



**Periodical Report
6 Months of project
implementation**

**New Curricula in
Precision Agriculture
Using GIS Technologies
and Sensing Data**

**ABDELHAMID IBN BADIS UNIVERSITY,
Mostaganem, ALGERIA**



Co-funded by the
Erasmus+ Programme
of the European Union

Joint Project: Capacity Building in the Field
of Higher Education ERASMUS+ 2018

Prof. Hadjira BENOUDNINE

Internal UMAB Work plan

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UMAB Tasks	Expected date of delivery	Observations
Meeting with the Top managers <ul style="list-style-type: none"> -Presentation of the CUPAGIS project -Discussion on project activities -Decide which faculties and departments will be involved in the project -Identify a project coordinator at the University, according to local conditions -Organize the following activities of the project 	6 November 2018	Done
Meeting with Deans of different faculties involved in the Cupagis project <ul style="list-style-type: none"> -Discussion with the Deans on the project and choice of teachers who will be members in the project - Make a list of valid subjects/courses for analysis and future updates 	14 November 2018	Done

Internal UMAB Work plan

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UMAB Tasks	Expected date of delivery	Observations
Establishment of list of curricula's in the area of agronomy for bachelors and masters degrees	15 January 2019	Done
Kick of meeting	18-19 February 2019	Done
Meeting with the Dean of the SNV and the pedagogical responsible Objectives: <ul style="list-style-type: none"> - Abstracting of the kick of meeting - updating the selection of the working group According to CUPAGIS conditions 	11 March 2019	Done
Meeting with the internal CUPAGIS Group Main objectives <ul style="list-style-type: none"> - Presentation of the project for the selected working group - Assign responsible persons as a work group for the execution of each work package (WP1 – WP5 (Ref. 1.1. – 5.2.)) - Plan the following activities of the project 	15 March 2019	Done

Internal UMAB Work plan

UMAB Tasks	Expected date of delivery	Observations
Meeting for discussion about Dissemination Plan Objectives: Establishment a dissemination plan for CUPAGIS Project	31 March 2019	Extended to 11 May 2019 done
Meeting for discussion about Dissemination Plan Objectives: Establishment of an internal quality Assurance plan	7 April 2019	Extended to 11 May 2019 done
The second meeting with trainers Because of no availability of few teachers and the English language, other teachers were invited to explain them the project and plan the activities	7 April 2019	English language and the availability of teachers were the majors problems in the selection of trainers
The third meeting with trainers The final list of the trainers for the two first workshops was discussed. The responsibility of the courses were assigned	14 April 2019	

Internal UMAB Work plan

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UMAB Tasks	Expected date of delivery	Observations
Establishment of the PASENSO <ol style="list-style-type: none"> 1. Responsible of the PASENSO should be assigned 2. Draft document for establishment of the PASENSO 3. The document should be Approved by the administration of the university 	30 April 2019	1 and 2 steps are done (3 rd step not yet)
National Monitoring	11 June 2019	Done
National coordinating meeting at UMAB university <ul style="list-style-type: none"> - Discussion about the CUPAGIS project evolution - Problems of management and communication - Presentation of the different works packages according to the project description - Discussion about the budget - Discussion about the equipments 	20 June 2019	Done

Internal UMAB Work plan

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UMAB Tasks	Expected date of delivery	Observations
Questionnaires Students Questionnaires received and distributed	15th June 2019	Only 30 questionnaires were completed on 30th June 2019
First survey Report based on the questionnaires , conducting analysis and reports	15th July 2019	Extended to 30 September 2019
Training the trainers First workshop at Technical University of Berlin	19-30 August 2019	Visa problem Take too much times to fix an appointment
Information day for stakeholders and local press	22 September 2019	Maximum deadline 30 September 2019
Information day for students and teachers	23 September 2019	Maximum deadline 30 September 2019
Prepare a set of documentation for PAGIS and VCR	30 September 2019	Maximum deadline 30 October 2019

