

Back to the Future: Implementing the SDGs in Canadian francophone academia

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INTRODUCTION

The United Nations (UN) Agenda 2030 is a global program comprised of 17 integrated, non-hierarchical and indivisible Sustainable Development Goals (or SDGs). It is a useful and ambitious tool for States, various levels of national and local governments as well as civil society organizations and actors. Because the United Nations Charter has a "moral weight" on states' actions as opposed to binding contractual agreements, how can the SDGs be deployed, when it is a well-known fact that various levels of governance usually work in silos, with very little coordinated efforts? What type of governance should be considered in order to assure SDGs are being accounted for in a meaningful and measurable way? Furthermore, how is it possible for each actor, and especially universities, to contribute to the global sustainability efforts and synergistic linkages between the SDGs?

The UN has identified no less than 169 targets and each country has its own institutions and interlocutors on the international scene. The role of researchers is partly to contribute to the domestication and appropriation of the SDGs (henceforth called: localization), as each country, region and governing level must identify the indicators that will be relevant to them. First, because not all of them will be congruent or measurable at the national, regional or urban level and second, because prioritization is strongly linked to local context and to the cultural aspects of concerned communities. It is therefore essential to understand the links that exist between the 17 SDGs, as some are catalysts (specifically SDGs 6, 7, 9, 12, 14, 15 and 17), others are accelerators (SDGs 3, 4, 5, 8, 11, 13 and 16) and others still represent large global goals (SDGs 1, 2 and 10).¹ The implementation of the 2030 agenda must rest as much on understanding the interactions between the different SDGs as well as measuring impacts of this implementation on various environmental

¹El Hadji Fall and Eunice Kamwendo, United Nations Development Programme, Strategic Approach to SDG Prioritization and Implementation in the African Context (POLICY PAPER 2016) 1-21.

and social processes (e.g.: biodiversity decline, climate changes, political processes, etc.). From a transdisciplinary perspective, linking the SDGs involves the coordinated efforts of a variety of actors as well as the organized contribution of many academic disciplines and economic sectors, such as that which is put forth by a certain number of academic research centers, for instance the CIRODD (Centre interdisciplinaire de recherche en opérationnalisation du développement durable) in Québec, Canada.

Many countries and regions do not necessarily grasp the values, ideas and principles which drive the SDGs, and have difficulty putting them in place. Consequently, many countries and regions are failing or are very lately in even attempting to localize the SDGs or reporting on them. Québec has an opportunity to do it coherently, as certain laws relative to sustainability could require them to be used as a reference framework (re: the 2006 Québec Sustainable Development Act).² This disconnect between the SDGs as a reference framework and their implementation on the ground is a major research question for scientists. Additionally, sustainable development (SD) needs to be better taken into account in academic research and training within a national, international and transnational research cooperation in multi-stakeholder settings. According to Suni (2016), there is a promising future in developing long-term relationships between science and society by emphasizing a particular attentiveness to the needs of capacity-building and reengineering the old disciplinary research structures.³ Furthermore, relevant sustainability research questions could be rendered feasible in a new structural research design throughout the promotion of a “new academic culture” based on sound relationship between civil society stakeholders and scientists.⁴

To address these issues, a consortium of Québec research organizations and universities (*Institut Hydro-Québec en environnement, développement et société (Institut EDS)* from *Université Laval*, the *Centre interdisciplinaire de recherche en opérationnalisation du développement durable (CIRODD)*, *Université du Québec à Chicoutimi (UQAC)* and *Université du Québec en Outaouais (UQO)* put together in late May 2019 a conference at ACFAS⁵ titled “[The Sustainable Development Goals: an opportunity to engage the dialogue between science and society?](#)”. The conference tackled three major areas of SDG academic implementation over one and a half days:

1. Workshop 1 (W#1) SDGs and research: This workshop focused on sharing the experiences of Québec, Canada and elsewhere in order to reflect on the opportunities offered by the SDGs to develop multi-, inter- and transdisciplinary research.

² LQ 2006, c. D-8.1.1

³ Tanja Suni, Sirkku Juhola, Kaisa Korhonen-Kurki, Jukka Kayhko, Katriina Soini and Markku Kulmala. “National future Earth platforms as boundary organizations contributing to solutions-oriented global change research”. *Current Opinion in Environmental Sustainability*. 23 (2016): 63–68. <https://doi.org/10.1016/j.cosust.2016.11.011>

⁴ Suni *et al.*, “National Future Earth platforms as boundary organizations contributing to solutions-oriented global change research”

⁵ ACFAS (Association francophone pour le savoir) is the most important multidisciplinary, interuniversity and intersectoral science event in the Francophone world. Established in 1923, its mission is to promote research and innovation as well as scientific culture in the French-speaking world by contributing to knowledge dissemination and to the scientific approach, with a view to improving society’s quality of life.

