

Practitioners Novice: Advancing Early Career Environmental Expert Curricula

Godwin Adiel Lema

Email; godwinlema@gmail.com; <https://orcid.org/0000-0002-9602-0713>

Geography Department, University of Dar es Salaam, Dar es Salaam, Tanzania

Godwin A. Lema (PhD) is a lecturer with over twelve years' experience in impact assessment teaching, training and consulting. He is a registered environmental expert by National Environment Management Council in Tanzania and a member of International Association for Impact Assessment

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With exception of IAIA IA practitioners' formal courses via online, face-to-face, and annual conferences, training of environmental experts is ad hoc and voluntary in developing countries in general and Tanzania in particular. The late 1990s and early 2000s global funding enabled the International Institute for Environment and Development to collaborate with the University of Dar es salaam Institute of Resource Assessment in training the first generation EIA practitioners in the country. Unfortunately, most of them have retired, while voluntary financing of the potential young generation environmental expert has gradually disappeared. This paper is a reflection of environmental experts training history pointing to the opportunities and challenges along with drawing a lessons for future action. It draws from the online resources training manual developed in the country, experiences from the enforcement and compliance authority and personal encounter process in pioneering formalisation of expert training programme beyond usual university curriculum. It is founded that changing course contents, nature of expert engagement, gender, financing models and collaborating institutions are drivers of curriculum advancement. External funding and expatriates facilitated first generation expert training (1998-2005). Phasing out of the supply driven curricula calls for demand driven initiative to advance early career environmental expert curricula. Participants' pays model, flexible institutional collaboration, engaging experts from diverse disciplines and gender sensitivity are innovative pathways advancing early career IA expert curricula beyond university setting in Tanzania.

Keywords: First generation IA practitioners, environmental experts, curriculum, Tanzania

Introduction

Training impact assessment practitioners require advancing curricula overtime. Pope and Morrison-Saunders (2018) publication underscored contents of courses-what is to be taught, pedagogy or how it is taught and essential skills that learners should develop as major issues in impact assessment teaching. Differently, Alvaro Enriquez-de-Salamanca (2019) published weaknesses of impact assessment lecturers using a case study from universities in Spain that lecturers specialisation in environmental

assessment is low due to limited knowledge in impact assessment and none publications in the referred environmental assessment journals. The weaknesses attribute to controversial selection of lecturers in the discipline and fragmentation of environmental assessment teaching. Aply, because environmental assessment stands as third division subject at the university than an independent branch of knowledge, as it should be. Tanzania faces similar problem with 144 individual experts and 70 firms of experts registered (NEMC, 2021). The experts are drawn from diverse conventional disciplines (sociology, engineering, geography, botany, zoology, archaeology, environmental management, marine science, to mention a few) but they must attend tailor made training to qualify for registration and update knowledge annually afterward. Early career training curricula as such has to tell who should be taught? Who should train? What is an ideal learning environment for environmental experts? This gap provoked the writing of this article.

Literature

International efforts to train environmental experts started before 1980s (Bisset and Tomlinson, 1985; iaia.org/wiki) with voluntary global multilateral funding. The early training (Mwalyosi et al., 1999; Sadler and McCabe, 2002) groomed first generation experts in developing countries. Beneficiaries were practitioners and government executives in charge of environmental management, trainers being expatriates. As Stelmack et al. (2005) noted IA education was poorly documented in the literature. Gradually with Gazzola (2008) trends in education in environmental assessment publication suggestion came pushing for formal IA education, enhanced collaboration among departments and designating holistic approaches to teaching and learning. Sanchez (2010) advanced best practice in IA education transcending legal trap arguing the law should not bind the practice, instead a societal calls for environmentally and socially responsible decision-making has to inform IA teaching. Sanchez and Morrison-Saunders (2010) further acknowledged the fact that university teaching across countries encompasses both theory and practice drawing on textbooks, fieldworks, case studies, government legal guidance and guest lecturers. Literature also point demand to advance beyond short courses and online training (Pollack *et al.*, 2014), with latest emphasis on understanding IA as both arts and science (Pope and Morrison-Saunders, 2018) and an independent body of knowledge (Álvaro Enríquez-de-Salamanca, 2019). Literature

skipped nature of experts' engagement, facilitating team, gender sensitivity, financing, partnerships and collaborating institutions to advance curriculum overtime. This calls further studies.

