

Full length Research paper

Forestry education in Sierra Leone: progress and constraints in preparing for the job market

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Forestry education in Sierra Leone started with the Universities Act. 2005 which separated Njala University (NU) from the University of Sierra Leone (USL). This study reviews forestry education at NU from 2007 when the School of Forestry and Horticulture (now School of Natural Resources Management) actually became functional to date. The study methodology entailed NU record review on: Students' enrollment; graduation; job placement; forestry curriculum content etc.; Interviews with key University staff; students etc. on funding; industrial actions; student misconduct and, female forestry students on enrollment issues etc. Personal observations were also made. Findings: The NU forestry curriculum was reviewed in 2015. Government's graduate forestry job placement is declining. Government support to NU (over 95% of the total financial burden) is waning, inconsistent and untimely. External funding support terminated during the 10 years long rebel war. This war was followed by the 14 months Ebola scourge in 2014 and the recent industrial actions by lecturers all disrupted the academic calendar, while examination malpractices, cultism, student misconduct etc. affect student graduation. Conclusions: Financial constraints, cultism, student misconduct etc. affect NU calendar, student enrollment and graduation. Students intake and graduation, (especially female forestry students) may continue to decrease in tandem with rising costs of education. Government of Sierra Leone should provide Grant to students that opt to study Forestry in the University as to increase on the population.

Key words: Act, Review, Enrollment, Graduation, Placement, Constraints, Malpractice

INTRODUCTION

Background to Forestry education in Sierra Leone

Forestry education in Sub Sahara Africa initially enjoyed some donor funding, but was terminated in the 90s due to changes in donor priorities emphasizing adherence to democracy, human rights and transparency (Temu, 2002, U.I, 2008). This is similar to other African countries formal forestry education can be traced back to setting up of national forestry departments in the colonial era (Ackom, E. K. 2010). Thereafter, national governments handled most of the funding. Forestry education in Sierra Leone effectively started with the creation of the Universities Act 2005, which separated NU from USL. Sierra Leone being a donor-dependent economy, the forestry sector (including forestry education) continues to be underfunded while demand on funds escalates. Responsible factors include: the

decade long civil war (1991-2002) which ruined the economy and damaged infrastructure; the Ebola scourge spanning 9 months (26th November 2014 and the recent 2 months long lecturers' strike which distorted the University calendar at high cost.

Closure of non-degree forestry training institutions

Like other forestry institutions in Africa, the Certificate Forestry Training School at Bambawo, located in eastern Sierra Leone was closed in 1979 due to funding constraints. Tubmanburg College in Liberia which was used instead, also closed. These closures also affected the Forestry Training School in Ibadan, Nigeria and the Kenya Certificate Forestry College. Successful cases are for the Mali's Centre de formation pratique forestiere (CFPF) and the Zimbabwe forestry training college. Middle level forestry training output therefore decreased significantly from these closures albeit some operated intermittently pending the availability of funding (Temu, 2002, Temu and Kiwia, 2008, Nair 2004 and U. I, 2008). However, the Certificate Training Center at Njala, which

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was heavily supported by the Overseas Development Administration from 1984 onwards, started training forestry technicians from 2000 to date. These technical graduates continue to feed the undergraduate forestry programmes of Njala University.

Student misconduct

Other factors undermining forestry education at Njala University include: cultism, examination malpractices, theft, property damage etc. Despite frantic efforts at addressing the problem, these malpractices still continue. Cultism in particular is believed to be supported by elites in society who allegedly promise students of job prospects (especially members of the white group) as opposed to the black group which is less privileged. Several court cases have proved futile due to want of evidence because no cult member is willing to expose the group.

Female forestry student enrollment

Female student enrollment which is an issue in some Sub Sahara African universities is also an issue in Sierra Leone where female students are mostly offering Arts and commercial subjects as opposed to the blue-collar forestry jobs. Some job adverts nowadays tend to even favour female candidates as a remedy, but the low female student enrollment and graduation undermines this opportunity. A few universities have investigated the root cause of this problem and have instituted remedial measures to address the problem (Temu, 2002; Temu and Kiwia (2008).

Funding constraints and overseas training opportunities

Funding inconsistency, fixed sum payments, later release of funds and especially the running of a private KVA generator at NU worsens the financial problem. Besides Government has been running an austerity budget since March this year. Also, even the few postgraduate training fellowships offered by Korea, China, Turkey, Iran etc. are criticized because the training environments differ from the trainee's teaching and research environment (Griffin, 1982) in fact, the flora of the country offering the training could be different from the trainee's home country flora, thereby questioning it's relevance forestry training in particular.

Job market-focused curriculum review

The old forestry training curricular hardly makes graduates marketable. While it suits government forest service jobs, this two is now recruiting low number of graduates due to funding constraints. For instance, while the university of Sudan graduated about 590 graduates from 1993-2000, only about 164 were recruited by year 2000 (Temu, 2002). Hence the further

justification for the curriculum review. In fact, FAO, 2000; Avelo et al. (2014); Wolf et al, (2006) and Purnell, (2006) had recommended a review with suggestions on curriculum contents to ameliorate the situation. The NU's School of Natural Resources Management curriculum review was successfully done in terms of new models introduce, and a new B.Sc, honor programme introduced.