2. Workshop 2 (W#2) SDGs and Training: Building on key competencies in SD,⁶ an increasingly recognized tool for facilitating the integration of SD into academic education, this workshop reflected on the links between the key competencies in SD and the SDGs as well as their implementation in a variety of institutions, from different angles and at different scales.

3. Workshop 3 (W#3) Operationalization of the SDGs: In this very hands-on workshop, participants explored the necessary collaborations between research, education and civil society stakeholders. It brought together a rich nexus of actors from the field who presented their networking strategies in order to link with academia (research and training). The workshop also allowed participants to share their vision and proposals to foster co-creation of spaces for connection, dialogue and collaboration between academia, government and civil society stakeholders, in order to accelerate the operationalization of the SDGs.

With over 20 contributions, these workshops were the starting point of a dialogue held in a final workshop that we hope to sustain and accelerate beyond Canada.

4. Workshop 4 (W#4) Looking forward to 2030 for a global contribution of francophone universities: In this collaborative workshop, participants worked in a creative approach on some key questions, such as: what is the way forward for francophone universities, research organizations and their partners to accelerate the cross-cutting implementation of the SDGs? In 2030, when we look back on our achievements, what do we want to be proud of?

Notwithstanding DeLoreans and flux-capacitors, this article will make a pragmatic attempt at setting a future roadmap pertaining to SDGs implementation, identify roadblocks and levers as well as propose ways to accelerate SDGs localization.

METHODOLOGY

It is increasingly clear that global and local sustainability challenges will not be “won” by technoscientific approaches alone, or policy alone, or social sciences in silo, but rather by close collaboration dynamics, facilitated and even propelled by co-creation processes. Co-creation is an innovative approach that aims to involve a variety of stakeholders, including beneficiaries or customers, in the different phases of creation and production of a product or service.⁷ Co-creation processes imply a high level of commitment and collaboration between the actors, who share the goal of developing a product or service that will fulfill needs in the most appropriate way.⁸ Co-creation is based on methods of participatory animation and the implementation of a transparent,

⁶Arnim Wiek, Lauren Withycombe and Charles L. Redman, “Key Competencies in Sustainability: A Reference Framework for Academic Program Development”. *Sustainability Science*, 6, n°2 (2011) : 203-218. Doi: 10.1007/s11625-011-0132-6

⁷Venkat Ramaswamy and Francis J. Gouillart, “Building the co-creative enterprise”. *Harvard Business Review* 10 n°88 (2010) : 100-109.

⁸C. K. Prahalad and Venkat Ramaswamy, V. *The future of competition: Co-creating unique value with customers*. (Harvard Business Press, 2013).

constructive and respectful dialogue.⁹ The process of co-creation of knowledge that was developed during the four conference workshops evolved in three steps within which scientists and non-scientist collaborators came together in three dynamic dimensions of integration: co-design, co-production and co-dissemination.¹⁰ According to Füller et al. (2011), this process is recognized as a way to improve creativity in an innovation process.¹¹

Illustrating and exemplifying the theory and practicum of co-creation, the conference (both for the organizing and delivery parts) was highly interactive in nature and wholly based on team work. Our methodological strategy is transdisciplinary,¹² it calls for an innovative research setting that seeks joint scientific and non-scientific efforts, on one hand, by i) researchers in natural sciences (geology, ecology...), social sciences (management, economics, international business, sociology...) and engineering (civil and mechanical structures, architecture, design and art...) and the other hand by ii) professionals and experts (SD organizational coach, SD analyst...) to contribute to the co-design of a holistic SD vision based on the SDGs. The methodology we deployed throughout the duration of the conference's activities was two step-fold and sought reliable answers to our main research questions that motivated the ACFAS conference, namely: what is the way forward for francophone universities, research organizations and their partners to accelerate the cross-cutting implementation of the SDGs? In 2030, when we look back on our achievements, what do we want to be proud of?

While the three first areas (W# 1. SDGs and research, W#2. SDGs and Training and W#3 Connecting research, training and action) characterized the first stage of the research by focusing on involving different speakers which allowed the conference to cover a wide variety of academic and professional topics with regards to the SDGs at the local, international and transnational level, the fourth area of the conference W# 4: Operationalization of the SDGs characterized the second stage of this co-creation design. This last stage was rigorously based on the first three workshops and was intended to put all the contributors together for the sake of building a sound and innovative future research cooperation agenda to enhance the SDGs' implementation and their social and environmental outcomes. This last part of the conference was built upon a participative approach, with a coherent set of activities,¹³ to generate several brainstorming rounds regarding day one's main discussed topics and activities.