Internal UMAB Work plan

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UMAB Tasks	Expected date of delivery	Observations
Development of courses Each UMAB teacher, will examine and develop a new course according to the program of training (theoretical and practical in laboratory), a particular attention to the existing curricula in agronomy, a first draft digital version of the module should be developed the list of the recommended teaching materials should be established	30 October 2019	Deadline 30 December 2019
Skype meeting of the project board	Each 2 months	Not yet
First general assembly of Cupagis project	Oran October- November 2019	date not fixed
Assurance quality report	December 2019	Deadline 15 January 2019
UMAB Interim report	15 January 2020	Deadline 15 January 2020

UMAB Work group

No	Name, Surname, email	Position	Responsibility (WP, tasks according to the work plan)
1 co-ordinator	BENOUDINE Hadjira Emails : hbenoudnine@gmail.com Hadjira.benoudnine@univ-mosta.dz vrcc@univ-mosta.dz	Professor and vice rector of foreign relations and cooperation	Responsible of WP5
2	LABDAOUI Djamel Email : labdadjam@yahoo.fr	Associate professor	Responsible of the PASSENSO And responsible person for signing a contract regarding equipment delivery
3	FARAH Tahar Email : ferahtahar@yahoo.fr	Lecturer	Responsible of WP1
4	MAHIOU DJamel Email : djamel.mahiout@univ-mosta.dz	Associate professor	Responsible of WP2
5	Meriem Mokhtar Email : meriem.mokhtar@univ-mosta.dz	Associate professor	Responsible of WP3
6	ABED Mansour Emails : Mansour.abed@univ-mosta.dz	Associate professor	Responsible of WP4
7	Mansouri Toufik Email : mansouri.toufik@hotmail.com	Lecturer	Responsible of software's licences and new software installation
8	Ms TEMDI Samira Samira.temdi@univ-mosta.dz	Head of International Cooperation office	Management of the administration tasks of the project

Courses to update

- UMAB has chosen to set up a new professional master's program (M1 and M2)
- According to the Algerian laws, it's not possible to update any course without the agreement of the Algerian Higher Ministry of Education and Scientific Research

Name of the course to be upgraded

1. Remote Sensing and Application of Earth and Environment
2. Optimizing computer vision algorithms and real-time implementations
3. Basics of the Precision agriculture – characteristics, technologies, economic efficiency, optimal use of resources
4. Yield sensors for Precision Agriculture
5. Soil physical properties and its measurement
6. Application of Precision Agriculture for crops growing

Name of the course to be upgraded

7. Application of Precision Agriculture for crops growing
8. Using of SENTINEL1-2-3 imagery for agricultural field monitoring
9. Global Navigation Satellite Systems (NAVSTAR, GLONASS, GALILEO, etc.)-
10. The processing of satellite images with agronomic applications
11. Sensors and the management parameters (quantity and quality) of the
12. Management Marketing and Decision Making in Precision

Criteria for teacher selection for trainings

1. The specialty and expertise in the field (agronomy and technology)
2. Availability to carry out the project
3. Language Proficiency in English (Speaking and Comprehension)



Teacher that will develop new courses

Working group	Department
Dr LABDAOUI Djamel	Agronomy
Dr FARAH Tahar	Halieutic sciences
Dr MAHIOU DJamel	Agronomy
Dr Meriem Mokhtar	Agronomy
Dr ABED Mansour	Electrical engineering
Dr MERAH Mostéfa	Electrical engineering
Mansouri Toufik	Halieutic sciences
Dr Belabed Soraya	Agronomy
Dr Kadem Habib	Agronomy
Dr Mostari Abassiya	Agronomy
Prof .LARID Mohamed	Agronomy



Equipment & Software

Equipment/Software	Name of the person(s) responsible for the equipment/software installation	Occupation of the responsible persons	Contact information of the responsible persons
Equipment	Labdaoui Djamel	Associate professor at the department of Agronomy	Email : labdadjam@yahoo.fr
Software	Mansouri Toufik	Lecturer at the Faculty of Natural Sciences and Life	Email : mansouri.toufik@hotmail.com
Software	Larbaoui Kheira	Computer sciences engineer	Email: mosta_27@outlook.com

