Prof. Ishenkumba Kahwa's Summary of Achievements and Profile

1. **Personal Information**: Prof. Ishenkumba Kahwa (date of Birth October 01, 1952) received his BSc (Ed) (Hons) majoring in Chemistry and Mathematics with Education Option and an MSc (Inorganic Chemistry) from the University of Dar es Salaam (Tanzania) in 1976 and 1980 respectively; he obtained his PhD (Inorganic Chemistry) from Louisiana State University (USA) in 1986 on a Fulbright Scholarship.

2. **Employment History**: He has served at the University of the West Indies, Mona Campus, Jamaica since 1987 as Lecturer (1987-1993); Senior Lecturer 1993-2000; and Professor of Supramolecular Chemistry (2000-2018); Emeritus Professor (since 2020). He served in leadership positions as: Head, Department of Chemistry (2002-2008), Dean, Faculty of Science and Technology (formerly Faculty of Pure and Applied sciences) (2008-2013) and Deputy Principal, Mona Campus (2013-2018).

3. **Awards:** He has received several awards for his work including: CARICOM Science Award (2011), Gleaner Award for Science and Technology (2003), Vice Chancellor's Award for Excellence in Research and Public Service (2004), Fellow of the Caribbean Academy of Sciences and Fellow of the World Academy of Sciences, TWAS, (formerly, the Third World Academy of Sciences). Order of Distinction –Commander Class (Jamaica Government) - 2016

4. **Major Research Accomplishments**:

   a) **Novel molecular systems and their laser induced luminescence behaviour:** Since joining the University of the West Indies, Mona Campus, Jamaica in 1987, Prof. Kahwa established a research programme focused on how charged species (ions) derived from metal atoms interact. Ions can influence each other either through their intrinsic electronic behaviours or cooperative chemical or physical activity. Systems containing such interacting ions have potential as efficient medical diagnostics and therapeutics, catalysts or as inputs for the preparation of new generations of sophisticated materials. Prof. Kahwa has collaborated with his students who successfully completed their studies (13 PhD; 5 M.Phil.) to prepare and determine the precise identities of a series of new molecules featuring clusters of metal ions that are within short distances from each other and capable of interacting. Many of these systems have fascinating magnetic and electronic behaviours that were readily probed using laser beams in the laboratory he set up at UWI Mona.

   b) **Hazardous Materials in Jamaica:** In collaboration with the Labour Studies Programme (UWI), the Department of Community Medicine and Psychiatry (UWI) and a broad-based coalition of several stake holders from Jamaica and USA that he assembled, Prof. Kahwa led the development and establishment of a new suite of B.Sc, M.Sc, M.Phil. and Ph.D. programmes in Occupational and Environmental Safety and Health (OESH). These programmes, which begun at UWI in September 2006 under Prof. Kahwa's leadership, are now hosted by the Departments of Chemistry at the Mona (Jamaica) and St Augustine (Trinidad and Tobago) Campuses. The programmes development received significant financial support from the Environmental Foundation of Jamaica and International Labour Organization and resulted from extensive research on hazardous materials, especially asbestos, carried out in Jamaica by Prof. Kahwa's team.

5. **Entrepreneurial Activities:** Prof. Kahwa set up a small business to safely remove, package and dispose of asbestos in Jamaica and has helped many companies and institutions to manage their asbestos problems. Until then such service was sourced from overseas companies. Since he started the business, there are two other licensed local asbestos abatement operators. His efforts to get Jamaica to put in place mechanisms to manage asbestos pollution contributed to the establishment of the designated disposal

facility by the NSWMA, licensing regime for operators and national guidelines for handling asbestos by National Environment and Planning Agency (NEPA), and wide use and availability of related safety equipment.

