



UNIVERSITE D'ABOMEY-CALAVI
Faculté des Sciences Agronomiques



Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)

***Project: Enhancing access to graduate training
for disadvantaged students in Benin - RUFORUM
NURTURING-GRANT***

Project number: **RU- 2016 –NG**

Period: August 2016 – September 2018

Budget: \$ 27, 000 US

First year technical report

Project Coordinator

Prof. Brice Augustin Sinsin
Rector, University of Abomey-Calavi
01 BP 526 Cotonou
bsinsin@gmail.com

Principal Investigator

Prof Achille Ephrem ASSOGBADJO
Faculty of Agronomic Sciences, University of Abomey-Calavi
05 BP 1752, Cotonou, Republic of Benin
Tel: +229 95055975
Email: assogbadjo@gmail.com
Email: achille.assogbadjo@fsa.uac.bj

Table of contents

Table of contents	i
1. Introductory message.....	1
2. Profiles of the Nurturing grant beneficiaries.....	2
3. Academic progress.....	4
4. Conclusion	6
Acknowledgment	6
6. Appendices	7

1. Introductory message

The University of Abomey-Calavi (UAC), the largest one in Benin was created in 1970. Its mission is to contribute to sound scientific research and to foster unemployment reduction through quality training of the students. The university offers degrees such as BSc. MSc., and PhD. In 2015 UAC counted about 90,000 registered students in 24 Faculties, Polytechnics, High Schools, and Institutes. In line with its vision and mission, UAC intends through this project to train the youth to acquire skills to tackle development bottlenecks in their communities. The project targets economically disadvantaged and brilliant master students that will register at the University of Abomey-Calavi in Republic of Benin. As expected outputs, twelve scholars will successfully complete their MSc study with a partial financing support provided by RUFORUM through Nurturing Grant support. This will leverage socio-economic transformation not only in their family but also at the community level. Activities include enrolment of students, capacity building, monitoring and evaluation. The project is aligned with the RUFORUM Nurturing Grant vision, which is to address gaps identified in implementation of Competitive Grants, broaden participation and address emerging issues/opportunities. The project started in October 2016 and will close in September 2018. The project total cost is USD 27,000. The project will be managed and coordinated by the Rector's Office at University of Abomey-Calavi in Republic of Benin. The project will deliver 12 MSc Theses, 12 Journal articles, and several knowledge communication products including among others, Newsletter articles, profiles of recruited students, impact storylines.

Table 1 summarizes the number of student originally planned per master programme along with their respective cost.

Table 1. Budget for two years project

Rubric	Quantity	Unit amount (USD)	Total amount for 2 years (USD)*
1. Fees			
Fees for students to be registered for the MSc programme in Biodiversity and Natural Resources	4 students/year x 2 years	1125	9000
Fees for students to be registered for the MSc programme in Biostatistics	4 students/year x 2 years	1125	9000
Fees for students to be registered for the MSc programme in Food Sciences and Nutrition	4 students/year x 2 years	750	6000
2. Coordination support	1 support/year x 2 years	1200	2400
3. Bank charges	1 time/year x 2 years	300	600
Total for 2 years (USD)			27000

*Exchange rate for calculation in July 2016: USD 1 = FCFA 580

This document is the report of the first year of the project.

Table of contents

Table of contents	i
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2. Profiles of the Nurturing grant beneficiaries

In total, 13 students were selected after a competitive process. A call for application was launched via social media and administration of the Faculty of Agronomic Sciences. A selection board was set up to examine the applications. From this assessment, 13 students were selected i.e. one more than planned in the official project document. Three (23 %) were female while ten (77%) were males (Figure 1a).

The students were registered in four master programmes. Three (23 %) were registered in the Biostatistics master programme, two (15 %) in the Management of Natural Resources and Biodiversity master programme, and four (31 %) each in the Food science and technology master programme and Forestry and Management of Natural Resources master programme (Figure 1b).

