A GENERIC CURRICULUM OUTLAY FOR TRAINING PROGRAMMES IN ENVIRONMENTAL HEALTH IN AFRICA

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Introduction

The Africa Academy for Environmental Health (AAEH) views the discipline of Environmental Health as the theory and practice of ascertaining, correcting, controlling, minimizing and preventing those factors in the environment that can potentially and adversely affect the health of present and future generations. This is in line with the WHO (2009) definition of environmental health as the discipline that: addresses all the physical, chemical, and biological factors external to a person, and all the related factors impacting on behaviors; encompasses the assessment and control of those environmental factors that can potentially affect health; and targets prevention of disease and creation of health-supportive environments.

Many people in Africa are exposed to a series of environmental threats to their health, physical and mental development and even their survival. Morbidity and mortality due to unhealthy environmental conditions that is largely preventable by taking decisive action and finding innovative, healthy, cost effective and sustainable ways to develop and improve our livelihoods (Okonofua, 2005; Esposito *et al* 1995)

The AAEH recognises the importance of training Environmental Health professionals who will address these issues that will ultimately help to enhance good health and sustainable environmental management. According to Hailu (2008) training environmental health professionals is important because it will ensure protection of public health, consistent implementation of existing rules and regulations, as well as prepare staff to address new and emerging environmental public health issues.

To ensure that the professionals trained are able to participate in enhancement of good health, the International Federation of Environmental Health (IFEH) commissioned the International Faculty Forum (IFF) for environmental health educators to develop an international curriculum in environmental health. This curriculum was intended to address the ongoing issues of professional identity, status and transportability of qualifications for environmental health professionals. To this effect a model was developed to guide the development of such a curriculum in 2008 at the World Congress on Environmental Health in Brisbane. The model emphasized the concept of core skills for Environmental Health Professionals and focused on the development of a curriculum that enhances ability/skills that are uniquely entrenched and focused on by health professionals. Based on this model, the AAEH workshop held in Pretoria in March 2009 came up with a model that emphasised development of an internationally portable curriculum that aims to promote environmental health

articulation within various countries in Africa. It is on this background that the AAEH as an organ of the IFEH developed this curriculum.

The mission of the curriculum is to ensure development of environmental health professionals who have relevant knowledge, skills and competencies through training and research required for the improvement of health in communities (seen in the broader sense that includes industry and other recipients of an environmental health service).

Rationale

The development of an international programme on environmental health is intended to ensure that irrespective of the location within Africa all environmental health practitioners will be educated to the same core curriculum. This will ensure that cross-cultural insights have been shared and leads to the development of environmental health professionals who have common internationally recognized educational base. This will facilitate transportability of qualifications and mutual recognition of partners not only in Africa but also for the rest of the world.

Curriculum process

The AAEH was launched in August 2008 in Nairobi with the main aim of advancing the science and practice of environmental health in Africa. As part of achieving its objective the AAEH was successful in being awarded a DelPHE (Development 0f Partnerships in Higher Education) award funded by the British Council. The establishment of the curriculum was facilitated through a number of workshops in Africa that included important role-players such as academic institutions, professional bodies and –associations, government department (health and environment), municipalities, private industry as well as non-governmental organizations. A refined curriculum is to be formally launched at the 2nd All Africa on Environmental Health to take place in Lilongwe, Malawi during May 2010.

Objectives of the curriculum

1. To create a curriculum for environmental health practitioners which is aligned with quality assurance principles and facilitates increased articulation;
2. To create a curriculum which can be adapted to individual institutional frameworks in order to offer a degree course in Environmental Health; and
3. To create a curriculum for Africa which fits within the international framework for environmental health practitioners to increase global articulation and portability

Implementation of the curriculum

Admission to the programme will require student compliance with the relevant national and institutional policies which should allow for vertical and horizontal articulation. Various entry routes will be considered for all potential scholars, for example, mature entry and school leavers. However, fundamental knowledge/qualification in Mathematics, Core sciences (biology, chemistry and physics) and Language competency will have to be considered. Minimum and maximum duration of the proposed curriculum to be in line with institutional policies.

Course Requirements

All aspects of the curriculum must be achieved together with practical training to attain competency. The African curriculum for the Bachelors degree in environmental health stipulates the minimum competencies that a graduate should achieve to practice. These competencies consist of relevant knowledge, skills and competence. These competencies can be achieved either through an integrated curriculum approach during the time of study at the Institution, or professional body certification/registration subsequent to graduate practical training. These should include teaching strategies such as, laboratory practices, field trips, industrial attachments; work integrated learning, service learning as detailed in the curriculum outcomes.

Competency Criteria

This curriculum is based on a cluster of related knowledge, skills and competence that were compiled by the AAEH and IFF (IFEH) respectively relates/affect a major part of the environmental health practitioners' scope of practice. These can be measured against some accepted standards, and can be improved via training and development. .

Assessment Strategy and credit transfer and certification

Assessment of competencies is to be aligned with institutional policies. A combination of various assessment strategies should be utilised in order to ensure achievement of the stated competencies and assessment criteria. Therefore the theoretical, practical and reflective aspect of the curriculum must be assessed. The level of assessment should be aligned with the level of the competency and assessment criteria (e.g. progression of learning). Grading of results/competencies to be aligned with institutional policies. Credit transfer/ exemption/ waiver/ progression can be considered where institutional policy allows. On successful completion of all requirements the degree that will be awarded is the Bachelor degree in Environmental Health.