⁹Gabriela Ribes-Ginera, Maria Rosario Perello-Marina and Odette Pantoja Díaz. "Co-creation impacts on student behavior". *Procedia - Social and Behavioral Sciences* 228 (2016): 72 – 77.

¹⁰Wolfram Mauser, Gernot Klepper, Martin Rice, Bettina Suzanne Schmalzbauer, Heide Hackmann, Rik Leemans and Howard Moore. "Transdisciplinary global change research: the co-creation of knowledge for sustainability". *Current Opinion in Environmental Sustainability* 5 n3-4 (2013) : 420-431. <http://dx.doi.org/10.1016/j.cosust.2013.07.001>

¹¹Johann Füller, Katja Hutter and Rita Faullant. "Why co-creation experience matters? Creative experience and its impact on the quantity and quality of creative contributions". *R&D Management* 41 n°3 (2011): 259-273. <https://doi.org/10.1111/j.1467-9310.2011.00640.x>

¹²Marie-France Turcotte and Marie-Andrée Caron. *La transdisciplinarité et l'opérationnalisation des connaissances scientifiques*. (Montréal: Éditions JFD, 2017).

¹³ Kaner et al. *Berger Facilitator's Guide to Participatory decision-making*. (San Francisco : John Wiley & Sons, 2014).