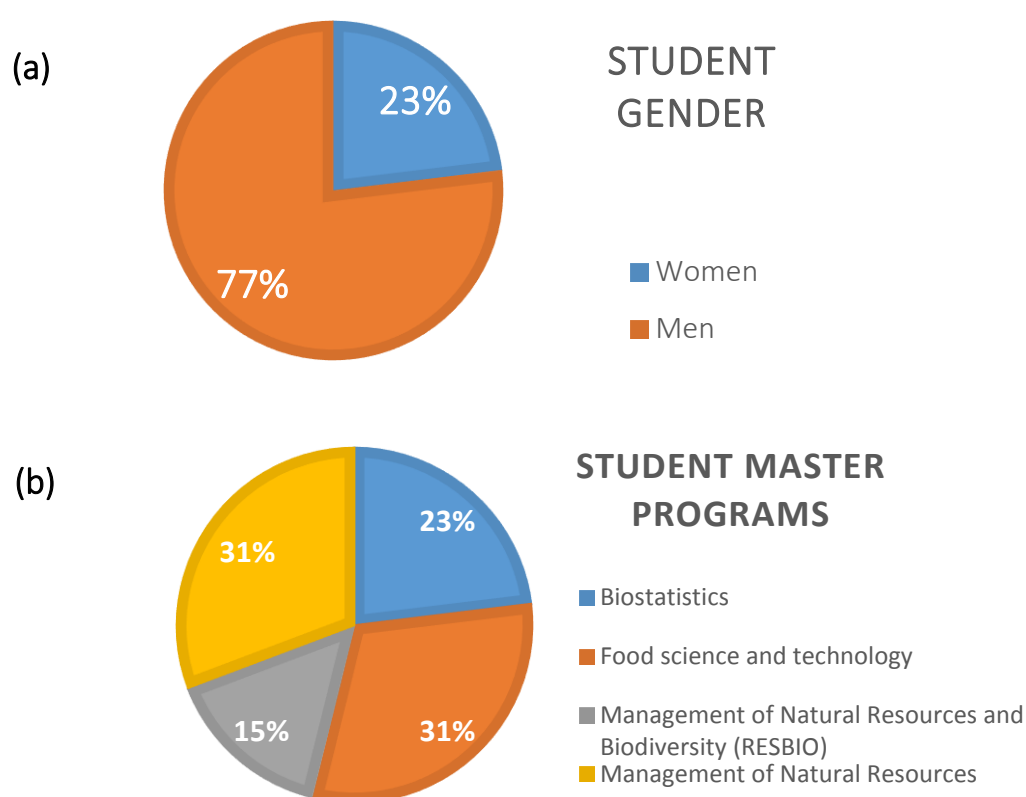


Figure 1. Distribution of the beneficiaries between gender (a) and master programmes (b)

Altogether, **3 (instead of 4)** were registered for the MSc programme Biostatistics, **2 (instead of 4)** for MSc programme in Biodiversity and Natural Resources and **8 (instead of 4 in MSc programme in Food Sciences and Nutrition)** for MSc programme in Food Sciences and Nutrition, and Forestry and Natural Resources Management. The difference with what was previously planned (see Table 1) has allowed to enrol one additional student, making 13 beneficiaries instead of 12 originally planned (further explanations are provided in the financial report).

Table 2 gives details (first name and surname, gender, master programme, and contact details) of the project beneficiaries. Figure 2 shows a photograph of the beneficiaries of the RUFORUM Nurturing Grant with Dr Moses of RUFORUM.

Table 2. List of Nurturing Grant Beneficiaries at the Faculty of Agronomic Sciences starting in the academic year 2016-2017: name, mater program registered for, and contact details

N°	Name	Gender	Master program registered for	Phone number (+229)..	Email
1	AGLASSA Cossi Aubin	M	Management of Natural Resources and Biodiversity (RESBIO)	96153012	cosaubin@gmail.com
2	CHABI Hermann Ghislain	M	Management of Natural Resources and Biodiversity (RESBIO)	96031035	chaghisher@gmail.com
3	HOUENOU Jésusnon Ezéckiel	M	Management of Natural Resources	66999196	jehezeckiel@gmail.com
4	GANDAHO M Cléo-Claudia	F	Management of Natural Resources	97716079	cgandaho15@gmail.com
5	SEWA Samuel Jonathan	M	Food science and technology	67763374	jonathansewa@gmail.com
6	AGBOHESSOU Mariette	F	Management of Natural Resources	96155825	magbohessou@gmail.com
7	FASSINOU Finagnon Toyi Kévin	M	Food science and technology	97787793	faskeve@yahoo.fr
8	FONTON Johnnor Murillos Yatoundé	M	Food science and technology	97477940	murillosfonton@gmail.com
9	GBEDAN Roméo	M	Food science and technology	66810177	romeogbedan@gmail.com
10	AGOUNDE Gafarou	M	Management of Natural Resources	96692934	agoundegafarou@gmail.com
11	SACLA-AIDE Edmond	M	Biostatistics	66720575	saclaaideedmond@yahoo.fr
12	OROUNLA B. Rachidatou	F	Biostatistics	66371821	rachobiss@gmail.com
13	VIAYINON Jean-Hénock	M	Biostatistics	67458320	henocksjean@gmail.com