Dissemination plan

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Milestones	Activities	Description
24 th march 2019	Designation of a blogger	Dr. ABED Mansour Responsible of the WP4 for Abdelhamid Ibn Badis University, Mostaganem (P9) mansour.abed@univ-mosta.dz
09 th June 2019	Event dissemination	First Local Dissemination Meeting of the CUPAGIS Project (The 1st CUPAGIS DLM'2019) Location: Abdelhamid Ibn Badis University Mostaganem, FSNV Guests: Teachers, students, PhD students and researchers
10 th June 2019	Traditional dissemination	Live radio broadcast on local radio Dahra FM Publication of a Press Release
	Modern dissemination	- Dissemination on websites and Facebook - Send scanned publications and links to: alexandra.ivanova@acm-spac.a.dz
22 th September 2019	Event dissemination	Second Local Dissemination Meeting of the CUPAGIS Project (The 2nd CUPAGIS DLM'2019) Location: University of Mostaganem, FST Guests: Teachers, students, PhD students and researchers
23 th September 2019	Traditional dissemination	Live radio broadcast on national radio Channel 1 / Channel 3 Publication of a Press Release
	Modern dissemination	- Dissemination on websites and Facebook - Send scanned publications and links to: alexandra.ivanova@acm-spac.a.dz
8-9 December 2019	Event dissemination	Participation (posters) at the 6th Edition of the International Conference: ISPA'2019 (International Conference on Image and Signal Processing and Their Applications) Organizers: University of Mostaganem and Laboratory Signals and Systems (LSS) Location: Mostaganem
24 th December 2019	Event dissemination	Third Local Dissemination Meeting of the CUPAGIS Project (The 3rd CUPAGIS DLM'2019) Location: University of Mostaganem, Kharuba Academic guests: Teachers, students, PhD students and researchers Non-academic guests: Practitioners in the Agronomic field, socio-economic partners
25 th December 2019	Traditional dissemination	TV show on A3 Publication of a Press Release
	Modern dissemination	- Dissemination on websites and Facebook - Send scanned publications and links to: alexandra.ivanova@acm-spac.a.dz



UNIVERSITE
Abdelhamid Ibn Badis
MOSTAGANEM

Schedule of dissemination events

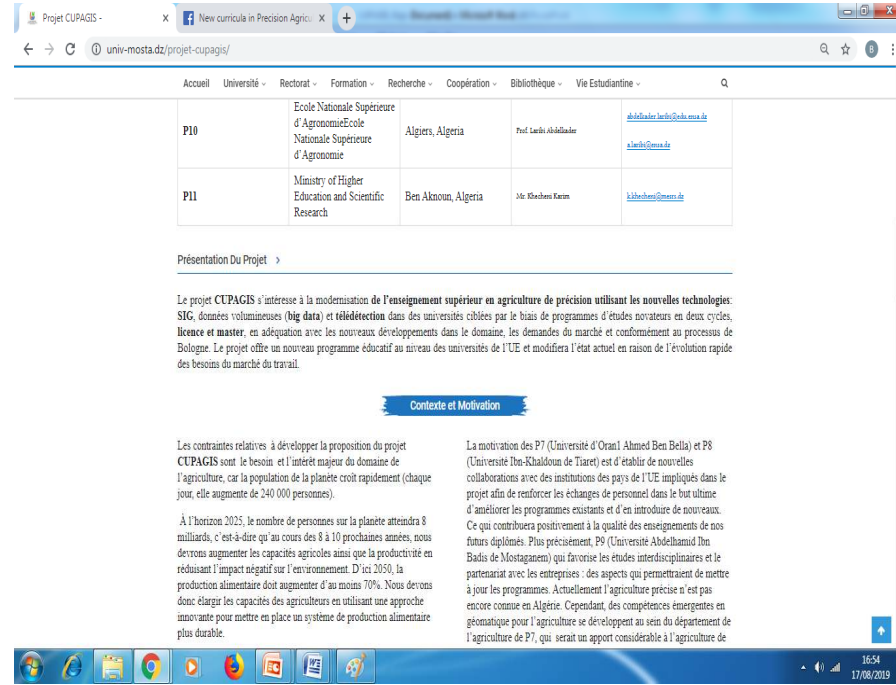
Event	Agenda
1. Presentation of CUPAGIS project to teachers and professors of the faculty of natural sciences and life	February 2019
2. Dissemination and presentation of the Cupagis project to the Students of Agronomy department	9 June 2019
3. Presentation of the CUPAGIS project on the Bulletin n°10 of the UMAB university	Published on the website on 6 th July 2019 (page 26 and 27)
4. Creating a Web page of the CUPGAGIS project on the website of the university	https://www.univ-mosta.dz/projet-cupagis/
5. Creation of facebook page	Cupagis Project-Umab
6. Preparing dissemination tools : flyers, banners and posters for the infos days	23 September 2019
7. Local Press meeting	24 September 2019
8. Radio meeting	November 2019

