

## **Challenges in supporting “2030 Agenda for Sustainable Development” at University Alioune Diop of Bambey (UADB), Senegal**

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### **Abstract:**

Situated in rural areas, in an environment characterized by relatively high poverty and deteriorating ecosystems, University Alioune Diop wants to fully contribute to the economic and social development of its country and its surroundings, the Diourbel region. To this end, emphasis was placed on sustainability with the creation of a sustainable development department and the launch of a bachelor's degree in sustainable development and environmental management. This cross-disciplinary training focuses on the three fundamental pillars of sustainable development: economic efficiency, social equity and environmental quality. In addition to this training offer, UADB set up a gait that supports integration, implementation and achievement of the Sustainable Development Goals (SDGs), taking into account local perspectives. In that regard, two workshops focusing on an integrated approach of the SDGs were organized in partnership with Laval University of the city of Québec. These workshops were consisted of a simple, pragmatic, participatory and accessible approach that made it easier to adapt SDGs to local context and facilitated their comprehension, appropriation and implementation. Through these workshops, participants could understand and integrate SDGs in order to diagnose local problems and propose adequate solutions, through an inclusive and a participatory approach. These workshops permitted to mobilize collective knowledge around sustainability issues from the actors of the community, to discuss open-mindedly on various subjects related to SDGs targets and to identify regional priorities around these issues, highlighting the role of UADB as an active actor of sustainable development in its region and its country.

## **Introduction**

In the year 2000, the international community adopted the Millennium Development Goals (MDGs) to meet the needs of the world's poorest people. The aim was to fight poverty, promote gender equality, protect the environment, promote access to health care and quality education worldwide, particularly in development and less developed countries. Unfortunately, the expected results did not live up to expectations even if, in a country like Senegal, the incidence of income poverty decreased from 67.9% in 1994 to 46.7% in 2011 (Sakho-Jimbira et al. 2015). In 2015, the MDGs gave way to the Sustainable Development Goals (SDGs).

This United Nations-defined program has 17 goals that are set in 169 targets to create a better, more just, egalitarian and prosperous world by 2030. It was then recommended to UN member countries, civil society, private institutions, and individuals to build on these goals to shape their economic and social development policies (Diop 2016). Indeed, it is a universal program that applies to both developed and developing countries while giving each of them the flexibility to comply with their own national priorities (Sakho-Jimbira et al. 2015). Therefore, their implementation requires an inclusive and collaborative approach.

Like many other African countries, Senegal was quick to take ownership of the SDGs. In 2015, several regional consultation workshops on the specific Sustainable Development Goals for Senegal were organized by the Ministry of Environment and Sustainable Development. As a result of these consultations, 7 objectives were considered high priorities nationally. In order of importance, this is SDG 6, which refers to water and sanitation, SDG 15 on terrestrial ecosystems, SDG 1 on poverty, SDG 2 hunger, food security and nutrition, SDG 13 focused on climate change, SDG 7 on energy, and SDG 4 on quality education. Taking these priorities into account was considered fundamental in the implementation of the Post-2015 development agenda in Senegal, both at national and regional level (Said Hassani et al. 2015).

The Senegal Emerging Plan (PSE), which constitutes the reference document for Senegal's economic and social policy, integrates all these priorities. However, it must be recognized that there is no institutional set-up at the highest political level that can facilitate the implementation of the SDGs. Indeed, the absence of a national steering committee bringing together a diversity of actors accentuates the delay in the implementation of the

SDGs. To alleviate this shortcoming, and in order to reach the greatest number of actors, the University Alioune Diop de Bambey (UADB) has set up a participatory process that supports the integration, the implementation and the achievement of the SDGs taking into account specific requirements at the local level. This process started in July 2017 with the completion of two workshops in the city of Bambey.

This text will present, in its first part, the context of the region. The second part will focus on the main methodological lines of the approach used in the two workshops. The last part will focus on the presentation of their provisional results.

### **The Diourbel region: a worrying economic and social vulnerability**

Located on the West African coast, Senegal enjoys a relative political and social stability marked by the election by direct universal suffrage of four Presidents of the Republic since its access to independence in 1960. In economic terms, the Senegal was strongly affected by the drought years of the late 1970s and the Structural Adjustment Programs (SAPs) imposed by the Bretton Woods institutions (World Bank and International Monetary Fund) in the years 1980/2000. Indeed, the Senegalese government had to engage in a vast program of economic reforms based on the free market, the liberalization of prices, and free competition. The most significant reforms concerned the agricultural sector. This has resulted in the withdrawal of the State from the various agricultural sectors with the main consequences of the abolition or reduction of the national agricultural marketing and extension offices, but also the end of subsidies of all kinds. The social costs of SSPs were felt very early in the country. We are witnessing the abolition of boarding schools and school supplies, a decline in the construction of schools and health facilities, a dwindling of essential medicines, but also a decrease in the recruitment of health staff and teachers. Throughout all the country, there was a disintegration of the social fabric (Diop 2017).