Figure 1. Nurturing grant beneficiaries with Dr Moses of RUFORUM

3. Academic progress

Most of the students have completed the exam of the first year of their respective master program and are waiting for their marks and grades (See Appendix 1). In addition, twelve out of the thirteen already have the topic of their master research and are currently drafting they proposal (see Table 3).

Table 3. Research topic of the Nurturing Grant Beneficiaries at the Faculty of Agronomic

N°	Name	M.Sc Thesis supervisor	M.Sc Thesis co-supervisor(s)	M.Sc. Topic	Stage of evolution
1	AGLASSA Cossi Aubin	Prof Ahamidé	Not applicable	Biological and socio-economic assessment of threatened species in the district of Lokossa, southern Benin	Proposal drafting
2	CHABI Hermann Ghislain	Prof Assogbadjo	Dr Gbèdomon	Ecosystem disservices of the Reserve of Biosphere of Pendjari: Trade-offs and implication for sustainable conservation of the reserve	Proposal drafting
3	HOUENOU Jésusnon Ezéckiel	Prof Assogbadjo	Dr Idohou	Local perception and habitat suitability modelling for ecological restoration of <i>Milicia excelsa</i> in Benin (West Africa)	Proposal drafting
4	GANDAHO M Cléo-Claudia	Prof Assogbadjo	Dr Idohou	Impact of climate changes on the distribution of the threatened <i>Ipomoea beninensis</i> in Benin (West Africa)	Proposal drafting
5	SEWA Samuel Jonathan	Prof Hounhouigan	Dr Chadaré	Effect of peeling, formulation and pasteurisation process units on the microbiological and physico-chemical quality of pineapple juice from Benin.	Proposal drafting
6	AGBOHESSOU Mariette	Prof Assogbadjo	Dr Salako	Comparative analysis of performances of cuttings and air marcotting in propagating <i>Irvingia gabonensis</i> and <i>Adansonia digitata</i> in Southern Benin	Proposal drafting
7	FASSINOU Finagnon Toyi Kévin	Prof Hounhouigan	Dr Chadaré	Infant food formulation based on two selected food trees and shrubs from Benin	Proposal drafting
8	FONTON Johnnor Murillos Yatoundé	Prof Hounhouigan	Dr Chadaré	Effect of storage on microbiological, physico-chemical and nutritional quality of optimally pasteurized pineapple juice from Benin	Proposal drafting
9	GBEDAN Roméo	Prof Hounhouigan	Dr Chadaré	Under discussion	Not applicable
10	AGOUNDE Gafarou	Prof Assogbadjo	Dr Salako / Dr Idohou	Predicting climate change impact on elephant food resources in the Pendjari National Park	Proposal drafting
11	SACLA-AIDE Edmond	Prof Glèlè Kakaï	Dr Chadaré / Dr Salako	Relative performances of optimization using mixture design	Proposal drafting
12	OROUNLA B. Rachidatou	Prof Glèlè Kakaï	Not applicable	Multiples Correspondence Analysis for typology of cows breeder in Benin	Proposal drafting
13	VIAYINON Jean-Hénock	Prof Glèlè Kakaï	Not applicable	Nonlinear Mixed Effect Models	Proposal drafting

4. Conclusion

The project has effectively started and the activities of the first year which mainly were (i) to recruit the beneficiaries, and (ii) enrol them in their respective master programmes were successfully achieved. In addition, it was possible to register one more student (13 instead of 12). The second academic year will start in October 2017. The next challenge for beneficiaries is to successfully complete the second year as the first one. For the management team, the next challenge is to ensure successful supervision of the beneficiaries such that they complete their master and contribute to building the capacity of human resources in agricultural sector.

