OVERVIEW OF TIRDO RESEARCH AND DEVELOPMENT ACTIVITIES, TECHNICAL ADVISORY SERVICES AND FUTURE OUTLOOK

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• BRIEF INTRODUCTION OF TIRDO
• CORE FUNCTIONS OF TIRDO
• TECHNICAL CAPACITY AT TIRDO
• ACTIVITIES AT TIRDO LABORATORIES
• PRIORITY AREAS OF RESEARCH
• TECHNOLOGIES TRANSFERED
• FUTURE OUTLOOK/CONCLUSION
• The Tanzania Industrial Research and Development Organization (TIRDO) is a multi-disciplinary research and development organization established by an Act of Parliament No. 5 of 1979 and it became operational on 1st April, 1979.

• TIRDO is a semi autonomous organization under the Ministry of Industry and Trade.
Governing Policies on R&D at TIRDO

- National Research and Development Policy –2010
- Sustainable Industrial Development Policy 1996–2020
- National S,T &Innovation Policy –2010
- National Development Vision –2025
- IIDS–Master Plan –2011

Vision –2025
The core functions of the organization are:

• To carry out **APPLIED RESEARCH** in various aspects of local and foreign industrial techniques and technologies and evaluate their suitability for adaptation and alternative use

• To provide to the firms engaged in industrial production **ADVISORY TECHNICAL SERVICES** relating to the establishment of systems for the control and regulation of industrial processes

**GOAL** IMPROVED INDUSTRY PERFORMANCE & PRODUCTIVITY
TIRDO VISION

High Quality, Environmentally friendly and Demand Driven Research Institution with Outputs Resulting to Competitive Industry.
TIRDO MISSION

To Conduct Research, Development and Technical Services on Industrial Processes and Products, while utilizing local materials in partnership with Industries.
The technical capacity at TIRDO is built on Physical Laboratories and Pilot Plants for:

- Applied Research,
- Technology Development,
- Industrial Advisory Technical Support Services.
LABORATORIES

- Food and Microbiology Laboratory.
- Environment and Occupational Safety Laboratory.
- Agro Technology and Industrial Chemistry Laboratory.
- Materials Testing Laboratory/Non destructive testing Laboratory (NDT).
The Food and Microbiology Laboratory is the only Accredited Laboratory at TIRDO since 2009 through the South African National Accreditation Systems (SANAS) (SIX PARAMETERS ONLY)

Efforts are underway to accredit three (3) more laboratories which includes:

- Environment and Occupational Safety Laboratory;
- Materials Testing/NDT Laboratory
- Agro technology and Industrial Chemistry Laboratory
HUMAN RESOURCE CAPACITY

- TIRDO has 80 workers of which 45 are Scientists, Engineers and Technicians and the rest consists of Administrative personnel.
- PhDs  (9) (3 undertaking PhD studies)
- MScs  (23)
- Technicians (10)
PRIORITY AREAS OF RESEARCH FOR COLLABORATION

- Agro processing Technologies
- Gas and Petrochemical Technologies
- Textile and leather Technologies
- Coal, Iron and Steel Technologies
- Natural and Medicinal products Technologies
- Nanotechnologies (water and energy)
- Biotechnologies
PRIORITY AREAS OF RESEARCH- Cont.

• Renewable energies
• Aquatic Ecosystems and Water quality Technologies
• Environment/Pollution Prevention and Control Technologies
• Information and Communication technologies (ICT),
ON GOING RESEARCH ACTIVITIES

• Production of bio chemicals and bio fuels (such as glycerol, ethanol and bio methane) from biomass.
• Development and utilization of tunnel solar drying technologies for production of high quality cassava flour.
• Universities, Innovation and Inclusive development in Africa: Towards a Research network.
ON GOING TECHNICAL SERVICES TO INDUSTRY AND ESTABLISHMENTS

- Physical, Chemical and Microbiological testing of foods and water quality ( Metals and Non Metals), fuels, determination of calorific values etc.
- Environmental monitoring of Air quality, Waste water streams, Sound levels, Lighting levels, flue gas, particulate matter etc.
- Energy Audit to Industry, Government Buildings, Institutions, and establishments.
- Non Destructive Testing on Gas and Oil pipelines, Buildings, metal structures etc.
NEEDED SUPPORT FOR CAPACITY BUILDING

- Equipment maintenance and calibration
- Accreditation of Laboratories
- Purchase of specialized Equipment in the fields of Environment Monitoring
- Specialized Skills Development in the areas of Non Destructive Testing (NDT) on Concrete Structures
- Specialized Training on Equipment Utilization (XRF, AAS-Zeeman)
TECHNOLOGIES DEVELOPED AND TRANSFERRED

- Production of particle Boards using Cashew nut shell liquid Glue.
- Traceability systems in Coffee, Tea, Fish and Cashew nut Industries and GS 1 company in Tanzania.
- Bio control methods for prevention of Ochratoxin A in Coffee processing
- Solar drying technologies for vegetables and fish products
Supporting Environment for Research & Technology Development

- Policies to Support R&D, Innovation and Entrepreneurship.
- Tanzania has the political will to ensure that R&D is the National Agenda.
- Strong R&D – Academia Linkage.
- Provision of National R&D Fund.
- Availability of R&Ds in Diversified Fields (Agriculture, Medicine, Fisheries, wildlife, Biotech, etc)
FUTURE OUTLOOK

- Accreditation of all TIRDO laboratories to acquire international recognition of services.
- Establishment of more laboratories in Government strategic areas (leather and textile, metallurgy and energy technologies)
- Establish and strengthen collaboration with industry, academia and other R&D institutions locally and internationally.
THANK YOU FOR YOUR ATTENTION