20th Meeting of COMSATS Coordinating Council

Council for Scientific and Industrial Research (CSIR-Ghana)

Prof. Victor Agyeman Esq
Director-General

14-15 May 2017
Presentation outline:

1. Introduction
2. Organizational structure
3. Staff Profile
4. Key performance Index
5. Budget
6. Awards
7. Research programmes (Publications)
8. Capacity building
9. New programmes
10. International collaborations
11. S &T coorperation requests
12. Conclusion
Introduction

- The Council for Scientific and Industrial Research (CSIR) is the foremost Scientific and Technological Institution in Ghana.

- It has 13 Research institutes located throughout Ghana in all the agro ecological zones.

- The current strategic re-orientation of the CSIR has resulted in remarkable improvement in the quality of research programmes and outputs.
CSIR Nation-Wide Location
Introduction

- This has led to an improvement in technological development capacity within the Institutes.

- Evidenced by the relatively high number of national and international awards received by scientists and institutions.

- CSIR is working within the framework of Seven (7) Corporate Research Thematic Areas namely:
NEW CSIR RESEARCH PROGRAMMES

Centres of Excellence

- Food Security & Poverty Reduction
- Biotechnology & Biomedical Science
- Materials, Built Environment & Manufacturing
- Electronics & ICT
- Science & People / Technology for Society
- Energy & Petroleum
- Climate Change & Environmental Conservation
# Staff Profile

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Staff</td>
<td>3506</td>
<td>100</td>
</tr>
<tr>
<td>Senior Members</td>
<td>584</td>
<td>17%</td>
</tr>
<tr>
<td>Senior Staff</td>
<td>1057</td>
<td>30%</td>
</tr>
<tr>
<td>Junior Staff</td>
<td>1865</td>
<td>53%</td>
</tr>
</tbody>
</table>

- **Senior Members**: 584 (17%)
- **Senior Staff**: 1057 (30%)
- **Junior Staff**: 1865 (53%)
# Staff Qualification

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
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<tbody>
<tr>
<td>PhD</td>
<td>285</td>
</tr>
<tr>
<td>MPhil/MSc</td>
<td>252</td>
</tr>
<tr>
<td>BSc</td>
<td>600</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1137</strong></td>
</tr>
</tbody>
</table>

![Pie chart showing percentages of PhD, MPhil/MSc, and BSc qualifications](chart.png)

- PhD: 53% (285/1137)
- MPhil/MSc: 25% (252/1137)
- BSc: 22% (600/1137)
Some Key Performance Indicators

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publications</td>
<td>447</td>
</tr>
<tr>
<td>Patents</td>
<td>2</td>
</tr>
<tr>
<td>Copyright</td>
<td>161</td>
</tr>
<tr>
<td>Market Products</td>
<td>31</td>
</tr>
</tbody>
</table>
## Capacity Building

<table>
<thead>
<tr>
<th>Training</th>
<th>PhD</th>
<th>MPhil/MSc</th>
<th>BSc</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>138</td>
<td>75</td>
<td>36</td>
</tr>
</tbody>
</table>

5/24/2017
## Budget

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount Released, $m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation</td>
<td>23.201</td>
</tr>
<tr>
<td>Goods And Services</td>
<td>3.575</td>
</tr>
<tr>
<td>Capital</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27.026</strong></td>
</tr>
<tr>
<td>Donor Funded-projects</td>
<td>10.110</td>
</tr>
<tr>
<td>IGF</td>
<td>2.04</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>12.150</strong></td>
</tr>
</tbody>
</table>
Compensation: 86%

Goods and Services: 13%

Capital: 1%

Donor Funded-projects: 26%

IGF: 5%

GOG: 69%
National Awards

- **2016 Best Agricultural Researcher** - CSIR-SARI led by DR. Francis Kusi

- **2016 Technology Impact Award**
  - The CSIR was adjudged winner of the *Excellence in Product Innovation (Manufacturing) Award*.