Acknowledgment

Both beneficiaries and the project management team express their gratitude to the RUFORUM for providing such opportunity.

6. Appendices

Individual first year report by the project beneficiary

INDIVIDUAL REPORT FORM _ NURTURING GRANTS _ RUFORUM

STUDENT NAME, PICTURE AND PROGRAM	SEX AND AGE	ACADEMIC RECORD	ACADEMIC PROGRESS	LEARNING EXPERIENCE	CHALLENGES AND HOW THEY CAN BE ADDRESSED	SUPERVISOR (FULL NAME)	TENTATIVE RESEARCH TOPIC
 CHABI Hermann Ghislain UAC/FSA/RESBIO	M 25/09/1986	Année en cours	FSA/ MASTER EN GESTION DES RESSOURCES NATURELLES ET DE LA BIODIVERSITE (RESBIO)	• Aménagement et conservation des ressources naturelles, • Aménagement des produits forestiers non ligneux et ligneux, • Aménagement des systèmes agro-forestier traditionnels, • Aménagement des aires protégées, • Analyse, traitement statistique et interprétation scientifique des données biologiques, • Etude d'impact Environnemental, • Elaboration et mise en œuvre de Projets de développement et de recherche scientifique, • Suivi évaluation de projets, • Atténuation et adaptation aux effets néfastes des changements climatiques sur l'environnement, • Monographie de la diversité biologique (Ressources forestières animales),	Renforcement de la résilience des couches les plus vulnérables <u>Address:</u> Tel: 0022996031035 ou 0022995198009 Email: chaghisher@gmail.com	Prof Dr ir ASSOGBADJO Achille E.	Ecosystem disservices of the Reserve of Biosphere of Pendjari: Trade-offs and implication for sustainable conservation of the reserve

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 AGLASSA Cossi Aubin UAC/FSA/ RESBIO	Masculin 01/03/ 1981 à Savalou	Année en cours (pas encore de notes)	FSA/ MASTER EN GESTION DES RESSOURCES NATURELLES ET DE LA BIODIVERSITE (RESBIO)	➤ Aménagement des aires protégées, ➤ Analyse, traitement statistique et interprétation des données biologiques, ➤ Etude d'impacts Environnemental, ➤ Elaboration et mise en œuvre de Projets de développement et de recherches scientifiques, ➤ Atténuation et adaptation aux effets néfastes du changement climatique sur l'environnement, ➤ Monographie de la diversité biologique (Ressources forestières animales), ➤ Aménagement et conservation des ressources naturelles, ➤ Aménagement des produits forestiers non ligneux et ligneux, ➤ Aménagement des systèmes agro-forestiers traditionnels,	Atténuation de la vulnérabilité des couches les plus vulnérables/ promotion des essences fruitières et des produits forestiers non ligneux (PNFL) Tél: 0022995462704/ 0022996153012 Email: cosaubin@gmail.com	Prof. Dr Ir ASSOGBADJO Achille E.	Contribution à l'étude biologique et socio-économique des essences menacées dans la commune de Lokossa

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 FONTON Johnnor Murillos Yatoundé, Human Nutrition and Food Science	Male 25 years old	Biological value of food: 15,50 Applied Nutrition: 13 Development and operation of food composition tables: 16,50 Toxicology and food safety: 12,80 Harvest quality, storage and food preservation: 11,10 Rheology of food: 14.50 Food additives and spices: 16,50 Dynamics of food consumption patterns: 13,25 Sensory evaluation: 15,50	The year being not finished we have not yet written exams in the courses below Biochemical basis and physiology of nutrition, genesis and evolution of equipment, unit operations of the food process, integrated quality management, linear model 1 and 2, agricultural experimentation 2, agricultural research, scientific writing technique, gender and development, scientific English, ethics and nutrition research, biochemical composition and functional quality of food, formulation and optimization of nutritional value of food, nutrition and dietetics, advanced nutrition physiology, food and nutritional security, food and nutrition in emergencies, Research methodology in laboratories and research stations, chromatographic methodology, nutritional surveys planning, computer science applied to nutrition, scientific seminar, rural monography	This master1 course allows me to acquire skills in the following domains: food formulation, dietetic nutrition, food safety and nutrition, planning nutritional surveys nutrition in emergency situations and sensory analyses.	-	Dr Chadaré / Prof HOUNHOUIGAN	Effect of storage on microbiological, physico-chemical and nutritional quality of optimally pasteurized pineapple juice from Benin