Non-consortium organizations

Stakeholders And interested parties	Experts and practitioners in the field	<ul style="list-style-type: none"> ▪ Algerian Space techniques center • Agricultural Chamber of Mostaganem Wilaya (Farmers Database) • Agricultural Services Branch • Association of Oleiculture • Viticulture Association • Potato Association • Plasticulture Association • ArbOleiculture Association • Association of beekeepers • Bendaha Ltd • Forest Service
list of Potential employers	Audience with professional interests on project results	<p><u>Different regional companies</u></p> <ul style="list-style-type: none"> • METIDJI NUTRITION, Spa • Agri-Food Products Sales Company, Sarl, SOVEPROAM • The Grands Moulins du Dahra, Spa, GMD • Algeria Seeds & Seeds News, Sarl, AGSN • MELLAH SEEDS, Eurl • MILLS of Mostaganem, Spa • AGRO SENOUCI, Sarl • AGRO MOSTA, Sarl • Groupe Avicole Ouest, Spa, GAO ORAVIO

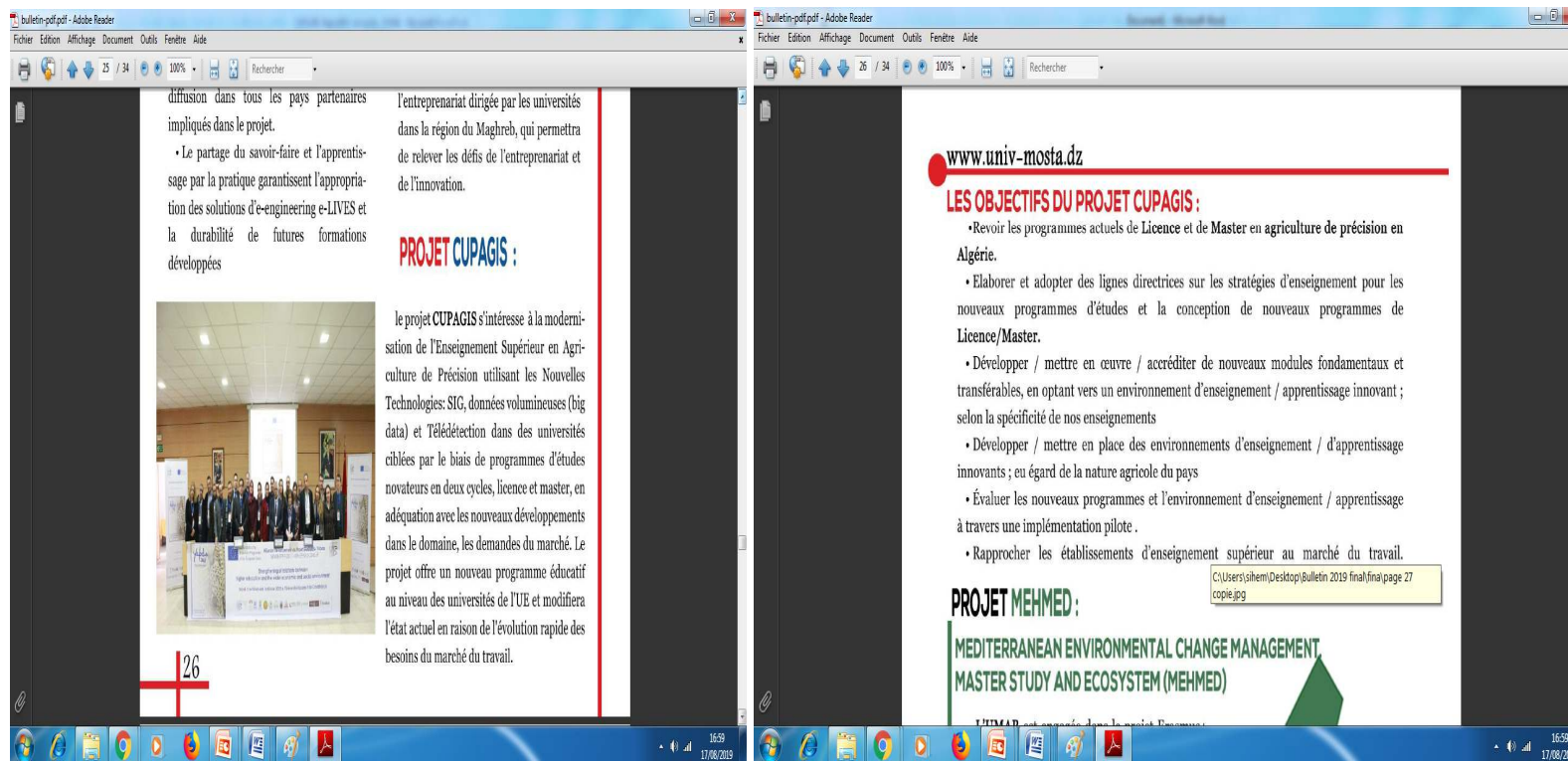
Implemented dissemination activities

March 2019: Design of the Page web of the project: <https://www.univ-mosta.dz/projet-cupagis/>



Implemented dissemination activities

June 2019: Published paper in the revue of the university (<https://www.univ-mosta.dz/wp-content/uploads/2019/07/bulletin-final-umab.pdf>)



Implemented dissemination activities

4 April 2019: At 2 PM a meeting with DAHRA Radio and the responsible of PASRNSO (Presentation of the CUPAGIS project)



June 2019: CUPAGIS presentation