The region of Diourbel, in the center of the country, a former groundnut basin, is among the most affected regions. With no sea fringe or perennial watercourses, surface hydrology is almost non-existent in the region. The vegetation is scarce and is mainly in the form of isolated trees (Regional Council of Diourbel 2013, 8). The region has an estimated population of 1,420,082 inhabitants in 2013, about 11.0 percent of the national population. This population was recorded at 1,053,856 in 2003, an annual average growth rate of 1.52%, lower than the national average over the same period, calculated at 2.5%. It is an extremely young population. This youth of the population is explained by a high birth rate

and fertility (Regional Council of Diourbel 2013: 8). In addition, this high number of young people generates a strong social demand in terms of education, health and jobs.

It is in this context that the Regional University Center (CUR) of Bambey was created in 2007 with the option of general and professional university training of short duration to meet the requirements of local development. In 2009, the Bambey CUR was transformed into a full-service university. In August 2011, it became Alioune Diop University of Bambey (UADB). The UADB has 3 Training and Research Units (UFR): the UFR Health and Sustainable Development (SSD), the UFR Economics, Management and Legal Engineering (ECOMIJ) and the UFR Applied Sciences and Technologies of Information and of Communication (SATIC).

Established in a rural environment characterized by increased poverty and a progressive deterioration of natural resources, the UADB wants to fully contribute to the economic and social development of the country in general and in particular of its surrounding region: Diourbel.

Faced with these issues, the fundamental question is:

*How does the UADB intend to meet the challenges of implementing SDGs in order to stimulate development in its surrounding region, and in Senegal in general?*

### **The beginnings of the sustainable development program at UADB**

The UADB wanted to emphasize his attachment to sustainable development with the creation of the first department of this type of training in Senegal and in the West African subregion. This transdisciplinary training focuses on the 3 fundamental pillars of sustainable development:

- Economic efficiency to ensure sound and sustainable management, without harming the environment and society;
- Social equity to meet the basic needs of people in housing, food, health and education, in order to reduce inequalities between individuals, while respecting cultures;
- Environmental quality to preserve natural resources in the long term, maintaining great ecological balances and limiting environmental impacts.

The Bachelor of Engineering in Sustainable Development and Environmental Management (IDDMN) of the UADB is based on a combination of theoretical lessons

teaching the main concepts related to sustainable development, and fieldwork that allows students to discover and study concrete issues related to sustainable development. Thus, all environmental issues at the local level, from waste management to the green economy, including pollution, climate change, marine protected areas, etc., are taken into account. The program is multidisciplinary and converge several speakers from the academic and professional community. Therefore, managing this diversity of disciplines is a huge challenge and effective strategies for managing this diversity needed to be put in place. In doing so, it was proposed to organize a workshop of exchange and sharing on the different lesson plans. The aim was to avoid misunderstandings and duplication of efforts. In this sense, the license in IDDMN is a great innovation and responds to the willingness of public authorities to expand the training offer to have a program allowing to future professionals to integrate effectively the three pillars of sustainable development.

In addition to this training offer, the UADB has put in place a process that supports the integration, implementation and achievement of the SDGs, taking into account the specific requirements of the locality. This process focused on an approach called "the integrated approach for SDGs", developed by the Hydro-Québec Institute for Environment, Development and Society (EDS Institute) of the Laval University located in Quebec City (Canada). The purpose of this approach is to contribute to integrate and achieve SDGs at the local level, by providing stakeholders with tools for analysis, diagnosis and planning and by enabling them to adapt SDG to specific requirements from the local. This approach is innovative, inclusive, collaborative. It is accessible and allows better ownership of the SDGs and their implementation.

In July 2017, two workshops were organized in partnership with EDS Institute. The first one was held with the UADB's academic community: faculty, students, and administrative and support staff and the second with the community of Bambey, represented by local elected officials, municipal officials and representatives of community organizations.