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 GBEDAN Mahumawon Ghislain Roméo	Male 27 years old	Biological value of food: 15 Applied Nutrition: 15,75 Food composition tables: 17,50 Toxicology and food safety: 13 Harvest quality, storage and food preservation: 12.80 Rheology of food: 14,50 Food additives and spices: 16,50 Dynamics of food consumption patterns: 13.25 Sensory evaluation: 14,50 Bioactive compound of food: 17,75	This academic year (2016-2017) being not yet ended, we have not yet been evaluated in some subjects and in this wise, we have not get the marks of these subjects. In the number of these subjects, we can mention: Biochemical basis and physiology of nutrition, genesis and evolution of equipment, unit operation of the food process, integrated quality management, linear model 1 and 2, agricultural experimentation2 agricultural research, scientific writing technique, gender and development, angal Science, ethics and nutrition research, biochemical composition and functional quality of food, formulation and optimization of nutritional value of food, nutrition and dietetics, advanced nutrition physiology, food and nutritional security, food and nutrition in emergencies, Research methodology in laboratories and research stations, chromatographic methodology, nutritional surveys planning, computer science applied to nutrition, scientific seminar, real-life monography	This master1 course allows us to strengthen our skills in the following fields: dietetics and nutrition, food design, food safety, nutritional planning of surveys, feeding and nutrition in emergency situations.	-	Prof. Joseph D. HOUN- HOUGAN	Under discussion

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 Samuel Jonathan SEWA Food science and technology	Male 25 years old	<u>Summary of courses followed and evaluated:</u> + Dynastic of models of food consumption: 14.75 + Applied nutrition: 11 + Biological value of foods: 16.5 + Rheology: 15.5 + Sensory analysis: 13 + Quality harvest, storage and conservation: 10,55 + Additives: 17 + food safety and toxicology: 11.75 <u>Summary of the specialty courses followed and not yet evaluated:</u> + Basic biochemical and physiological nutrition + The process engineering unit operation + Integrated quality management + Scientific writing + Ethics and research in	For this first year of master courses, we have 30 theoretical courses which are finished by : + practical training on the field "rural monography", which will be also noted. <u>Summary of the specialty courses not completed:</u> + Emergency situations + Computer science applied to nutrition. + Genesis and evolution of equipment and food proceeds + Development and operation of food consumption tables + training course of methodology research in the laboratory <u>Summary of combined specialties courses completed and not yet evaluated:</u>	I have acquired through already completed courses, a clear picture and thorough knowledge on foods, the secrets of a food combination perfect for not only development, maintenance and protection of the body but also the biological values of food, the relationship of these with the physiological needs of the body for proper operation. Also I had the enlightened mind in support of the forms of malnutrition and the steps to be taken in emergency situations. This is in	The challenges during the study period is to immerse myself in the courses to take the best advantage for a good career in food biotechnology for the resolution of situations of malnutrition and hunger in Benin. In front of such a vision, I also had to take care of survival and the research of working material : a computer for the practical work and statistical data processing and also a bike for the moving during the practice works and to save time. RUFORUM gave me a great chance to continue studies. So to better meet this	Supervisors: Dr. Chadare Flora / Prof. Joseph HOUNHOUIGAN	Effect of peeling, formulation and pasteurisation process units on the microbiological and phisico-chemical quality of pineapple juice from Benin.