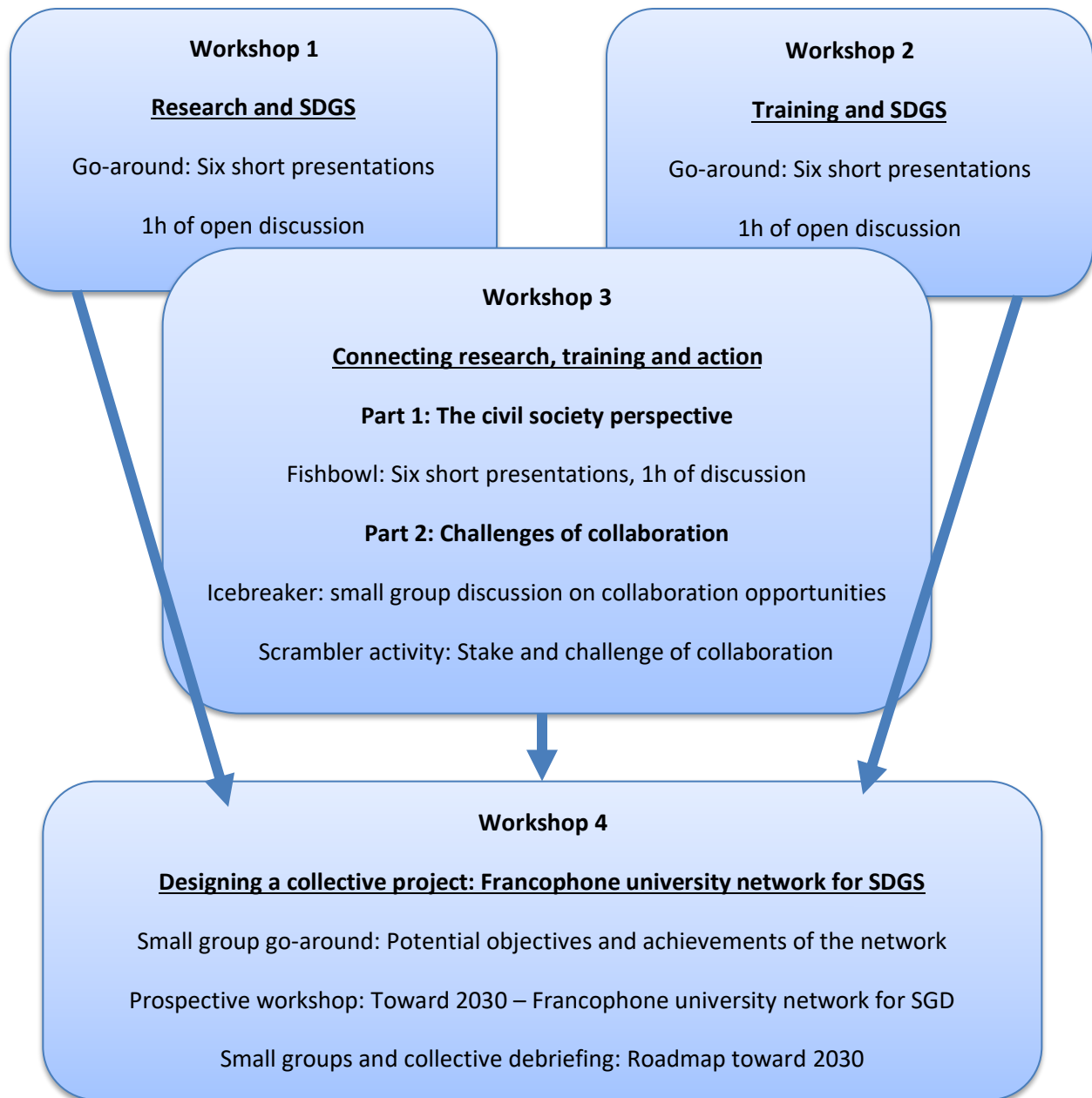


Figure 1 : Schematic presentation of activities sequence

RESULTS

The outcome of the conference are reliable and innovative answers to our main research questions.

In **Workshop # 1** (The SDGs and Research: Sharing the Experiences of Quebec, Canada and Beyond), it was shown that the challenges of implementing the SDGs were comprised of **1) prioritizing** among the 169 global targets); **2) implementation** which takes into account interactions between the various SDGs as well as the different processes they must be based on); **3) transversal and cross-sectoral training**, including transdisciplinarity and sustainability key competencies with a focus on dialogue and collaboration ; **4) localization**, taking into account the particularities of each academic institution; **5) understanding and respect for local specificities** such as local cultures and traditional or indigenous knowledge.

In **workshop #2** (SDGs and Training), three broad topics were discussed:

- i. The challenges of SD education: University SD education (whether pedagogy or disciplinary knowledge) is in constant evolution and therefore in need of constantly asking how disciplines need to evolve to remain relevant. This does not preclude the very real need of educating specialists; however, a common language needs to be developed to increase the employability of students graduating from SD programs. As SD "teaches continuously and plurally", it is also necessary to diversify ways to teach SD by field of study (respect of specificity) as well as in a more holistic way (creating bridges and common understanding between disciplines). It requires *à la fois* respect of the varying abilities and adaptability of individuals as well as taking the time to create dialogue... while going as fast as possible! A wicked dilemma.
- ii. Students' involvement and commitment: Students' commitment seems to be a guarantee of success in various SD education endeavors (and even more so when students from different disciplines work together). Students live on or off campus, get involved in their communities and in larger society while still in school. From their very first year, students have a real impact which constitutes an opportunity.
- iii. The university's role: Universities are some of the most durable institutions in society (more so than governments). Multiple approaches and strategies exist to increase the inclusion of SDGs in training programs, which each institution can tailor to their own agendas (e.g.: MOOCs, train change agentstraining, eco-advisers, combination of practical and field work, etc.). As well, each university must find its own way in contaminating its different administrative levels. In some cases, it takes tenacity and one must be patient before the seeds finally begin to germinate. Universities that encourage researchers and students to invest on and off campus are living labs, which allows them to work and experiment in multidisciplinary contexts. Some adopt a strategy of discreet but effective infiltration of the main SD principles in the various programs offered by the university. Subliminal infiltration must be performed without doing so coercively.

In **Workshop #3**, the "Operationalizing the SDGs - The necessary collaboration between research, training and the field" topic was addressed using dynamic and hands-on collective

intelligence processes. The aim of this participatory workshop (with a “fishbowl” formula) was to enable field actors to present their networking strategies with the research and academic actors. The workshop also aimed to allow participants to share their vision and proposals to foster the co-creation of connection, dialogue and collaboration spaces between academic, government and grassroots actors, in order to accelerate progress and operationalization of the SDGs.

Through various team exercises, conference participants discussed the best reasons for building connections between science and society, thus strengthening the interconnexions between field, research and academic actors. These were grouped in three categories:

1. Fluidity in communications and knowledge

- Decluttering knowledge;
- Develop a common language, especially to identify needs;
- Exchanging information and communicating;
- Exchange experiences for upgrading with regards to SD.

2. Personal and interpersonal skills development

- Increasing recognition and convergence between university students and the university (administration, employees, etc.);
- Increase the perception that we are an ecosystem;
- Have an open posture (listening) in order to foster collaboration;
- Develop long-term monitoring / collaboration culture.