### **The integrated approach of the SDGs in Bambey: an innovative approach**

The integrated approach, or "mainstreaming" was formalized at the world level, at the UN conference for women held in Beijing in 1995. The principle of the integrated approach is to no longer limit the efforts with a particular focus on the implementation of specific measures in favor of a single target, but to systematically involve all relevant actors. It is about actively and explicitly monitoring the interaction and its possible effects on the

actors' situations. It is a new systemic questioning that helps to identify endogenously and diachronically existing problem-situations and lay a solid foundation for an issue in the form of local project-solutions (Action Positive 2004).

The integrated approach for SDGs developed by the EDS institute is a participatory and accessible analysis and research tool that contributes to adapt SDGs to locale level facilitating their ownership and implementation. Used for the first time at Laval University during the 2016-2017 academic year, this approach is articulated around three sequences that are:

- the diagnostic phase;
- the knowledge mobilization phase;
- the phase of the ideation or formulation of concrete projects in order to overcome the social, economic and environmental problems identified during the first stage.

The UADB, as a young Senegalese public university, is gradually shaping the culture of sustainable development and positioning itself among the first interlocutors of this transversal discipline. This scientifically pristine and under construction context was considered as a good opportunity to test the integrated approach for SDGs in Bambey. This experience required a good qualitative approach in the field.

### **Requirements of the field survey**

The choice of the qualitative method suggests qualitative investigation techniques that can help to identify reliable information in the field. All scientific research requires methodological prerequisites to translate specific realities of an environment where specific problems arise. In sustainable development, the local dimension as a place of innovation and experimentation is especially important, even more in a department like Bambey where the evils of poverty are felt daily (Mbengue 2013).

### **Methodology of the workshops**

#### ***Objectives***

The main objective was to allow participants to understand and take ownership of the implementation of the SDGs at the local level.

Specific objectives were:

1. To diagnose economic, environmental and social problems at the University and Bambey community level;
2. To mobilize local knowledge in the field of sustainable development;
3. To transfer achievements, knowledge and skills of UADB to other actors in the community.

### ***The grid of questions***

The achievement of these objectives necessitated the development of a grid of questions. These questions are likely to stimulate interactive thinking, consensus on problem situations, to share knowledge in the field of sustainable development, to find concerted solutions to priority social, economic and environmental problems.

### ***The choice of participants***

Not being able to interview all the actors given the scarce availability of resources and time persuaded us to work on reduced samples. The sampling chosen during this research is of a reasoned type focused mainly on the diversity of socio-professional profiles and the availability of participants.

For the first workshop with UADB, the group was composed in order to have representatives from different social and professional categories and different staff services for a total of 36 participants. For efficiency needs, it was divided into 6 balanced groups of 6 participants, each department of the University being well represented by a participant. The specificity of this workshop lies in its heterogeneous composition. Indeed, students, housekeepers and security service agents have had the opportunity to participate with the UADB's cenacles in the diagnosis and analysis of social, economic and environmental aspects of their work or life environment.

The second workshop focused on community actors that are at the core of the participatory approach, the appropriation of the SDGs and the transfer of knowledge. Indeed, 48 volunteer participants divided into 6 groups of 8 respondents from community organizations and local elected representatives of the commune of Bambey participated to the community workshop. Participants were identified from the repertoire of local elected officials, community associations available at Bambey City Hall. A reminder system allowed to confirm the participation of the chosen actors and to avoid the omissions of the chosen date or place.

Overall, we voluntarily decided to limit the size of each workshop for more efficiency in the work. For logistical and comfort reasons, these activities took place at the multipurpose hall of the UADB respectively on July 13 and 20, 2017.

### ***The Workshops***

After the presentation of the participants and the installation of the groups, we distributed the working material (ODD icons printed on 20 c.m. x 20 c.m. color cards, target list by goals, EDS diagram as framework of analysis, Sustainable development project grid, DIY material...) and defined the languages of communication (Wolof and / or French). With the support of three facilitators, we took care to assign a visible number to each group. For each exercise, a written and visual register has been produced.

It was recalled that the decision-making process is participatory in nature seeking consensus, discursive, verbal exchanges and interactions among participants.

The first exercise consisted of:

- ✓ Make a diagnosis and highlight social, economic and environmental problems.  
Find consensus on what is done or seems to be done.
- ✓ Retain points that have not yet had real solutions. And, among these problems choose the most important ones.
- ✓ Remember through a word game, a single word for each problem and write each word on a separate sheet.
- ✓ After receiving the batch of 17 SDGs cards, place the four problem-sheets on the table and insert one by one each SDG, bringing it closer to the most relevant problems.
- ✓ For each link, write on post-it and paste on the concerned SDG the elements of answer which justify the presence of this problem in this SDG. Move SDG cards or problem sheets as needed and indicate additional links. Each action is done by consensus of the group.