		nutrition science and food technology + Conference scientific .seminar + Nutritional survey planning +Chromatographic method + Food and nutrition in emergency situation + Food and nutritional security + Physiology advanced nutrition + Formulation and optimization of the nutritional value of foods	+ Linear model 1 and 2 + Gender and development + Scientific English + Agricultural experimentation. I have written exams for 8 courses and still have to write 23.	case of the basics for the development and planning of nutritional surveys and emergency situations and support to vulnerable people. I have also been enlightened on the physicochemical and microbiological analytical methods, which are laboratory work that ensures the safety of food.	chance I had to run also for these needs, way parallel, while maintaining a level of understanding necessary of course. For the rest of the course, I will optimize performance to gather a good average which can favor me for the thesis, if God made me grace.		
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 AGBOHESSOU MARIETTE MASTER IN FORESTRY AND MANAGEMENT OF NATURAL RESOURCES	FEMALE, 23 years (30/04/1994)	1- Animal ethology: 05.50 2- SIG: 08.50 3- Conservation Biology: 9.25 4- Sociology of Natural Resources: 9.75 5- Climate Changes: 12.50 6- Functioning of Forest's Ecosystems: 14.50 7- Functioning of Savannah Ecosystems: 14.50 8- Measure of biological biodiversity: 15.00 9- Landscape's Ecology: 15 10- Soils' Ecological restoration: 15.25 11- Genetic of population: 17 12- Applied hydrobiology: 19.5	2011-2012: 1 st Year of Bachelor degree 2012-2013: 2 nd Year of Bachelor degree 2013-2014: 3 rd Year of Bachelor degree 2016-2017: Master 1 (Ongoing)	-Study of vegetation, -Forest inventory, -Nursery of forest species, -Management of agroforestry system Ethnobotanical investigations, -Using of GPS, -Morphometric measurement, - Implementation of forest planting	CHALLENGE -Instable Internet connection for doing research at University, so we need to go to internet cafe outside of school, - Collect of data at the end on species with large values is very important challenge for conservation and valorization, - Another challenge is to write a scientific article on our results and to publish it in a Journal with impact factors HOW THEY CAN BE ADDRESSED All challenges we have name hereinbefore can only be addressed on the basis of financial resources.	Pr. Dr. Ir. Achille E. ASSOGBADJO Dr. Ir. Valère Kolawolé SALAKO	Comparative analysis of the performancy of cuttings and marcotting in propagating <i>Irvingia gabonensis</i> and <i>Adansonia digitata</i> in Southern Benin

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Name: GANDAHO Mahugnon. Mihinnoudéa. Cléo-Claudia Picture:  Program: Masters in Management of Natural Resources.	Sex Female Age 23 years	Master 1 record: Some notes - Genetics of the population: 16 - General Hydrobiology : 18.25 - Geographic information system, teledetection and cartography: 9.25 - Ecosystem of savannas : 12 - Dynamic of the animal populations : 14.50 - Ethology : 13 - Sociology of the natural resources : 11.50 - Ecological Restoration : 13.45 - Measure biodiversity: 14.25 - Scientific drafting: 15.25 - Biology of the conservation: 12.80 - Climatic change: 09 - Ecology of the landscape: 11.45 - Ecology forest: 14.25	End of Master 1 (This year) Beginning of Master2 (Next Academic year)	- Know –how on use of field works tools - Knowledge on how to field works - Good knowledge in R programming software - Knowledge I all basic statistics software - Knowledge in phytosociology records	- Difficulty to easily access materials due to financial support - Issues of internet access for research works - Lack of funds to finance practical works I need financial support in order to address all these above challenges.	Prof Achille ASSOGBADJO Dr. ir. Rodrigue IDOHO	Impact of climate changes on the distribution of the threatened <i>Ipomoea beninensis</i> in Benin (West Africa)

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 Family Name: HOUENOU Given Name: Jésusnon Ezéckiel Program: Master	Sex: Male Age: 23 years old	- Licence, bachelor degree	- Master in progress (Available Scores per course) First year of Master -Genetic of populations: 15.5 -Landscape ecology: 13.65 -Fauna knowledge and animal ethology: 10.7 -Ecological restoration: 14.65 -Biology of conservation: 11 -Dynamic of forest ecosystems: 15 -Dynamic of savannah ecosystems: 12.5 -Hydro -biology: 18 -Scientific redaction: 13 -Climate change: 9.75 -GIS, cartography and remote sensing: 13.25 -Sociology of natural resources: 12 -Measurement of biodiversity: 12.8 -Dynamic of animal populations: 17.5	-Ethnobotanical investigations; - Forest inventory; -Nursery and agroforestry system ; -Morpho metric measurement.	CHALLENGES The mean challenge here is to collect the data on species with large values of use with a view to passing later to their conservations and valorizations. HOW THEY CAN BE ADDRESSED This project can only be carried out on the basis of financial resources.	Prof Achille ASSOGBADJO Dr. ir. Rodrigue IDOHO	Local perception and habitat suitability modelling for ecological restoration of <i>Milicia excelsa</i> in Benin (West Africa)