6. **Achievements as Leader at UWI**: Prof. Kahwa has served the UWI as Head of the Chemistry Department, Dean of the Faculty of Science and Technology and Deputy Principal of the Mona Campus. He is currently Professor Emeritus following his retirement in 2018.

a) **Head of the Department of Chemistry:** As Head of the Department of Chemistry, along with his colleagues, he initiated curriculum reform across the UWI which he and his colleagues articulated in a wide ranging press coverage by a major international Chemical and Engineering magazine published by the American Chemical Society (http://pubs.acs.org/cen/science/8223/print/8223sci1.html). The Department's infrastructure was enhanced through acquisition of more teaching and research stations (fume hoods); recruitment was streamlined to include psychometric tests and extensive interviews; and publication outputs were among the highest at UWI.

b) **Member of the UWI Mona Strategic Transformation Team:** Prof. Kahwa was a member of a select team of five distinguished professors charged with a task of identifying challenges facing the UWI Mona, developing and implementing strategies for repositioning the UWI Mona Campus to deliver its mandate in what had become a very competitive environment. The team identified financial precariousness, serious competition and systemic underperformance as threats to UWI Mona's survival and viability. Prof. Kahwa was tasked with developing strategies for scholastic enhancement. He introduced quantitative instruments and processes for evaluating/assessing the quality and impact of research outputs and led the identification of new opportunities for increasing research output and impact through capacity building, consolidation of resource mobilization efforts for research, publications and graduate education.

c) **Dean of the Faculty of Pure and Applied Sciences**: As Dean of the Faculty of Science and Technology he initiated and oversaw major curriclum reform initiatives, which were adopted across the whole university. The Faculties of Science and Technology defined a minimum number of credits for a major and opened the door for its students to customize their degrees. Students could broaden their career options through multi-, cross- and inter-disciplenary approaches by pursuing courses of interest in other departments and faculties for credit. More opportunties were also created for students from other faculties to take courses in the Faculty of Science and Technology.

The Faculty introduced successful engineering (now offered by a new Faculty of Engineering) and agriculture programmes of study.

d) **As Deputy Principal:** He succesfully led the UWI negotiation team on the well received J$4Billion student accomodation Public Private Partnership (PPP) project with a local investor. This success opened new and more PPP opportunities with overseas players. He also initiated transformation of student services, introduction of formal student entrepreneurship programming and enganging more effective academic quality assurance management mechanisms.

e) **Conflict Resolution and Institution Building:** When the civility situation in the Department of Mathematics and Computing deteriorated and began threatening orderly operations of the whole of the, then, Faculty of Pure and Applied Science the UWI Mona turned to Prof. Kahwa to get to the bottom of the problem and identify solutions. He led a team that succesfully identified the problem and proposed tough solutions. These were implemented but it was when he became Dean in 2008 that the he led the Campus's effort to enforce key measures which effectively stabilized the Department and set it on a growth path. It is now an admirable and productive academic department.

7. **International Level Contributions:** Prof. Kahwa has contributed to major initiatives around the world as a referee for several international journals and was a member of a high level team helping the African Union to estalish a five campus continental university, ***The Pan African University***. He also was an advisor to the African Technology Policy Studies Programme and a European Union funded research programme and reviews applications and nominations for membership and research funding submitted to the World Academy of Sciences.

8. **Regional and National Contributions:** Prof. Kahwa is very much engaged in the development of science, technology and innovation (STI) in Jamaica and the Caribbean. He co-led the STI policy review/development in Jamaica.

   He also served as a member of the CARICOM STI Committee set up by the Hon. Dr. Keith Mitchell, the CARICOM Prime Minister in charge of STI, to chart out strategies for CARICOM to take advantage of STI to achieve rapid economic and social development.

   He has been the co-author of the CARICOM STI Chapter of the UNESCO World Science Report, which is published every five years, since 2005. The latest publication of the report was in 2021 (https://www.unesco.org/reports/science/2021/en).

9. **He has served on the Boards of:**

   a) The Hazardous Substances Regulatory Authority – Chairman (since 2016).

   b) Petrojam Ethanol Ltd. – Vice Chairmen (since 2019).

   c) Jamaica National Agency for Accreditation (since 2017)

d) International Centre for Emvironmental and Nuclear Sciences (Member 1999-2021; Vice Chairman (2017-2021).

e) Mona Institute of Applied Sciences (since 2008).

f) Technology Solutions Ltd. (since 2020)

g) Environmental Health Foundation (since 2018).

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