for Agronomy department



CUPAGIS presentation for the
selected teachers



CUPAGIS presentation
for the selected teachers

Questionnaire for students

We proceed to the translation of the questionnaire into Arabic

CUPAGISSTUDENT QUESTIONNAIRE / draft
مسودة / استبيان
Ecole Supérieure d'Agronomie
Indicative Questions to determine the level of awareness about the CUPAGIS project among students and teachers of PC universities
أسئلة إرشادية لتحديد مستوى الوعي حول مشروع CUPAGIS بين الطلبة والأساتذة في الجامعات، للزراعة الدقيقة

No	The questionnaire
1	Do you know about the program ERASMUS+? هل تعرف ما هو برنامج إيراسموس بلس؟ No
2	Do you know about the project CUPAGIS? If you know anything about it, please inform us from whom or how have you found out this information? هل تعرف مشروع CUPAGIS؟ إذا كنت تعرف أي شيء عن ذلك، يرجى إعلامنا بمن أو كيف اكتشفت هذه المعلومات؟ No
3	Evaluate the necessity of the educational process modernization تقيم ضرورة تحديث العملية التعليمية 1 - no Need 2 - غير مهم 3 4 5 - highneed 5 - مهم جدا
4	Do you think that teaching of special disciplines is at a satisfactory level? هل تعتقد أن تدريس التخصصات الخاصة في مستوى مرضي؟ No
5	Do you think that the amount of special disciplines is at a satisfactory level? هل تعتقد أن كمية التخصصات الخاصة في مستوى مرضي؟ No
6	Do you think that the content of special disciplines is at a satisfactory level? هل تعتقد أن محتوى التخصصات الخاصة في مستوى مرضي؟ No

