

# FOOD SECURITY AND LIVELIHOODS IN AFRICA IN THE 21<sup>ST</sup> CENTURY

THE ROLE OF AGRICULTURAL TRAINING  
INSTITUTIONS

by

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# INTRODUCTION

- STRUCURAL REVOLUTIONS IN WORLD DEVELOPMENT SINCE 1960
  - GREEN REVOLUTION
  - WHITE REVOLUTION
  - BLUE REVOLUTION
  - SCIENCE AND TECHNOLOGY REVOLUTION

# AFRICA'S SHORTFALL IN THE GREEN AND OTHER REVOLUTIONS

- NEGATING SOCIAL AND CULTURAL SYSTEMS
- UNSTABLE AND UNDEMOCRATIC POLITICAL SYSTEMS
- WEAK INSTITUTIONS
- MISSING LINK IN AGRICULTURAL SYSTEMS
- INADEQUATE POLICY FRAMEWORKS
- INADEQUATE ATTENTION TO 5 DEV EVILS:  
POVERTY, ILLITERACY, IGNORANCE, DISEASE,  
GOVERNANCE

# CONTRASTING EXPERIENCE OF ASIAN COUNTRIES (TIGER ECONOMIES)

- COURAGE, AND SENSE OF PURPOSE
- ENCOURAGEMENT OF INNOVATIVENESS
- REINFORCEMENT OF POSITIVE CULTURAL VALUES AND SYSTEMS
- VISIONARY ATTACKS ON REVOLUTIONS
- INSTITUTIONAL SUPPORT
- CAPACITY BUILDING (RESEARCH, ADAPTATION AND ADOPTION OF TECHNOLOGIES)

# PARADOX OF THE ASIAN EXPERIENCE

- PREVAILING STATE INEFFICIENCY
- WIDESPREAD CORRUPTION
- RELATIVELY COMPETENT AND EFFICIENT CIVIL SERVICE
- INVOLVEMENT AND PARTICIPATION OF PUBLIC AND PRIVATE SECTOR IN CHANGE
- APPROPRIATE TECHNOLOGY THROUGH REVERSE ENGINEERING

# PAST EFFORTS IN DEVELOPING AGRICULTURAL SECTOR IN AFRICA

- HEAVY EMPHASIS ON STATE-DOMINATED PARADIGM ACCOMPANIED BY INEFFECTIVE AND INEFFICIENT GOVERNMENTS AND INSTITUTIONS
- CRISIS OF STATE CAPABILITY AND LEGITIMACY
- HEAVY DEPENDENCE ON FOREIGN AID
- LOW INDIGENOUS TECHNOLOGICAL CAPABILITY

# PRE-REQUISITES FOR SUCCESSFUL AFRICAN AGRICULTURE

- WORK IN SYNERGY WITH WORLD AGENDAS
- TARGET SOCIAL GOALS SUCH AS POVERTY REDUCTION, QUALITY OF LIFE, LIVELIHOODS, HEALTH, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT
- FIGHT RURAL-URBAN MIGRATION
- HIGH POPULATION GROWTH AND URBAN CONCENTRATIONS

# THE CAMEROON ENVIRONMENT

- NATURAL ENDOWMENTS IN NATURAL RESOURCES AND GEOGRAPHICAL LOCATION
- FAVOURABLE CLIMATIC CONDITIONS
- RICH SOILS
- POTENTIAL FOR DIVERSIFIED AGRICULTURAL PRODUCTION
- RICH HUMAN RESOURCES
- CULTURAL DIVERSITY



# OVERVIEW OF CAMEROON AGRICULTURAL SECTOR

- CAMEROON COVERS 1.6% OF CONTINENT
- 54% OF AFRICAN BIRD SPECIES
- 50% OF KNOWN AMPHIBIAN SPECIES
- 50% OF THE REPTILE SPECIES
- 48% OF THE MAMMALS
- 42% RECORDED AFRICAN BUTTERFLY SPECIES
- 21% OF THE AFRICAN FISH SPECIES
- ONLY 11% OF IRRIGABLE LAND IRRIGATED

# CAMEROON AGRICULTURE CONT.

- AGRICULTURE PRODOMINANTLY SUBSISTENT
- MEAN FARM SIZE IS 1.6 HA
- RUDIMENTARY AGRICULTURAL TECHNOLOGY
- LOW-INPUT AGRICULTURE
- INSUFFICIENT AGRICULTURAL EXTENTION
- LOW INVESTMENTS IN AGRICULTURAL RESEARCH
- PROBLEMS OF MARKETING AND PROCESSING

# CONSTRAINTS TO FORESTRY AND NATURAL RESOURCES PROTECTION

- MAN-MADE DEFORESTATION AND NATURAL SOIL EROSION
- AGGRAVATED HUNTING AND POARCHING
- ABUSIVE EXPLOITATION OF FORESTRY AND WATER RESOURCES
- INADEQUATE ENFORMCE OF POLICIES
- ABSENCE OF COMPREHENSIVE LANDUSE LAWS
- RAPID UNCHECKED URBANIZATION

