



**Tanzania Industrial Research and
Development Organization (TIRDO)**



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1. INTRODUCTION

- 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



1.1 Mission

- To conduct research, development and technical services on industrial processes and products, while utilizing local materials in partnership with industries



1.2 Core functions

- i. Carry out and promote the carrying out of applied research designed to facilitate the evaluation, development and use of local materials in industrial processes.
- ii. Research into local and foreign industrial techniques and technologies and evaluate their suitability for adoption and use in industrial production.
- iii. Promote and provide facilities for training personnel for carrying out applied scientific and industrial research.
- iv. Operate documentation system to disseminate information on applied research.
- v. Provide technical services for industrial development
- vi. Provide technical capacity to mitigate industrial pollution.

1.3 Core departments

- **Industrial Research (Director)**
 - Food & biotechnology Division (Head)
 - Industrial Chemistry and Agro-processing Division (Head)
 - Environment and Occupational Safety Division (Head)
- **Engineering Development (Director)**
 - Materials Science and Technology Division (Head)
 - Textile and Leather Division (Head)
 - Energy Division (Head)
- **Information, Communication Technologies and Technology Transfer (Director)**
 - ICT Division (Head)
 - Instrumentation Division (Head)
 - Technology Transfer Division (Head)

2. ACTIVITIES AND PROGRESS MADE FOR THE LAST YEAR

2.1 Research and Development

- i. Green cassava processing
- ii. Coal briquetting
- iii. Development and transfer of mushroom substrate blocks

2.2 Consultancies in industrialization

- i. Complete shoe factory from tannery to leather goods
- ii. Cotton medical products (northern TZ – Simiyu region)
- iii. Others

2.3 Technical audits to industries; (18) audits

2.4 Environmental audits and environmental and social impact assessments (ESIA)

- i. ESIA is done for new projects
- ii. Auditing is done to operating projects

2.5 Energy auditing to industries

- i. 10 water utilities were audited for energy efficiency
- ii. Energy study to refugee camps (Nyarugusu, North-western Tanzania) was done for prospecting fuel switching to renewable energy.

3. COLLABORATION WITH TUBITAK MARMARA RESEARCH CENTRE, TURKEY

- MoU for technical collaboration was signed in 2016
- Areas of collaboration
 1. Energy
 2. Engineering
 3. Food science and technology
 4. Biotechnology
 5. Materials technology
 6. Environment, and
 7. Chemistry



TIRDO Director General
Tubitak MRC President



On-going collaboration activities with Tubitak MAM

- i. Development of technologies for extracting Mchuchuma and Liganga iron ore
 - VanadiumTitanomagnetite
 Fe_2O_3 (70.39%); TiO_2 (12.94%); V_2O_5 (0.52%) and Al_2O_3 (8.63%).
- ii. Development and transfer of coal briquettes for household/ industrial use.
- iii. Technical services e.g., materials analysis (essential oils, etc.)

4. SOUTH-SOUTH COLLABORATION

4.1 Under COMSATS

- Collaborate with Tubitak MAM (Coal, services); IRCC Sudan (Leather technologies)
- Participating in ITRG (Mathematical modeling)
- Participated in Training Workshop on "Waste to Energy at the Zhejiang University, Hangzhou China From 22nd October - 3rd November 2018
- Established the COMSATS Centre for Climate & Sustainability (CCCS) at TIRDO
(<http://www.tirido.or.tz/CCCS1.php>)
 - Ambassador Kamal is highly appreciated

4. SOUTH-SOUTH COLLABORATION

4.2 General

- Participates in regional projects and research
- Regional research on [Innovating OKOA Substrate Blocks for Mushrooms Cultivation](#) in collaboration with researchers from University of Rwanda
- Signed a memorandum of understanding (MoU) with Africa region research centres for Uganda (UIRI) and Kenya (KIRDI)

5. S&T FOR ACHIEVING SUSTAINABLE DEVELOPMENT GOALS

TIRDO establishment was in fulfilling that science and technology contribute significantly to the country's socio-economic development. The organization is therefore mandated to:

- Undertake R&D for industries
- Provide industrial technical and quality assurance
- Advise the Government on issues pertaining to industrial development

.... /SUSTAINABLE DEVELOPMENT GOALS

GOAL		INTERVENTION BY TIRDO
1	No poverty	Food and Microbiology Division
2	Zero hunger	* Post harvest reduction through development of agro processing technologies
6	Clean water	Accredited laboratory with Food and Microbiology Division * Potable water analysis
7	Affordable and clean energy	Energy Technologies Division (Energy Management Centre) * Energy Management services to industries, commercial centres, and households) * Energy materials analytical services
9	Industry, innovation and infrastructure	* Research and development activities * Skills development to industrialists * Services to industries
13	Climate action	Environmenta and Occupational Health Division * Environmental and social impact assessment (ESIA) * Environmental auditing to industries * Advisory services to Government and community * Capacity building (training)

6. FUTURE PROSPECTS FOR COLLABORATION UNDER COMSATS' NETWORK

1. Joint research and development projects
 - Research
 - Consultancies
2. Capacity building activities
 - Training through COMSATS and by utilizing member countries' capacity building programs
3. Expert exchange and staff attachment
 - For bridging capacity gap at TIRDO
4. Technology transfer
 - Agro processing
 - Industrial technologies
 - Coal and mining, etc.

THANK YOU, ASANTE



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