CUPAGISSTUDENT QUESTIONNAIRE / draft
مسودة / استبيان

7	Do you think that proportion between theoretical (i.e. lectures) workload and practical (i.e. seminars, laboratorial practice, self-study) workload of special disciplines is at a satisfactory level? هل تعتقد أن النسبة بين عبء العمل النظري (أي المحاضرات) وعبء العمل العملي (مثل الملتكات الدراسية والممارسة الصغيرة والدراسة الذاتية) للتخصصات الخاصة في مستوى مرضي؟ No
8	Do you think that equipment in laboratories and computer classrooms, as well as state of computers' operational systems are at the satisfactory level for the purposes of the study of disciplines in the field of Precision Agriculture? هل تعتقد أن المعدات الموجودة في المختبرات والمختبرات للكمبيوتر، فضلاً عن حالة الأنظمة التشغيلية لأجهزة الكمبيوتر في مستوى مرضي لأغراض دراسة التخصصات في مجال الزراعة الدقيقة؟ No
9	Do you think that literature at the libraries, such as books, academic publications, electronic sources, academic journals etc. are up-to-date and are able to improve the quality of leaning and increase your knowledge of special disciplines? هل تعتقد أن الآباء في المكتبات، مثل الكتب والمختبرات الإلكترونية، المصادر الإلكترونية والمجلات الأكاديمية وما إلى ذلك متسعة وقادرة على تحسين جودة التعلم وزيادة معرفتك بالتخصصات الخاصة؟ Yes
10	What do you think should be also done in order to upgrade the quality of teaching and learning of special disciplines? ما الذي يجب القيام به أيضاً من أجل رفع مستوى جودة التدريس والتعلم في التخصصات الخاصة؟ Make more of theoretical lectures and laboratorial practice
11	Do you think that new approaches, such as blended learning and e-learning are able to improve the quality of knowledge acquisition? هل تعتقد أن الأساليب الجديدة، مثل التعليم المدمج والتعليم الإلكتروني، قادرة على تحسين جودة اكتساب المعرفة؟ Yes
12	What do you think about the participation of your University in international projects along with the leading European universities? ما رأيك في مشاركة جامعتك في المشاريع الدولية إلى جانب الجامعات الأوروبية الرائدة؟ it's a good step. 1 - Positive 2 - indifferent 3 - Negative 4 - غير متأكد

CUPAGISSTUDENT QUESTIONNAIRE / draft
مسودة / استبيان

13	The project CUPAGIS is based on years of European experience. In this regard, do you consider it right to use it in the modernization of the teaching process? يُبنى مشروع CUPAGIS على سنوات من الخبرة الأوروبية في هذا الصدد. هل تعتبر أنه من المناسب استخدامه في تحديث العملية التعليمية؟ Yes
14	What do you think, will the acquisition of practical skills in Precision Agriculture increase your professional competence? في رأيك، هل اكتساب المهارات العملية في الزراعة الدقيقة يزيد من كفاءتك المهنية؟ Yes
15	How much are you interested in the opportunity to get a certificate that is equivalent to the ones of the leading universities? ما مدى اهتمامك بفرصة الحصول على شهادة تعادل شهادات الجامعات الرائدة؟ معدل من 1 إلى 5 1 - notinterested 2 - غير مهم 3 4 5 - Highlyinterested 5 - مهم جدا
16	How do you consider, whether the use of a new laboratory will increase your interest in Precision Agriculture? كيف تلتكر، ما إذا كان استخدام مختبر جديد سيزيد من اهتمامك بالزراعة الدقيقة؟ Yes
17	Are you interested to get more information about the purpose, objectives and the scope of the CUPAGIS project? هل أنت مهتم بالحصول على مزيد من المعلومات حول غرض وأهداف ونطاق مشروع CUPAGIS؟ Yes
18	Would you like to participate in the project? هل ترغب في المشاركة في المشروع؟ Yes

For Teachers:
19. Will the project CUPAGIS improve your professional skills as high school teacher?
هل سيقوم مشروع CUPAGIS بتحسين مهاراتك المهنية كمعلم؟
Yes

Questionnaire for students

Observations

- The students were in period of exam, we have received **only 30 full completed questionnaires**.
- The **survey cannot be realist based on only 30 questionnaires**.
- We **have included the students of the Engineering School of Agronomy**
- The team working in this part has proposed **to extend the period till the end of September 2019**.