# BRIEF OVERVIEW OF CAMEROON EDUCATION SYSTEM

## **ANGLOPHONE SYSTEM**

- 7-5-2 SEQUENCE
- UP TO 2007 7 YEARS OF PRIMARY SCHOOL
- AGRICULTURE WAS A SUBJECT ON PRIMARY SCHOOL CURRICULUM
- EMPHASIS ON LEARNING BY DOING AND ACQUISITION OF SKILLS & COMPETENCES

## **FRANCOPHONE SYSTEM**

- 6-4-2 SEQUENCE
- HAVE ALWAYS BEEN SIX YEARS OF PRIMARY SCHOOL
- AGRICULTURE WAS NOT A SUBJECT ON MOST PRIMARY SCHOOL CURRICULAR
- EMPHASIS ON MEMORIZATION, ROTE AND CERTIFICATES

# GROWTH IN CAMEROON TERTIARY EDUCATION

- 213 STUDENTS IN UNIVERSITY IN 1961
- 1 677 IN 1966/67
- 7,746 IN 1976/77
- 34,180 IN 1990/91
- 44,551 IN 1992/93
- 80,000 IN 2000
- 120,000 IN 2004
- ABOUT 180,000 IN 2009

# PERFORMANCE OF AGRICULTURAL EDUCATION IN CAMEROON

- SLOW GROWTH RATE DUE TO STRONG SELECTION PROCESS AND LIMITED ACCESS
- LOW EQUITY RATIOS ON GENDER, SOCIAL AND GEOGRAPHY
- COLLAPSE OF PLACEMENT OF GRADUATES
- UNADAPTED CURRICULAE
- UNSTABLE INSTITUTIONAL REFORMS
- WEAK POLICY FRAMEWORKS

# THE ROLE OF THE STATE IN EDUCATION

- CENTRAL REGULATORY ON EDUCATIONAL PLANNING, PROGRAMMING AND POLICY
- APPROVAL AND CLOSURES OF SCHOOLS
- ACCREDITATIONS THROUGH GOVERNMENT MACHINERY
- NO INDEPENDENT QUALITY ASSURANCE AGENCY AND ASSESSMENT FRAMEWORKS
- SETS POLICIES FOR TEACHERS & RESEARCHERS

# MAIN ACTORS IN AGRICULTURAL EDUCATION AND TRAINING

- MINISTRY OF HIGHER EDUCATION FOR BACHELORS, MASTERS AND PHD DIPLOMAS
- MINISTRY OF AGRICULTURAL AND RURAL DEVELOPMENT FOR TECHNICIAN TRAINING
- MINISTRY OF FORESTRY AND WILDLIFE FOR TRAINING RANGE MANAGERS
- MINISTRY OF LIVESTOCK FOR VETERINARY TECHNICIANS



# NEEDS IN NATURAL RESOURCE POLICIES AND LEGISLATION

- THREATS TO BIODIVERSITY AND ENVIRONMENTAL PROTECTION
- EVIDENCE-BASED DECISION-MAKING
- BIODIVERSITY AND GLOBAL COMMONS
- QUALITY ASSURANCE AND RELEVANCE IN EDUCATION
- INDIGENOUS TECHNOLOGICAL CAPACITY
- GLOBALIZATION AND SUSTAINABILITY

# SOME AFRICAN BENCHMARKS IN AGRICULTURE AND FORESTRY SECTOR

- 62% OF AFRICAN NARIS (EXCEPT SA, NIGERIA AND KENYA) HAVE LESS THAN 100 SCIENTISTS
- 69% HAVE PHDS
- LESS THAN 54% OF AFRICAN WOMEN AGRICULTURAL SCIENTISTS HAVE A PHD
- PREDOMINANCE OF OLD SCIENTISTS
- MANY ARE UNDER QUALIFIED AND INEXPERIENCED

# BENCH MARKS CONTINUED

- NARIS ARE UNDERSTAFFED, UNDER-EQUIPPED AND UNDER-FUNDED
- BRAIN DRAIN IS ON THE INCREASE
- 42% OF AFRICAN NARIS ARE WEAK IN SOCIAL SCIENCES PARTICULARLY RURAL SOCIOLOGY, AGRIC ECONS, PLANT AND ANIMAL GENETICS, AGRIC ENGINEERING, FOOD SCIENCE, WEED SCIENCE, FORESTRY, WILDLIFE AND ENVIRONMENTAL MANAGEMENT

# THE NEED FOR AGRICULTURAL INFORMATION AND TECHNOLOGIES

- ACCESS AND USE OF AGRIC INFORMATION AND TECHNOLOGIES BY AFRICAN STAKEHOLDERS
- THREAT TO FOOD SECURITY AND LIVELIHOODS
- IMPEDIMENT TO AGRICULTURAL MARKETING
- PERPETUATION OF INAPPROPRIATE AGRICULTURAL POLICIES
- DESTRUCTION OF BIODIVERSITY