3. Concrete benefits creation for various actors

- Adapt tools to the local context with coercive measures, since operationalizing SD requires tools;
- Enrich and update university courses (including “train the trainers” schemes);
- Provide case studies – internships, trainings, new projects;
- Influence politics through partnerships;
- Innovation;
- Enable the popularization of scientific research and continuing SD education through links “to and with” the field.

The topic of the challenges of collaboration between science and society for the SDGs was also tackled, which generated a rich discussion. Within discussion groups of four to six, participants were asked to identify key issues and challenges for collaboration among field, research and training practitioners for the operationalization of SD. Diverse issues were identified, which are listed in Appendix 1. In order to feed reflection for possible action plans, the issues and challenges mentioned in the list were grouped into six broad categories:

- I. Efficient structures are paramount
 - a. Information flow systems
 - b. Effectiveness
 - c. Concrete results
- II. Collaboration requires time
 - a. Issue to maintain interest
 - b. Staff change issue
- III. Collaboration requires specific skills

- a. For communication
 - b. For teamwork
- IV. Collaborative networks need to be developed
 - a. Which transcend silos
 - b. Which mobilize the necessary resources
- V. Mutual understanding is a challenge in collaborative settings
 - a. Common language
 - b. Necessary compromises
 - c. Develop a shared vision
- VI. Go beyond the competition reflex
 - a. Develop trust
 - b. Develop openness
 - c. Develop access to data

For each of these categories, participants were asked to identify:

- i. The actors to mobilize and/or the relationships to weave;
- ii. Means and strategies of action;
- iii. The winning conditions.

Each participant also had a dozen labels to highlight the written proposal (s)he considered of interest.

Thus, the participants' proposals were transcribed into six diagrams, available in Appendix 2. The number of stickers were counted and entered in brackets. A photograph of each of the table notes from this workshop is included in the result schemas. An attempt has been made to synthesize and present possible futures that could result from operationalizing these suggestions.

Several objectives of the network have been identified in the different tables. The list below is a compilation of the objectives mentioned. The number of stars indicates the number of mentions from the various tables:

- To strengthen the ties between university campuses of the Francophony ****
- To link academic actors, students, researchers, civil servants and businesses / organizations ****
- To produce tangible benefits for civil society (promotes projects) ***
- To decompartmentalize knowledge and to facilitate access (open access) **
- To make knowledge accessible in French (including the "BABEL" translation and adaptation system) ***
- To contribute to students training and support **
- To reinforce civil society participation *
- To enable the popularization and operationalization of SDGs for decision-makers*
- To train leaders of tomorrow *
- To contribute to the ideation and realization of research projects in university campuses *
- To facilitate coordination of actions and projects about SDGs *

- To recognizes indigenous and local knowledge *

Workshop #4 tackled the possibility of creating a French-speaking academic SDGs network within the SDSN network. French-speaking academics from 16 universities in five countries and three continents were invited to define a road map to assert and strengthen their role in research and training for the realization of the 2030 Agenda in their different disciplines, sectors and scales of action.

A visioning workshop helped to bring out participants' common vision about a future SDGs francophone university network. In order to do this, participants were divided into groups of about eight. They were then invited to create a fictitious newspaper "Front page", projecting themselves in the year 2029, under the title "The French-speaking university network for the SDGs, a model of innovation recognized at the international level". Each of the four groups of participants had to produce a visual poster on which they consensually identified themes, values, projects or results that they wished to see achieved in the next ten years. Appendix 3 presents the various posters that were produced.

The second part of the workshop consisted in the co-creation of a roadmap towards a francophone SDGs academic network. Through four focus groups, participants were invited to reflect on the next milestones for the implementation of the network from the end of the conference until the completion of Agenda 2030. The groups then shared their suggestions in plenary in order to prioritize the actions to be taken, which were positioned on a three-year timeline.

In a second step, the participants were individually invited to propose their expertise or other relevant resources that could be mobilized to work successfully on each action and to carry out the various actions proposed on the timeline. To do so, they wrote their names and proposals on Post-It notes to which they added an asterisk if they wanted to formally commit themselves, and then stuck them next to the proposed action.

The final result can be seen in the following timeline table, which spans from May 2019 to the year 2022.