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AGOUNDE GAFAROU  Forestry and natural resources management	MALE 27	Population genetic: 17 Hydrobiology: 15.5 Biologie of conservation : 14 Forestry ecology: 13.75 Measure of biodiversity: 14.60 Restauration of soils: 14.15 Scientific redaction: 17 Climatologie : 12.5 Landscape ecology: 12.35 Ethology : 11	2012-2013: Licence1 2013-2014: Licence2 2014-2015: Licence3 2016-2017: Master1	-2016: Internship at the Laboratory of Biomathematics and Forestry Estimation (LABEF) at the Faculty of Agronomic Sciences (FSA) of Abomey Calavi University (UAC) -2016: Training in English at BENIN-AMERICAN LANGUAGE CENTER (BALC) from Vodjè to Cotonou. -2015: Internship at the Tchaourou slaughterhouse and participation in the vaccination campaign against CBPP and bovine pasteurellosis; -2015: End of training course on the fish farm Linssoussi Eugénie Anastasie (LEA) of Abomey; -2014: Internship in veterinary pharmacy and care of farm animals at the veterinary pharmacy of Marcel FADAIRO in Kétou; -2014: Real-life Monography Course (MMR), conducted in Songhaï Savalou; -2013: Internship of Discovery of the Rural Environment (DMR), carried out in the commune of Kétou.	-Finish second year of Master -Go to finally internship -Draw a document for getting Master certificate -Undertake and return what we're learnt in the professionals area.	Prof Achille ASSOGBADJO Dr KOLAWOLE VALERE SALAKO Dr RODRIGUE IDOHOU	Predicting climate change impact on elephant food resources in the Pendjari National Park

INDIVIDUAL REPORT FORM _ NURTURING GRANTS _ RUFORUM

STUDENT NAME, PICTURE AND PROGRAM	SEX AND AGE	ACADEMIC RECCORD	ACADEMIC PROGRESS	LEARNING EXPERIENCE	CHALLENGES AND HOW THEY CAN BE ADDRESSED	SUPERVISOR (FULL NAME)	TENTATIVE RESEARCH TOPIC
Name: Jean-Henock Sèmèvo VIAYINON Picture  Program: Master in Statistics major biostatistics	AGE: 23 SEX: Male	Master 1 records (in progress) Details English: 16.90 Univariate: 16 Analysis: 12 Probability: 15 Partial Differential Equation: 16 Statistical computing: in progress Multivariate: in progress Linear model: in progress Geostatistics: 16.75 Survival: in progress Genetics: 13 Econometry: in progress Seminar: in progress	Finishing Master1 Details Class attendance: Have well attended and passionately the courses Class assignments: Have completed all the assignment by the way. Homework: Well doing Behavior: Respectful and always motivated to learn more	Statistical Computation and Simulation: have learnt programing with R, MATLAB and Minitab. Quantitative genetics: have learnt how to use statistical methods to improve quantitative characters involved in plants and animals' production Geostatistics: have learnt how to apply probabilistic models to geographical data multivariate statistical methods: have learnt how to explore and describe relationship between variables in a multidimensional database Database: Have learnt how to build, clean, manage database and interact with data Survival analysis: Have learnt how to analyze survival dataset Linear Models: Have learnt about simple and multiple linear regression Statistical Methods in Economy: have mastered econometry Others: Have learnt about machine learning in Python, coding web page using html and CSS, big data, business analysis, design thinking and making, problems solving.	Challenge1 : Degree completion Can be addressed by hard learning, personal researching and working about the courses' contents and the thesis topic Challenge 2: PhD in Statistics & Machine Learning Can be addressed by both completing master and still being motivated to learn and research deeper about artificial intelligence and machine learning requirements.	Prof.Dr. Ir Romain Lucas GLELE KAKAI	Nonlinear Mixed Effect Models