# CHARATERISTICS OF CAMEROON AGRICULTURAL SECTOR

- FARMER AND FARM LEVEL CHARACTERISTICS
- INSTITUTIONAL LEVEL CHARACTERISTICS
- NATIONAL (MACRO) LEVEL ASPECTS
- INTERNATIONAL LEVEL FACTORS

# SECTORAL TRENDS IN EDUCATION AND TRAINING WITH FOCUS ON AFRICA

- BASIC LEVEL: EMPHASIS ON ACCESS, EQUITY, FLEXIBILITY, LITERACY AND NUMERACY
- SECONDARY LEVEL: EMPHASIS ON ACCESS, EQUITY AND EFFICIENCY
- TERTIARY LEVEL: LIFE-LONG LEARNING, ACCESS, QUALITY, RELEVANCE, MANAGEMENT, DIVERSITY, SKILLS BUILDING AND NATIONAL MANPOWER NEEDS

# NEW TRENDS IN HIGHER EDUCATION

- KNOWLEDGE AS A MAJOR DRIVER OF ECONOMIC DEVELOPMENT
- THE GROWTH OF BORDERLESS EDUCATION
- IMPACT OF INFORMATION, COMMUNICATION TECHNOLOGIES
- RISE OF MARKET FORCES IN EDUCATIONAL PROVISION AND ACQUISITION
- EMERGENCE OF A GLOBAL MARKET FOR HUMAN CAPITAL

# INDICATORS OF CHANGES IN EDUCATION

- INNOVATIVENESS, CREATIVITY, IMAGINATION TO FACE FOUR TYPES OF CHALLENGE:
- **STRUCTURAL CHALLENGE** FOR INSTITUTIONS TO CHANGE WITH THEIR ENVIRONMENT
- **QUALITY CHALLENGE** IN AWARDS AND SKILLS
- **DIVERSITY CHALLENGE** IN DELIVERY MODES
- **GLOBALIZATION CHALLENGE** FOR COMPETITIVENESS AND SUSTAINABILITY



# CONSTRAINTS OF AFRICAN UNIVERSITIES

- ERODING QUALITY OF EDUCATION
- LIMITED ACCESS DUE TO INCREASING ENROLMENTS
- POOR FUNDING TO EDUCATION & RESEARCH
- FEEBLE EDUCATIONAL POLICIES
- LACK OF POLITICAL INDEPENDENCE OF INSTITUTIONS AND STRATEGIC PLANNING
- WEAK UNIVERSITY MANAGEMENT

# CURRENT AND EMERGING NEEDS

- TRANSFORMATION
- FARM MANAGEMENT AND MARKETING
- COMMUNICATION AND LINKAGES WITH STAKEHOLDERS (FARMERS AND CONSUMERS)
- SCIENCE AND TECHNOLOGY
- ENERGY AND ECONOLOGY
- PROCESSING, NURITION AND HEALTH
- ANIMAL FEED AND INDUSTRIES

# WHAT SOME STAKEHOLDERS SAY

- STUDENTS COMPLAIN OF LOW PROFESSIONAL CONTENT AND OUTDATED CURRICULUM
- INSUFFICIENT HANDS-ON EXPERIENCE AND LABORATORY WORK
- LACK OF ACCESS TO INFORMATION AND COMMUNICATION TECHNOLOGIES
- INSUFFICIENT INERNSHIP OR INDUSTRIAL EXPERIENCE

# WHAT SOME STAKEHOLDERS SAY

- TEACHERS BELIEVE THAT AGRICULTURAL TRAINING IN DSCHANG IS BESET BY:
  - INADEQUATE FUNDING
  - LATE RELEASE OF GOVERNMENT FUNDS
  - UNDIVERSIFIED SOURCES OF FUNDING
  - POOR FINANCE LAWS
  - UNENABLING ENVIRONMENT
  - NO OR LITTLE UNIVERSITY-INDUSTRY PARTNERSHIP AND OUTREACH

# CONCLUSIONS

- ONLY 52% OF FASA GRADUATES FIND JOBS WITHIN FIRST YEAR OF GRADUATION
- INSTITUTIONAL RESTRUCTURING TO BRING BACK THE LAND GANT UNIVERSITY PROJECT
- INVOLVE ALL STAKEHOLDERS PARTICULARLY PRIVATE SECTOR IN TRAINING & RESEARCH
- INTRODUCE MECHANISMS FOR DEMAND-DRIVEN AND QUALITY PROGRAMMES

# CAVEATE

- **AGRICULTURAL TRAINING ALONE IS NOT ENOUGH AND AGRICULTURE IS NOT THE PANACEA FOR NATIONAL DEVELOPMENT. WHAT IS NEEDED IS A WHOLISTIC PARADIGM OF DEVELOPMENT THAT LOOKS AT THE WHOLE AGRICULTURAL SYSTEM WITHIN A BROADER NATIONAL POLICY FRAMEWORK, IN CONSONANCE WITH CHANGING TIMES AND THE NEEDS OF RURAL DEVELOPMENT**



THANK YOU