WHEN	ACTIONS
2019	Identify the leadership
	Agree on a network foundation resolution
	Form a steering committee <ul style="list-style-type: none"> • One member from every university • Include other organizations, including from civil society
	Set up a communication committee and develop a communication strategy

	Identify network contributors
	Develop a mechanism for integrating non-academic members as stakeholders <ul style="list-style-type: none"> · Observing members? · Joint Committee? · Animators? · Networking?
	Network and work with the SDSN
	Do a Financing Search - Part 1
	Do research on and document the process
	Identify consensual needs, aims and purposes of the network
2020	Identify researchers who are also community influencers
	Identify / define governance arrangements and parameters <ul style="list-style-type: none"> · Parity · Decentralised · Rotating · Shared · Non bureaucratic A tri-spoke / tri-regional structure? <ul style="list-style-type: none"> · North America · Europe · Sahel
	Develop a digital communication tool (proto-platform)
	<i>Together 2020</i> conference (April 2020)
	Conduct a constituent assembly OR Network manifesto
	Do a first strategic planning
2021	Hold calls for projects
	Do a Financing Search - Part 2
	Formalize the practitioners' and researchers' network

	Form a communications committee
	Recruit institutions to increase membership - Act to convince
	Disseminate the results of network researchers
2022	Develop a formal digital platform
	Formalize a structured activity schedule of two yearly meetings <ul style="list-style-type: none"> · Regional (3) · Global (1 which will be rotating)
	Develop influencing strategies for decision makers
	Capitalize on acquired knowledge By a report commented on by business and academic networks and policies: and highlight the synergies Policy briefs

Table 1 : Francophone network timeline

At the end of the workshop, the Université Laval's Hydro-Québec Institute for Environment, Development and Society (EDS) confirmed its intention to be the lead for the development of the Francophonie university network for students. Also, SDSN Canada has reaffirmed its support for the development of a French-language network within its network.

DISCUSSION

There is a high prevalence of SDG initiatives in both research projects and training, although integration is variable in the different institutions (some are quite advanced, others lag behind, others show strong initiatives of some individuals, while the institution does not really follow).

We also note that several research or training projects focus on sustainability, but don't necessarily use the SDGs framework. It could even be argued that the SDGs have very little percolation in the province of Québec, not least because several universities have been working on sustainability (or its variations, depending on the discipline or school of thought: eco-citizenship education, degrowth, circular economy, corporate social responsibility, sustainable health, etc.) well before 2015 (the year Program 2030 was launched). It also shows that sustainability can be interpreted in many ways, with many frames of reference (the SDGs of course, but also the Québec Act on Sustainable Development, ISO26000, BNQ21000, UQAC's ASD framework, etc.).

When we take stock of what the actors on the ground have to say, we note that academic and field collaborations exist, but they are more or less formal and more or less reciprocal. They exist in several areas and on many topics, as evidenced by the diversity of field actors who participated in the fishbowl activity of. On the other hand, collaborations are initiated either by the field actors (who are looking for knowledge, guides, tools, information or support validated by science), or by researchers (looking for cases products or services to study or areas/organizations to experiment within). It is important to note that very few projects are genuinely co-constructed, from the beginning, by a mutually committed collaboration between the two stakeholder categories. It should be noted that previous co-creation experience increases creativity, having significantly impacts on the number of contributions by stakeholders as well as the quality of submitted propositions.¹⁴ What emerged from the first three workshops is that there is a real desire to collaborate, or even co-construct projects that bring the field and academia together, but that this desire faces several challenges, which are peculiar to all transdisciplinary collaborations.

During the preparation of the ACFAS conference, the CIRODD team was able to mobilize the knowledge, expertise and skills developed during its first six years of existence and activities in order to take advantage of the presence of all these interested and enthusiastic participants. Thus, the structure of the conference allowed participants to become aware of this common will to collaborate, which has been named by everyone (especially in the icebreaker exercise). It is one of the main benefits of participatory research approaches.¹⁵ It also allowed the participants to name their challenges, to recognize them (and not to act as if it were easy to collaborate), but also to collectively identify ways to overcome them. Thanks to the long-standing partnerships developed by the EDS Institute and the organizing universities, it was possible to bring together the main stakeholders involved in the implementation of the SDGs in Quebec and in Canada, thus ensuring the success of the conference.

These first steps allowed the participants to: 1) get to know and better understand each other (community building); 2) develop the necessary trust to express themselves freely, without fear of being judged (trust building); and 3) develop the capacity of listening and opening up to the opinions of others (sense making). These three steps are conditions for effective and creative co-construction exercises.¹⁶

With this consolidation of the group during the first day, workshop 4 was made easier. As with the previous activities leading up to it, the design and facilitation style were optimal in order to stimulate creativity and participation. After a warm-up activity aimed at stimulating both speaking and listening skills (on the needs and objectives of a French-speaking SDGs university network), the vision workshop was conducted to enable participants to dream up a desired and desirable future contribution of the network. There was a convergence of visions, and a fairly unanimous support for this proposition as a result.