Quality Assurance Plan

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Steps	Expected date of delivery
Quality Board election	18-19 February 2019, Tallin, Estonia
Quality Management Plan agreed	18-19 February 2019, Tallin, Estonia
Dissemination of CUPAGIS objectives Meeting with the internal CUPAGIS Group Assign responsible persons as a work group for the execution of each work package	February 2019
Meeting with the internal CUPAGIS Group Assign responsible persons as a work group for the execution of each work package	Mars / April 2019
First Self evaluation : - Development forms and questionnaires - Questionnaires distributed to different students, teachers and socio-economic stakeholders	30 June 2019
Completed questionnaires received - Analysis of Training Needs with Industry (demand) - Analysis the answered questionnaires	30 July 2019
Training the trainers	19-29 August 2019
Self-evaluation questionnaire distributed	19-29 August 2019 (During courses)
Completed questionnaires received	19-29 August 2019 (During courses)
Report and survey	30 September 2019
- Annual reporting - SWOT Analysis and Action Plans Presentation a quality evaluation report during a national Workshops to discuss strengths, weaknesses, opportunities and threats of establishing New master professional and Passenso	October –November 2019, Oran Algeria
First quality Board meeting	October- November 2019. Algeria

Quality Assurance Plan

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Steps	Expected date of delivery
Quality Evaluation report -Interim	Mars 2020
Problems identification , adaptive and continues CUPAGIS project management and planning of Steering Committee meetings	Monthly
Purchasing equipments	April 2020
Training the trainers	June 2020
Self-evaluation questionnaire distributed	June 2020
Complete received questionnaires	June 2020
Report and survey	30 July 2020
Annual reporting	November 2020
Report and survey for International PASENSO (Precision Agriculture using sensing data Service Office) network with stakeholders support	June 2021
Annual reporting	September 2021
Final reporting	October 2021

Quality Assurance Plan

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Quality group list

Name, Surname	Occupation	Organization	Contact info (email)
Meriem Mokhtar	Associate professor	Department of Agronomy, Faculty of natural Sciences and Life	meriem.mokhtar@univ-mosta.dz
Medjahed Mostefa	Lecturer and Responsible of quality assurance at UMAB	Quality Assurance office	mostefam27@gmail.com
Benoudnine Hadjira	Coordinator of the project	UMAB	hbenoudnine@gmail.com

PASENSO (Precision Agriculture using SENSing data Service Office)

The PASENSO is new office which will be established at the faculty of Natural Sciences and Life. It's organized as follow:

1. Director or Responsible of PASENSO

- ✓ The Director is responsible of the management and establishing links between universities and different stakeholders.
- ✓ Identifying and classification targets groups (stakeholders) by needs
- ✓ Marketing of educational services
- ✓ Information support
- ✓ Conducting of the University audit on existing training courses aiming to replace/ upgrade of outdated curricula
- ✓ Studying the needs of industrial enterprises in service training of professional personnel
- ✓ Searching for interested organizations and sponsors

PASENSO (Precision Agriculture using SENsing data Service Office)

2- Agriculture Engineer / Computer sciences Engineer

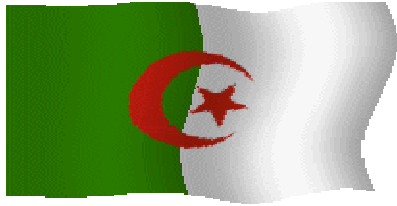
- ✓ Information support
- ✓ Marketing of educational services
- ✓ Upgrade of outdated agricultural equipment – to equip old machinery with sensors, navigation systems for the improvement of operations
- ✓ Creation of service for airborne monitoring of fields and farms
- ✓ Processing of satellites data organizations and sponsors

3- Secretary

- ✓ Organize the work of the Director of PASENSO and the office
- ✓ Manage the agenda,
- ✓ Type letters and reports
- ✓ Answer the phone, and
- ✓ Organize meetings and conventions

Communication

Communication is established based on :
Email and Phones



Thank you for you attention!



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