Post graduate student intake and graduation

Even in the big universities like University of Ibadan, postgraduate outputs are often by far less than the undergraduate forestry students. This is more so for the small and newly established universities like NU where only 7 postgraduate Master students graduated from 2014 to 2016.

METHODOLOGY

The study methodology entailed: Interview with staff, students, Njala Alumini Association, female forestry students etc. on: NU finances, students enrollment, graduation, misconduct, punitive measures inflicted, job placements etc. Female forestry students were particularly interviewed on their enrollment situation. Finally, personal observations were made based on the authors 9- 12 years service with NU.

RESULTS AND DISCUSSION

Funding support

While government grant and fees stagnated at 39 billion for 4 years, the SLG grant also stagnated for 2 years at 2.8 billion. The project fund remained very low irrespective of the huge infrastructural rehabilitation on course.

Graduation and Job placement figures

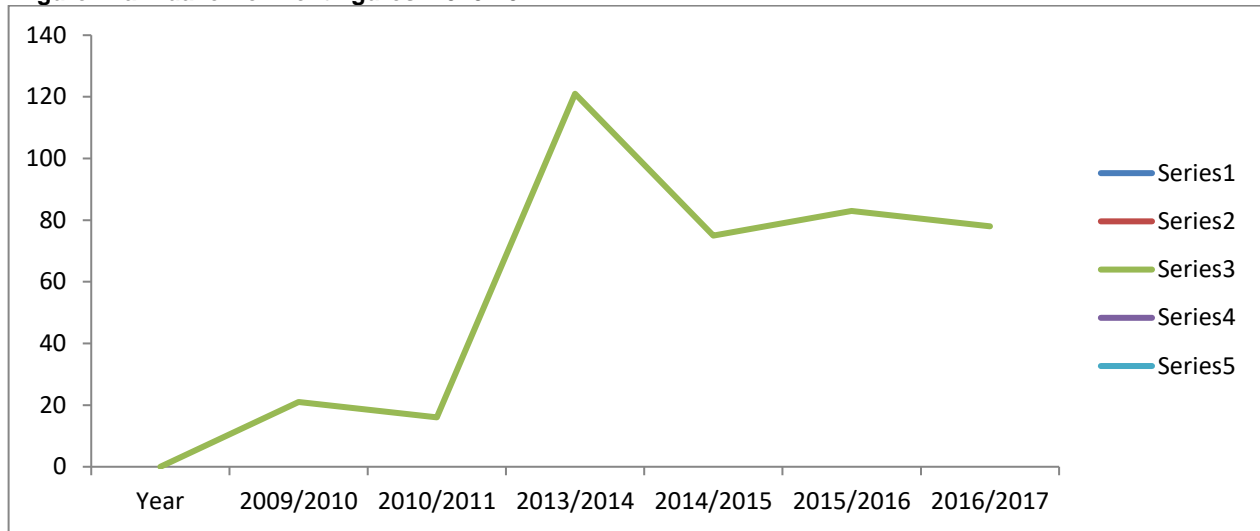
No female graduates in 2011; 2012 and 2015. Elsewhere, male graduate numbers double the females. The 2017 graduation figure will be at most 7. All students graduate (see table 4). This is in line with Eraut M. (1985) who laid emphasis on knowledge creation and knowledge use in professional contexts.

Curriculum review

Review effected with students starting with B.Sc general in Natural Resources Management but could do honors in any of the five programmes of the School on gaining aggregate 3.7 at end of second year. The programmes are Forestry, Wood Science, Horticulture, Wildlife and Fisheries and Aquaculture. The B.Sc. general course is likely to make the candidate more

YEAR VS ENROLLMENT

Figure 1: annual enrollment figures: 2010-2017



Plot 1 indicates enrollment figures for all courses from 2009/2010-2016/2017. The plot indicates a very low female enrollment for all the years assessed.

Job placements for graduates 2010 to 2015 MIRO forestry; FAO; Ministry of Agriculture Forestry and Food Security; SLBP, Sierra Leone Agricultural Research Institute.

Female graduates: non in 2011 and 2012 and 2015 and only 505 of males in 2013 and 2014