¹⁴Füller, Hutter and Faullant. "Why co-creation experience matters? Creative experience and its impact on the quantity and quality of creative contributions".

¹⁵Kaner *et al.* *Berger Facilitator's Guide to Participatory decision-Making*.

¹⁶Ian Segers, « Récit praxéologique : une approche éthique pour accompagner les transformations socioécologiques ». *Éthique publique* 20 n° 2 (2019) DOI : 10.4000/ethiquepublique.3935

Finally, in the last activity, we separated the group and took advantage of collective intelligence one last time to plan a relevant and coherent sequence of activities for the establishment of such a network, in which the contribution of everyone was identified. The timeline (Table 1) is a consensual result of a co-constructed reflection of actors from different backgrounds.

In a day and a half, the approach, applied to this conference by CIRODD and its partners, made it possible for a varied set of actors and stakeholders to effectively converge in order to collaborate in a meaningful way. We managed to overcome several collaboration issues (time, common understanding, facilitation) to co-construct a collective project truly stemming from the group's authentic needs. It shows, in our opinion, the relevance of collaborative and participative approaches to the co-construction of transition projects.

Finally, there remains the question of the impacts and operationalization of the activity, which are always uncertain. The challenge of maintaining stakeholder participation and interest, of providing leadership and monitoring, reporting progress and maintaining communication are very real. It will be necessary to take a drive into the future to see the real impacts and consequences of this conference. Many CIRODD team members wish they could travel 88 miles per hour into the future with a DeLorean (powered by agricultural switch grass or industrial residual matter!) to see if our collective dream and vision will have been accomplished in 2030...

CONCLUSION

When it comes to sustainability issues, co-creation enables integrated research approaches between academic and non-academic stakeholders as well as across regions and cultures. Its joint research topics and questions' framing allows the tackling of more efficiently complex societal and environmental problems such as those related to the SDGs. At first glance, it may look as if the current research's co-creative and participatory results and design would convert sustainability investigation from primarily a science-based into a pragmatic approach. However, its applied and transdisciplinary nature could enable major and very real "society-based" questions and issues to supplement the discipline's complex scientific nature, and to provide more credibility to the scientific aspect of the topic. Accordingly, the highly participative nature of the ACFAS conference gave the team the opportunity to generate an anchoring state to enable a communal, deep reflection around different aspects of the SDGs among the various participants. The conference's varied and participative activities also yielded insight regarding different SDGs' issues, from both North and South points of view. Undoubtedly, the rich cultural, scientific and professional diaspora of the conference gave us a sound and reliable exploratory idea on how strong collaborations between science and the field at both local and international levels, as well as their negotiation mechanisms should work and how to manage such a complex cross-cultural and transdisciplinary cooperation to enhance the SDGs outcomes in the future.

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APPENDIX 1 – List of Issues

- Achieving consensus on priorities
- Agree on the operating mode, rhythm, vocabulary
- Awareness of what is already done
- Balance and motivation
- Being able to compromise
- Change the type of authoritarian leadership
- Communications - choice of the target audience
- Complexity / diversity
- Complexity of implementation
- Consciousness, reflexivity, take care of the link
- Different interpretations / prejudices
- Data access - donor control
- Explain basic posture, personal humility
- Express issues and disagreements
- Extra time
- Individual responsibility
- Inertia
- Institutional competition
- Intercultural communication (Listening, dialogue)
- Integrate collaboration in sustainability and mutual trust
- Keep pace and interest
- Lack of a directory of experts
- Lack of coercion
- Lack of coherence
- Lack of incentive
- Lack of network
- Lack of resources for training and research enabling collaboration with society (field)
- Lack of university consolidation
- Language / concepts
- Mindset change: from not enough time, money, ... to enough people, ideas ... (ego and scarcity economics)
- Mutual trust in a competitive environment
- Need to listen, learn to listen
- Overload due to transition
- Privatization of solutions which skews the results
- Profit
- Realities concepts and vice versa
- Recognize that we are stronger together
- Renewal of elites
- Resources (human, financial)
- Rhythm of work
- Rigidity of the structures
- Risk culture, be willing to take risks
- Seeing your own work through the eyes of another
- Social resilience
- Speed of reaction
- Staff turnover
- Time
- To cultivate the interest of each
- To develop a common language
- Training in collaboration and teamwork
- Vampirism
- Vision and shared commitment