IA training curriculum advancement theory and methodology

Conceptual difference of the term education and training were explained elsewhere (see Ollagner, 2005; Jarvis, 1999; Winch and Clarke, 2008; Moura Casto and Oliveira, 1994). In this article, training curriculum theory embraces adult and continuing education methodology as it targets at professionals or practitioners (IAIA, 2008). The curriculum theory embraces contents (information, facts, attitudes and skills transmitted), organization (sequencing of activities, time frame and linkages) and methods or strategies used to transmit contents (Rycus, 1994). In an applied setting higher education is not enough to provide skills to a professional life (IAIA2008). As such, IA education and training is merged to develop formal and soft skills for its practice. This enable early career environmental assessor or graduate acquire assessment knowledge, skills and competences in an interactive learning setting. As such, in this study I adopted grounded theory (Tie *et al.*, 2019) to analyse IA training evolution drawing from training manuals online, personal communication and encounters in the process of formalising expert training curricula in Tanzania (1998-2019). The author's lived experience, events in organising IA training was resourceful to inform this paper.

Evolution of IA Training in Tanzania (1998-2005)

Globally financed expatriates' facilitated the rise of environmental expert training in Tanzania as the country had inadequate capacity and low expertise internally (Mwalyosi *et al.*, 1999). Awareness creation on environmental stewardship, capacity building and enhancing political will required external supports and collaboration among academics, government actors and Non-Governmental Organisations (NGOs). International Institute for Environment and Development in collaboration with the University of Dar es Salaam Institute of Resource Assessment executed need assessment study, production of orientation training and resource handbook in 1998 and documented the curriculum by 1999. The office of the vice president blessed the initiative by creating institutional and legal framework for environmental management and planning. National Environment Management Council (NEMC) prepared training manual after

enactment of Environmental Management Act of 2004 and the subsequent EIA and Audit regulations of 2005 as they mandate registration of EIA Expert, Environmental Audit Expert along with Firms of EIA and EA experts.

Insert Table here

Table 1: The first IA training curriculum highlights

Changes from 1998 curriculum to 2005 is evident in the course contents, nature of experts engagement, gender composition of facilitating team, financing model and collaborating institutions. Unlike 1998, 2005 manual omitted policy, legal and institutional issues in the course contents. Performance assessment in the 1998 course contents was replaced with monitoring in 2005. Relatively, many experts were engaged in the 1998 manual compared to 2005. Team composition with few female in preparing 2005 manual was relatively progressively gender sensitive compared to 1998 situation as all experts engaged were male. Financiers were all international in 1998 training while in 2005 international donors and a private company volunteered to sponsor the training. Collaborating institutions also changed from partnerships of international and national actors in the 1998 to all being nationals in 2005.

Post 2005 Early Career Environmental Expert Curricula Advancement

In this article, early career concept represent fresh graduate and other discipline professionals who aspire to engage in IA assessment industry as opposed to experienced practitioners in the field. Post 2005 training curricula advanced from the Southern African Institute for Environmental Assessment Training of the Trainers (ToT) with the Support from the World Bank Institute and the Government of Netherlands. They organised Professional Development for EIA Practitioners Course in Dar es Salaam – April 24-25, 2008. A separate training titled Civil Society Environmental Impact Assessment (EIA) Course was conducted for one day on April 26, 2008. The author attended all of the courses. A lead facilitator and an assistant who were expatriates from SAIEA facilitated the training for three days. The sponsors covered expenses including facilitation, breakfast, lunch, training venue and refreshment costs. Broadly, with a letter to myself, the April training ended externally funding of environmental expert curriculum in the country. By June 2008, Ministry of Justice and Constitutional Affairs hired four staff including this author from the University of Dar es Salaam to facilitate the training for five days as consultancy service to the link officers of the judiciary a

course on EIA to enable enforcement of Environmental Management Act. Unlike the previous curriculum the training in June adopted demand driven financing model. The university continued to announce short course training on demand. The courses are advertised on the website targeting national and international aspirants who ultimately paid training fees and transport costs. Participants are young professionals. Geography department further negotiated partnership to collaborate with NEMC (Geography Department/NEMC, 2016) and signed Memorandum of Understanding (MoU) in December 2017. After the MoU the first training was conducted in August 05th - 09th 2019. The institutional collaboration and partnerships advanced re-innovation of multidisciplinary curriculum for environmental experts training through engaging the academics, practitioners, reviewers, decision makers and the industry.