Year Vs Graduate

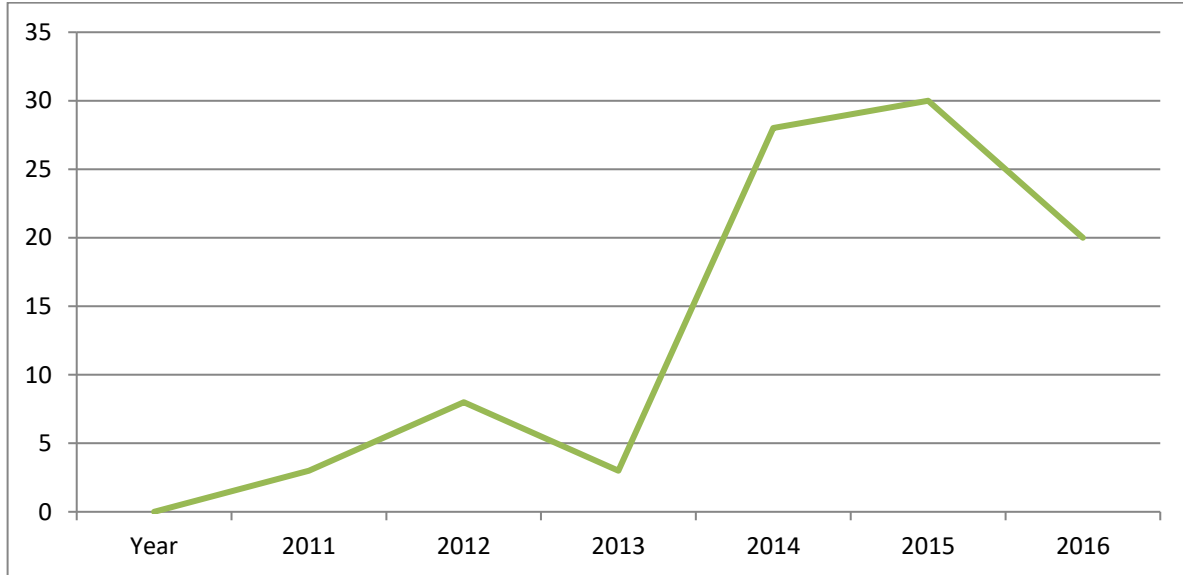


Figure 2: Graduate numbers from 2011 to 2016

marketable. This findings corroborate with that of (Bawden, R, 2000) who talked vividly on curriculum development for forestry education.

Closure of non-degree forestry programmes

The National Agricultural Training Center which enjoyed substantial support from the ODA from 1981 to date actually started a non-degree forestry training from

2000 to date and enjoys many provisions for field practical sessions for both forestry and agriculture disciplines.

Enrollment figures

The female forestry students currently admitted in years 2, 3 were asked about possible reasons discouraging their enrollment. Results; 30 blamed it on difficult

Future job placement trends**Table 1:** Annual Govt. expenditure (Grant/fees, Grant for sponsored students, Projects/income)

Years	2010	2011	2012	2013	2014	2015	2016	2017
Govt. grant/fees	16 bn.	18 bn.	24 bn.	38 bn.	39 bn.	39 bn.	39 bn.	39 bn.
subsidy								
SLG grant.	0.68 bn.	1.0 bn.	1.2 bn.	1.9 bn.	2.7 bn.	2.8 bn.	2.8 bn.	3.0 bn.
Govt. funded								
Projects/income	0.5 bn.	0.6 bn.	0.72 bn.	0.86 bn.	1.04 bn.	12.4 bn.	1.5 bn.	1.8 bn.

Table 2: Record of forestry graduates and job placements in Njala from 2011 to 2016

Graduation year	Total	Male	Female	Job placed
2011	3	3	nil	All employed
2012	3	3	nil	1 out of 3
2013	7	4	3	6 out of 7
2014	8	5	3	2 out of 8
2015	6	6	nil	5 out of 6
2016	12	10	2	3 out of 12

Table 3a: Male/female enrollment figures 2013/2014 session: All years

Programme	Year				Male	Female	Total
	1	2	3	4			
OD Forestry	4	19	-	-	18	5	23
HD Forestry	6	11	13	-	25	4	30
B.Sc. (Hons)	10	14	7	7	30	8	38
Totals	20	44	19	7	73 (81%)	17 (18%)	90

Table 3b: Male/ Female enrollment figures in 2014/2015 session: All years

Programme	Year				Male	Female	Total
	1	2	3	4			
OD Forestry	4	4	-	-	4	4	8
HD Forestry	5	8	9	-	19	3	22
B.Sc. (Hons)	11	12	12	8	32	11	43
Totals	20	24	21	8	55 (75%)	18 (24%)	73

Table 3c: Male/Female enrollment figures in 2015/2016 session: All years

Programme	Year				Male	Female	Total
	1	2	3	4			
OD Forestry	2	4	-	-	3	3	6
HD Forestry	5	5	8	-	16	2	18
B.Sc (Hons)	23	11	11	12	54	3	57
Totals	30	20	19	12	73 (90%)	8 (9%)	81

Table 4: Total student rustications, fines and expulsions in NU by 2015

1	Expulsions	8
2	Rustications	23
3	Rustication plus fine	8
4	Range of fine	0.5 to 2.5 million
5	Range of rustication	1-2 years
6	Total fine	Le. 27,656,000

course; 20% on poor visibility of the course; 20% on difficult field work; 20% on fear of snakes and scorpions and 10% on study of trees being boring.

Industrial action by students and academic staff

Industrial action by students has not taking place for two years now in the absence of an elected government. However, the most recent industrial action by the Academic Staff Association lasted for about 3 months.

Students misbehavior

The following table summarizes the level of students misbehavior in terms of examination malpractices, cultism, theft, injury, assault, wounding and property damage on both the Bo and Njala Campuses of NU Investigated in 2015.

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