The end of this exercise is marked by a plenary session in which the reporter of each group presents the highlights of the exercise. We subsequently wrote on the board the exhaustive list of problems identified by all groups and guided the audience to group together similar problems to come up with a list of 6 to 12 problems from which it was possible to do the second exercise.

The second workshop aimed to:

- ✓ Choose a problem from the reduced list of problems, write it on a round cardboard and place it in the center of the wheel (EDS diagram as an analysis frame).
- ✓ Brainstorm solutions from the municipality or university.
- ✓ Write down each solution on a post-it and paste it on the concerned SDGs.
- ✓ Report existing links between SDGs / solution or other elements of the wheel using the rope (positive links rope in green, antagonisms in red).
- ✓ Formulate a sustainable development project that is feasible on campus by briefly describing the content of this project, the actors / stakeholders to be involved to achieve it and the means to achieve it (in short, the *what*, *who* and *how*).

The plenary session closed the journey, full of exchanges, interactions, sharing, consensus and prioritization. Information was collected with the support of three students who took notes, pictures and videos useful for the analysis. However, even if the chosen methodology is of a real heuristic scope, it still has some difficulties and limits.

### **Difficulties encountered and limits of the approach**

As in all scientific research, ours has faced the difficulties and limitations inherent to this kind of innovative approach. First of all, the community and the participants are not always equipped to take part in this type of exercise.

Indeed, if the services of the municipal team made available to us the complete list of elected officials and community organizations, the challenge of having them participate in these workshops was not acquired in advance. The excessive politicization of activities in the commune and the context of the legislative elections have led to refusals to participate. Some had to first have the approval of their hierarchy of the political camp, while others declined the invitation to go on an election campaign. For the workshops, delays in starting the sessions and the use of two languages (French and Wolof for the community workshop) did not facilitate the rigorous management of time.

Also, the methodology does not adequately allow to return to the previous steps. For example, in the community workshop, a city councilor wanted to add a situation-problem to the diagnosis that had been done before in the morning. This iterative process, was not

taken into account in the first version of the methodology and proved to be a major constraint, especially if it involves older or less educated participants.

These preliminary reflections will be further developed in a more detailed research aimed at improving the methodology that accompanies the integrated approach for SDG.

### **Presentation of provisional results**

The implementation of the SDGs adopted by the UN through its various fora requires a growing share of scientific productivity that is useful for disseminating these SDGs and their challenges, to assist decision-making and to measure the various indicators. In Bambey, the first field experience on the SDGs was the work of a research team from Laval University in partnership with Alioune Diop University of Bambey (UADB) in April 2017. Their work focused on targets through the Targeting Grid of Sustainable Development Goals targets at the local level (GPC-SDG-L). Our work introduces a different and complementary approach by situating the SDG appropriation exercise at university and community level.

### **UADB facing social, economic and environmental challenges**

The first exercise of the workshop at the UADB was a diagnosis of the work and life of the occupants. The first partial results are shown in the table below.

**Table 1: UABD Diagnosis**

<b>Groups</b>	<b>Situation- Problem 1</b>	<b>Situation- Problem 2</b>	<b>Situation- Problem 3</b>	<b>Situation- Problem 4</b>
<b>Group 1</b>	Transport	Health	Habitat	Sanitation
<b>Group 2</b>	Insertion	Equipment	Health	Insalubrity
<b>Group 3</b>	Climate	Infrastructure	Strike	Poverty
<b>Group 4</b>	Income	Flood	Temperature	Sanitation
<b>Group 5</b>	Housing	Money	Health	Equipment
<b>Group 6</b>	scholarship	Feeding	unhealthiness	Promiscuity

**Source:** UADB Workshop, July 2017.

The first partial results show that the UADB has a vast project in achieving the SDGs. Through the table above, all the SDGs were put in situation during the workshop. The

University, a public institution, must improve the living and working conditions of its occupants for a better offer of quality services.

In the second exercise, the participants highlighted in a game of exchange and consensus, the problems or SDGs to be prioritized. The summary of this exercise can be found in Table 2.