The course structure for the curriculum was based on the five main pillars, that is, Community health, Pollution control, Built environment, Food and meat safety and Occupational health and safety as shown on Figure 1. From Figure 1 it is clear that the program should be built on a sound foundation of sciences that have to include the natural-, social-, mathematical-, IT-, language and social sciences. Finally, students need to be equipped with the necessary professional skills that would enable them to render an effective service. The following are regarded as important professional skills: risk management, development, interpretation and application legislative requirements and policies, epidemiology and research skills.

Course Structure

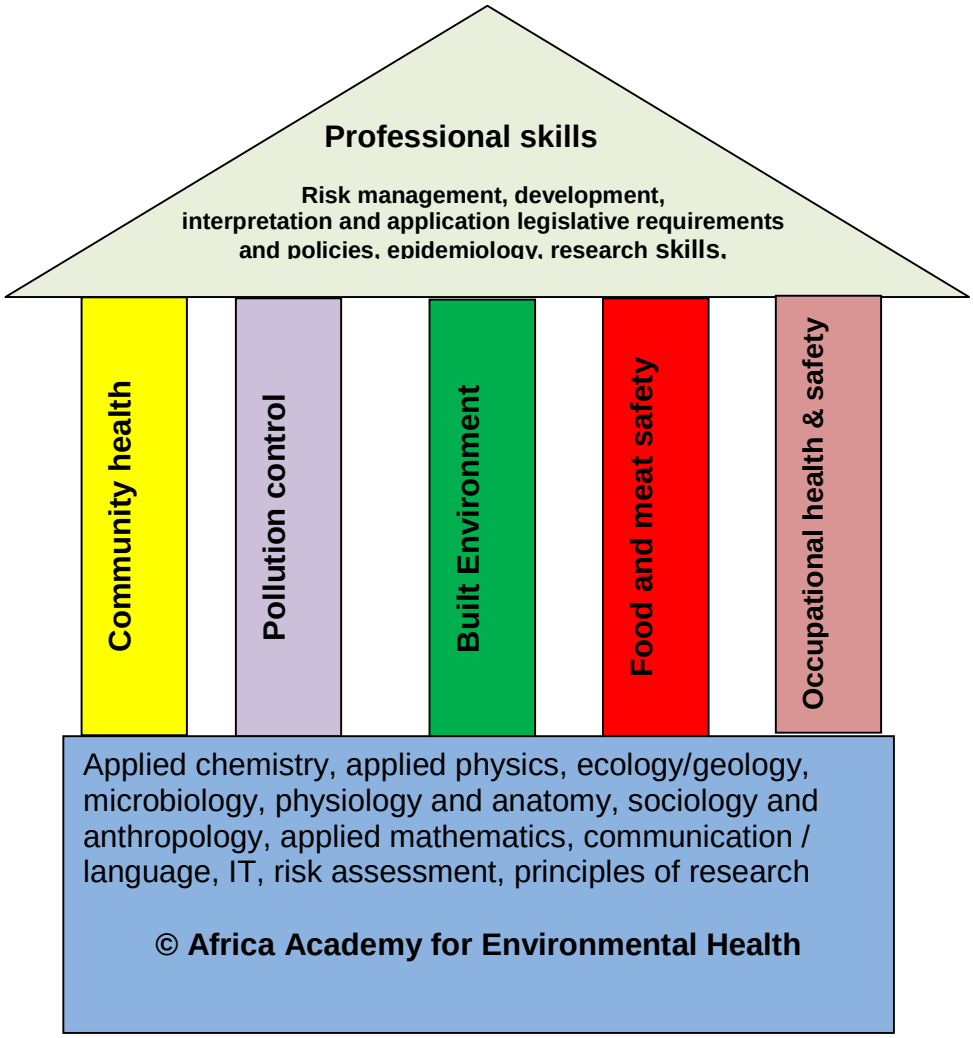

Figure 1 Pillars of environmental health training

Source: AAEH, 2009 meeting at Pretoria, SOUTH AFRICA

Work Integrated Learning (WIL)/ Placement would also form an integral part of this curriculum. According to the December 2007 paper compiled by the International Faculty Forum in Environmental Health, a period of internship or similar after acquisition of the qualification is recommended in order to improve:

- problem-solving

- communication skills
- professionalism
- comprehensive experience in
    - technical areas
    - professional areas
    - management and organizational arrangement
- planning, evaluation and implementation of EH programmes

The curriculum of the AAEH is supporting criteria similar to the above stated, and would include the following:

- The WIL programme should promote the students' understanding of the specific occupation for which they are being trained;
- Students should master techniques and skills required to successfully function as EH practitioners;
- WIL/ placement should form an integral part of the curriculum; and
- Each institution should have a policy and/or procedures in place for the implementation, management and assessment of WIL.

The curriculum also makes provision for a quality assurance options excercised by the relative Professional Associations / Board in the respective countires. It is of utmost importance that the body(ies) that formally represents or regulates the profession in the respective countries plays a pivotal role in assuring quality by accrediting training programmers. They also need to play an active role in the process of continually updating the programmes to keep up with trends and practices in the field of environmental health service delivery.

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