- **2016 The Ghana Development Award** for Making Available Various Technologies and Locally Produced Products for use by Enterprises and Households across Ghana
STI Policy Interventions

- Presidential Advisory Council on STI
  - Mainstreaming of S&T into government Policies and programmes

- Creation of National Research Fund
  - Provide sustainable funding for Research and development

- Establishment of National Innovation Centre
  - Provide incubation facilities for young business entrepreneurs
  - Liaise with Business community for effective use of research results
CROPS IMPROVEMENT

- Varieties of crops spanning the Ghanaian staple spectrum:
  - Cereals: *Maize, Rice, Sorghum & Millet*
  - Grain Legumes: *Cowpeas, Peanuts, Soyabean, etc.*

- Good agricultural practices (GAPs) as component technologies to assure optimum production and productivity.
VALUE ADDITION TECHNOLOGY

- **CSIR-Food Research Institute** has array of agro-processing/value addition technology.

- A number of commercial convenience foods in the Ghanaian and external market patronize our technologies.
POZZOLANA CEMENT
CSIR-GRADUATE SCHOOL

- CSIR Ghana has established a Graduate students.
- 6 Campuses in Accra and Kumasi
- Academic work started in September 2016
- 40 Pioneeer students
- Target in 5 years - 400 graduate students
Graduate School CSIR College of Science and Technology (CCST)

The seven (7) programmes offered are:

- MSc Climate Change and Integrated Natural Resources Management
- MPhil Climate Change and Integrated Natural Resources Management
- MPhil Soil Health and Environmental Resources Management
- MPhil Fisheries and Aquaculture
- MPhil Agro-Processing Technology & Bio-Sciences
- MPhil Plant Breeding & Biotechnology
- MPhil Industrial Animal Nutrition and Feed Production
2 more programmes will be added next academic year and these are:

- Transportation Planning and Engineering
- Construction Engineering
International Collaboration

- CSIR-NDRC of India on Ghana-Indian tomato project.
- CSIR/CORAF-WECARD/ECOWAS Project on Control of Mango Fruit Flies
- CSIR/EU HORIZON 2020 on Tropicsafe Project
- CSIR/IDRC (Canada) – Coconut lethal Yellowing Disease Project
International Collaboration

- CSIR/Iowa State University (US) – Integrated Soil Fertility Management
- CSIR/Univ. of Illinois (US) - Soybean Improvement Programme
- CSIR/Oxford University (UK) – impacts of EL Nino on the Carbon Oxide of Tropical Forests
- CSIR/Burn University – Accreditation of Wood and Furniture Testing Laboratory
International Collaboration

• CSIR/TRL (UK) - AFCAP Project of Hazardous Sites and Recommendation of Remedial Measures

• CSIR-GH/CSIR-SA – ReCAP Project on Alternatives to Steep Slopes

• CSIR/Bloomberg (US) - Initiative for Global Road Safety

• CSIR/Johns Hopkins (US) - Rural Transport Diagnostics Survey

• CSIR/Univ. of Finland on CAAST-Net funded by EU
Collaboration with International Research Institutions

- CSIR-Ghana has many collaborations with international research organizations house within its premises in Accra.

- These include:
  - International Water Management Institute (IWIMI)
  - Alliance for Green Revolution in Africa (AGRA)
  - Forum for Agriculture Research in Africa (FARA)
  - Center for Agriculture and Biosciences International (CABI)
  - West African Science Service Center on Climate Change and Adapted Land Use (WASCAL)
  - International Food Policy Research Institute (IFPRI)
  - Brazilian Agricultural Research Cooperation (EMBRAPA).
S&T Cooperation offers to other network members

- Joint research work
  - So far none but we have been in touch with TUBITAK MAM of Turkey on Materials Science, and Bitumen/Asphalt research project

- Training facilities – CSIR has the following facilities for training of Scientists
  - Biotechnology laboratory
  - Accredited Food Science laboratory
  - Quality Water Control laboratory
  - Soil Nutrient Analysis laboratory
Conclusion

- The CSIR within the last one year has chalked quite an impressive success in its Research and Development Agenda.

- Efforts are made to improve upon this in the coming year as the Government planned to increase funding for Research in the country.

- The CSIR also look forward to greater collaborations with other International Research Institutions.
THANK YOU