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 Kevin Finagnon Toyi FASSINOU Master in Nutrition and Food Science	• Male • 24 years old	Master I in progress. Below, the list of the courses that we have followed • Valeur Biologique des Aliments : 16.5 • Qualité des récoltes, stockage et conservation : 12.42 • Bases biochimique et Physiologique de la Nutrition : 15.25 • Nutrition appliquée : 16.5 • Composés Bioactifs et qualité fonctionnelle des aliments : 17.16 • Evaluation Sensorielle : 18 • Elaboration et Exploitation des tables : 17 • Toxicologie et Sécurité Sanitaire des Aliments : 15 • Rhéologie des aliments : 17 • Additifs Alimentaires et épices : 17 • Dynamique des modèles de consommation : 16 However, except this list of the courses which we have followed, five exams were done but yet we don't have our performance.	Master I in progress. Regarding this academic year, all courses was done (Except two courses "Informatique appliqué" and "Rédaction scientifique") which are starting but not fishing. Hence, fourteen exams aren't written yet • Modèle linéaire I • Modèle linéaire II • Expérimentation Agricole • Anglais • Genre et développement • Nutrition et diététique • Alimentation et nutrition en cas d'urgence • Sécurité alimentaire et nutritionnelle • Genèse des industries agroalimentaires • Opération unitaire du génie des procédés • Chromatographie • Physiologie avancée de la nutrition • Informatique appliqué • Rédaction scientifique	Through this Master I, my level in nutrition and food science has increased. During year I, we have performed a field practical training of "Rural monography" for 1.5 month	Limited access to documentation was our main challenge. To face this challenge, we use usually the document which we have by internet access. In the second part we have to improve our knowledge in laboratory analyses. To reach this aim, we can do a practical training after our course.	Dr. Ir. Flora Josiane CHADARE / Prof. Joseph D. HOUNHOUI GAN	Infant food formulation based on 2 selected food trees and shrubs from Benin.

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Name: SACLA AIDE Edmond  Program: Master in Statistics major Biostatistics	Age: 22 Sex: Male	Master 1 records (in progress) Details • English: 17,83 • Univariate: 15 • Probability: 14,40 • Analysis: 12 • Partial Differential Equation: 15,10 • Geostatistics: 14,5 • Quantitative genetics: 17,5 • Statistical computing: in progress • Linear model: in progress • Multivariate: in progress • Survival analysis: in progress • Econometry: in progress • Seminar: in progress	Finishing Master 1 This first year in Master Biostatistics was very interesting. The courses were very fascinating and well attended. I have learned so much specially the group's work and sharing knowledge between comrade	Univariate: have learnt some basis hypothesis test Geostatistics: have learnt quantity modelling using probabilistic models Survival analysis: have learnt the methods of statistical modelling and analysis of lifetimes Quantitative genetics: have learnt how statistical methods are used to estimate genetic values in plants or animals populations Data base: have learnt the role of data modelling, file management and database systems in information systems Statistical computing: Have learnt how to program with Minitab, Matlab and R software Linear model: have learnt simple and multiple linear regression and some of transformations of a dataset to reach linear model Multivariate: have learnt some statistical methods aimed at summarizing information from a table with many variables Econometry: have learnt some statistics methods applied to economics and some models used in economic analysis.	My main challenge is to well complete the master program. This can be addressed by learning very hard, improving my personal researching. My second challenge is to associate biostatistics with nutrition and food sciences	-Prof GLELE KAKAI Romain - Dr CHADARE Flora Josiane -Dr SALAKO Kolawole Valere	Relative performances of optimization using mixture design

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Name: Bissilimou Rachidatou OROUNLA  Program: Master in Biostatistics	Sex: Female Age: 23	Master 1 records Actually, we have not the final result (in progress) <u>Details</u> • English: 14.82 • Univariate: 13 • Probability: 13.2 • Partial Differential Equation: 15.50 • Geostatistics: 15.25 • Genetics: 18	Finishing Master1 The courses have been well doing. This imply a motivation to learn more	Concepts in: -Mathematicals, probability and Statistical Methods in Economy -Statistical Computation and Simulation (programing with Minitab, MATLAB and R) -Quantitative genetics (use statistical methods to improve quantitative characters involved in plants and animal's production) -Geostatistics (to apply probabilistic models to geographical data) -Multivariate statistical methods (explore and describe relationship between variables) -Linear Models (simple and multiple linear regression) -Database (how to build, clean, manage database and interact in Access and Cspiro) -Survival analysis (to analyze survival dataset)	No challenge	Prof. Dr. Ir. Romain Lucas GLELE-KAKAÏ	Multiples Correspondence Analyses and typology of cows breeder