**Table 2: Prioritization of problem-situations**

Groups	G1	G2	G3	G4	G5	G6
Priority-situation	Transport SDG 11	Health SDG 3	Sanitation SDG 3	Income SGD 9	Feeding SDG 2	Housing SDG 11

**Source:** UADB Workshop, July 2017.

The prioritization of problem situations at the UADB by the large group, bringing together all the participants of this workshop is mainly focused on the difficulties related to transport, health, sanitation, lack of income, poor quality of feeding and housing.

This diagnosis puts in context the SDGs for which the UADB and its different actors feel the need to mobilize to ensure their achievement. This necessarily involves the development of internal solutions that polarize all the vital forces of the university space. As an example, we can mention the micro-gardening project developed to meet the need for quality food on campus. SDGs 1, 2, 3 and 4 are targeted. Better nutrition contributes to the fight against poverty and hunger; it enhances the health of occupants who will then be able to study and work in good conditions.

The first part of the research conducted within the University has identified what could be the priorities and directions to be followed in achieving the targeted SDGs. Awareness of the need to change practices that are not in line with the spirit of sustainable development is the stage on which the development actions to be undertaken are based. Thus, the implication of the actors, the institution and the commune of Bambey which could by runoff effect be beneficial, would be a non-negligible added value.

### The commune of Bambey: the ills nailed to the pillory

The second workshop brought together the community actors of the city of Bambey who had to highlight, in a first approach, the real problems of development of the locality. The table below summarizes the provisional results from the community diagnosis.

**Table 4: Community Workshop**

Groups	Situation- Problem 1	Situation- Problem 2	Situation- Problem 3	Situation- Problem 4
Group 1	Schooling	Infrastructure	Environment	Production
Group 2	Marketing	Sanitation	Inequality	Insertion
Group 3	Sanitation	Rainfall	Poverty	Employment
Group 4	Sanitation	Poverty	Political	Infrastructure
Group 5	Unemployment	Harvests	Sanitation	Biodiversity
Group 6	Employment	Insecurity	Poverty	Sanitation

**Source:** Community Workshop, July 2017

The table highlights well-known issues in the locality, marked by poverty, education problems, lack of infrastructure of all kinds, farmers' difficulties in marketing agricultural products and youth unemployment. Nevertheless, sanitation remains the central concern. Returning to several levels of reflection, for almost all the working groups, it is an issue that must be tackled without, however, avoiding the problems of environmental degradation, inequality and insecurity (see Table 5 below).

**Table 5: Prioritization of problem situations**

Groups	G1	G2	G3	G4	G5	G6
Priority-situation	Sanitation SDG 6	Education SDG 4	Infrastructures SDG 11	Employment SDG 8	Unsafety SDG 7	Poverty SDG 1

**Source:** Community Workshop, July 2017.

Priority problems according to community actors concern sanitation, education issues, infrastructure, employment, insecurity and poverty that correspond to SDGs 6, 4, 11, 8 7 and SDG1. In this community where the population is very young, social demand is very high and continues to increase, raising the need for access to basic social services.

Sanitation, a problem shared to a certain extent with the university space was the subject of a solution in the form of a project called: *Zero Waste in Bambe*y.

**Graph 1: Data from the UADB and Community workshops**



By bringing together in each workshop all the groups, in plenary, a consensus emerged. For each activity, 6 priority problem-situations were identified. Considering together the results of both workshops, we can identify six priority SDG in Bambe

y (Graph 1): SDG 1: No Poverty, SDG 2: Quality Education SDG 6: Clean Water and Sanitation, SDG 3: Good Health and Well-being, SDG 8: Decent Work and Economic Growth, SDG 9: Industry, Innovation and Infrastructure. The identified SDGs address global issues and mitigate social inequalities.

**Conclusion**

The various sustainable development programs at Alioune Diop University in Bambe

major challenge to synergize other external stakeholders in the Training and Research Unit (UFR) in Health and Sustainable Development (SDD).

Bambey remains marked by relative economic and social poverty, and the implementation of the SDGs at the local level can stimulate community and university dynamics towards better living conditions for populations.

The first step for the implementation of the SDGs is to make them known by all actors of the community and to adapt their content to the local context. The integrated approach of the SDGs developed by the EDS Hydro-Québec Institute is a scientific tool that can contribute to this implementation of the SDGs in different local contexts. Through the two workshops held in Bambey, participants became aware of the challenges of the SDGs in their region. These two workshops have led to the identification of possible solutions to problems in the form of projects that can act as living laboratories in which researchers, local elected representatives, community organizations and other actors can work together and help to heal the ills of the commune of Bambey.

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