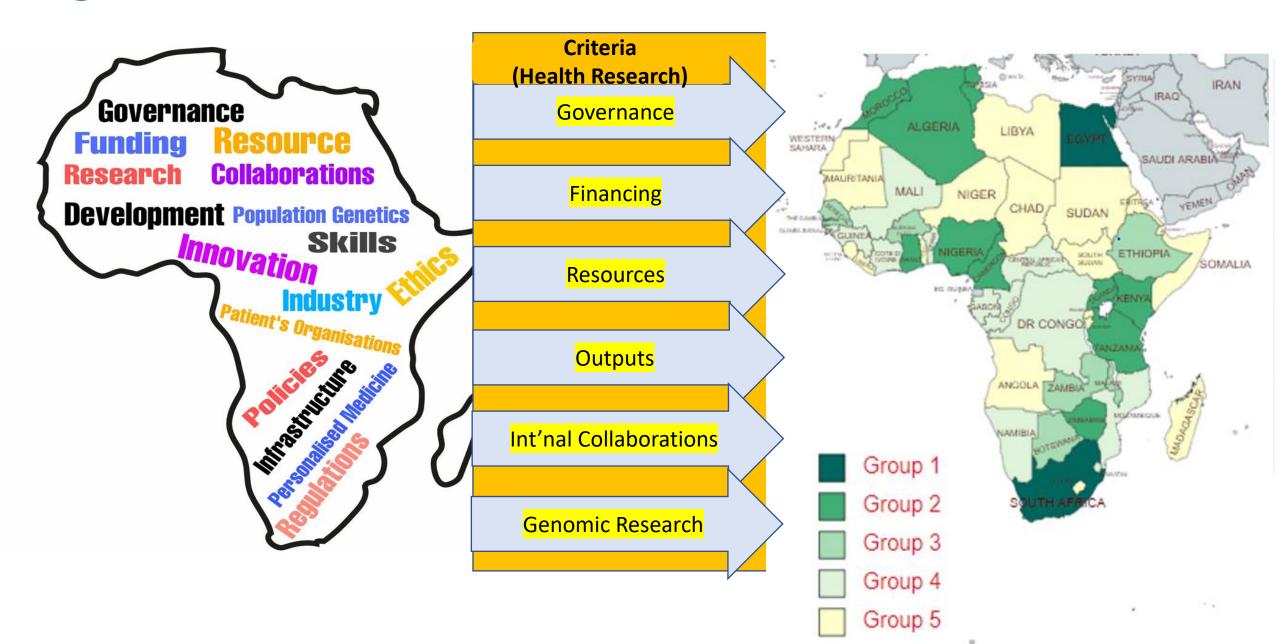


### Presentation Outline

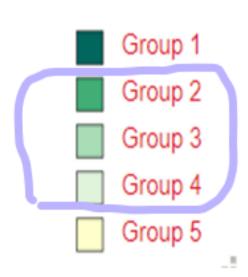
- The East Africa Regional Context
- Understanding the Region
- Strengths, Weaknesses, Opportunities, Barriers
- Gaps and Needs
- Areas of Interest
- Collaboration models



### Regional Context



The East Africa Region





Kenya Tanzania Uganda Ethiopia Rwanda



Group Photo for East Africa PM Stakeholders Workshop Participants 13/14<sup>th</sup> July 2022, Nairobi Kenya

## Understanding the Region

- High level of interest in PM;
- Found in Sub Saharan Africa,
- Members of East Africa Community, with an operational Health Research Commission and Commission for Science and Technology to promote and coordinate uptake of health and ST&I (Apart from Ethiopia);
- Have strategic ST&I policy frameworks (AAS 2018) with commitment to improve R&D investment



# SWOB Analysis - Strengths

- Have health research institutes with established research production;
- Presence of genomic research focusing on different diseases- infectious diseases;
- Health research policies available;
- Training programmes especially at postgraduate level;
- Sequencing/NGS facilities available for use in research though with limited clinical application;
- Have national research funding mechanisms;
- Established ethics review mechanisms at different levels-national, local institutional;



### SWOB Analysis - Weaknesses

- Low level of PM knowledge, PM not prioritised;
- Relatively weak health research system from poor implementation of relevant policies;
- Inadequate critical mass with right skill sets;
- Weak data driven systems: local electronic health records management; limited national data storage infrastructure, localised biobanking practices;
- Limited national research funding.



### SWOB Analysis - Opportunities and Barriers

### **Opportunities**

- Capacity building programmes
- Building/strengthening collaborations especially with the glowing global interest in strengthening health systems
- Demographic youth bulge and broad access to mobile tech and digitization as an opportunity for health solutions

#### **Barriers**

- Inadequate opportunities for skilled people/brain drain;
- Research agenda driven by external partners not addressing national health priorities

# Gaps

Kenya	Jganda -	Tanzania	Rwanda	Ethiopia
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- Sustainable domestic financing mechanisms;
- Private sector participation particularly in the Academia-Industry linkage expected to provide new product ideas and innovations;
- Research skills and expertise;
- Networks of excellence



## Needs

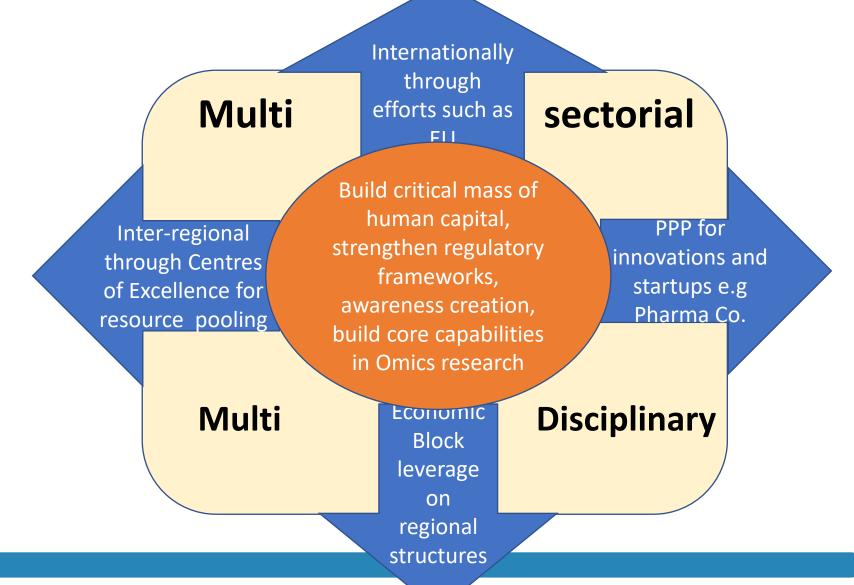
Kenya	Uganda	Tanzania	Rwanda	Ethiopia	
<ul> <li>Capacity in PM Development- Infrastructure, skills, strengthen academic programmes e.g bioinformatics</li> </ul>					
<ul> <li>Strengthening/ building regulatory frameworks that support PM</li> <li>Sensitization of stakeholders especially policymakers, patients</li> </ul>					
<ul> <li>Since PM requires a multisectoral, multidisciplinary approach, need for collaborations, public private partnerships,</li> </ul>					
<ul> <li>Translational Research connecting to innovation and implementation</li> </ul>					

### Areas of Interest

- Pharmacogenomics and promoting the pharma ecosystem
- Population genetics particularly in data generation and sharing;
- Training- Bioinformatics, data analysis;
- Developing PM strategies for promotion and adoption;
- PM focus in sickle cell disease (Kenya and Tanzania);
- HIV and TB host genomics research(Ethiopia and Kenya)



### Models of Collaboration







# Thank you