Insert Table 2 here

Table 2: IA Expert Training Curriculum UDSM/NEMC adopted in August 2019

Many instructors were engaged to facilitate the training with more female than male. A secretariat of 10 staff, 5 from UDSM and NEMC organised and coordinated the training. Course covered contents including environment and sustainable development, IA history, economic assessment and environmental valuation, policy legal and institutional frameworks, EIA process basic principles, stakeholders' participation and ultimately companies' experiences, sector specific EIA cases, with fieldwork and excursions. The curriculum engaged multidisciplinary IA training experts and institutional collaboration under demand driven model. Course participants paid facilitation fees and meet their own transport costs to attend the training. Participant pays financing of expert training curricula is ideal for relatively wealthier generation aspiring to venture in IA career as sponsorship is gradually disappeared. Those who afford training costs are invited and curricula negotiated by multidisciplinary team of experts in the field and institutions engaged.

Conclusion and Recommendations

Gradual phasing out of the international financing to build capacity of environmental experts in Tanzania is revealed. Demand driven, participants pays financing is emerging strategy along with institutional collaboration and partnerships of national level

institutions including the academia, governments, civil society, and private sector actors to advance environmental experts training curricula that is adaptive to local and national contexts to enhance sustainability. Conventional university teaching is less suited to efficiently train the emerging pool of early career environmental experts in a long run. It takes time, commitment and flexibility, experts from diverse disciplines to engage proactively in advancing environmental experts curricula through costs sharing and institutional collaborations.

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Table 1: First IA training curriculum highlights in Tanzania (1998-2005)

Institution/ date	IIED/IRA 1998 Resource Manual	2005 NEMC Manual
Contents	Organising EIA process – introduction, EIA in the World & in Tanzania Policy, legal and institutional issues for EIA Introduction to screening Introduction to scoping Terms of reference Stakeholders involvement-Why? How? Impact identification methods Environmental impact significance Impact mitigation planning management EIA report preparation-contents, clarity, presentation Review, decision-making Performance assessment and auditing	Introduction- basic concepts, values & principles Costs & benefits of using EIA EIA in the project cycle, EIA in Tanzania Registration & screening Scoping Public participation & involvement Social Impact Assessment Impact assessment Impact mitigation & management EIA report format Review Decision-making Monitoring Environmental audit
Experts engaged	10 in total; 3 UDSM academics; 3 expatriates, 4 practitioners, govt. officers-NEMC, TANESCO, TANRIC, mining,	7 in total; all were Tanzanians; 3 academics, 3 government executives (2 from NEMC, 1 from Ministry of Natural Resources-Forestry & Beekeeping Division); 1 from NGO
Gender sensitivity	All (male)	5 male, 2 female
Financer/sponsor	Danish International Development Agency (DANIDA), Department for International Development (DFID) through the British Council	Swedish Development Agency (Sida), UNDP, IUCN-EARO, Lower Kihansi Environmental Management Project, Environmental Resources Consultancy, donated desktop computer,
Number of Collaborating Institutions	5 (3 national, 2 international)	4 (all national)

Source: Extracted from IIED/IRA 1998 & NEMC 2005 Manuals

Table 2: IA Expert Training Curriculum UDSM/NEMC adopted in August 2019

<i>Course Module Content</i>	<i>Gender of Instructor(s)</i>	<i>Instructors' Discipline/Specialization</i>	<i>Institution/Department/School</i>
Environment & Sustainable Development	1(F)	Biogeography/Natural Resource Management	Geography
History of Environmental Assessment	1(M)	Environmental Economist	Economics
Economic Assessment and Environmental Valuation	2 (F&M)	Lawyers/Environmental Law	Law School
Policy, Legal & Institutional Frameworks	2(F&M)	Environmental Management	Geography/NEMC
EIA: Principles/ EIA Process Theory and Practices	1F	Marine Biology	Geography
Stakeholders Participation	2(F&M)	Demography	EIA/EA Consulting Company
Companies experiences		Mining Engineer	Institute of Marine Science
Specialised Sector IA – Marine/Mining		Marine scientist	

Source: EIA Training Programme Report (2019)