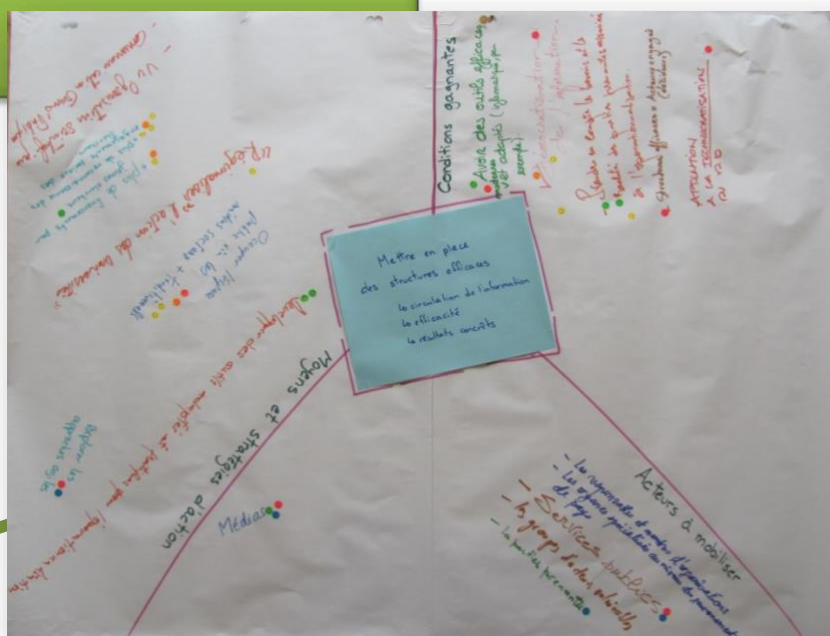
APPENDIX 2 – Schemas results of Workshop 3

PUT IN PLACE EFFECTIVE STRUCTURES

- Circulation information
- Effectiveness
- Concrete

Actors to mobilize

Media (3)
Public Services (2)
Stakeholders (1)
Groups of vulnerable actors
Specialized bodies at federal government level
Officers and members of organizations



Means and strategies for action

- Occupy public space via social and traditional media (4)
- More recognition of the social commitments of researchers (4)
- More funding for young researchers (3)
- Develop adapted and practical tools for operationalization (2)
- Explore agile approaches (2)
- "Regionalizing" university action (1)
- Popular science
- Public communication

Winning conditions

- Democratization of information (4)
- Take into account the needs and realities of the stakeholders involved in the operationalization (3)
- Have efficient, modern and adapted tools (ex: computer science) (2)
- Actors engaged (decision makers) (1)
- Attention to the technocratization of DD (1)

Schema 1: Put in place effective structures

COLLABORATION TAKES A LONG TIME!

- Challenging of maintaining interest
- Staff turnover challenges

Means and strategies for action

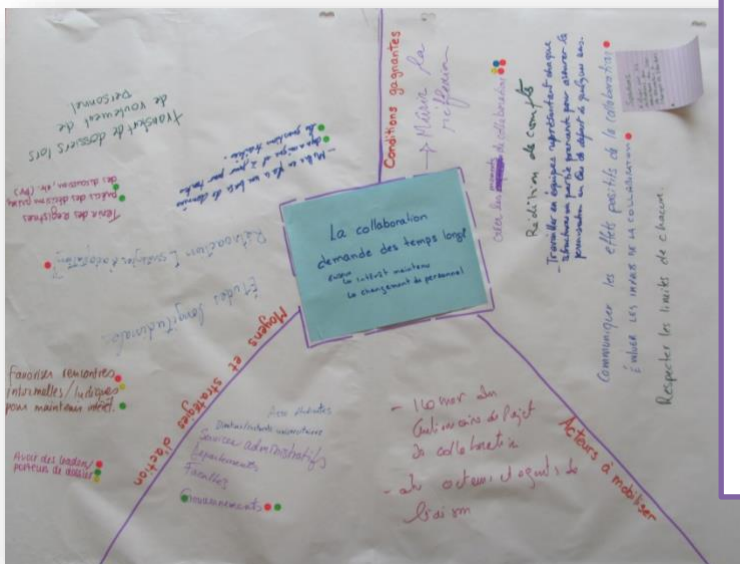
Have leaders / file holders (3)
 Promote informal and fun meetings to maintain interest (3)
 Set up a dynamic and up-to-date database for all the issues covered (2)
 Keep accurate records of decisions made, discussions, etc. (PV) (2)
 Feedback - coping strategies (1)
 Longitudinal studies
 Appoint shareholders to collaborative projects
 Transfer of files during staff turnover

Actors to mobilize

Government (3)
 Actors and liaisons
 Student associations
 Departments
 University directorates / rectorates
 Faculty
 Administrative services

Winning conditions

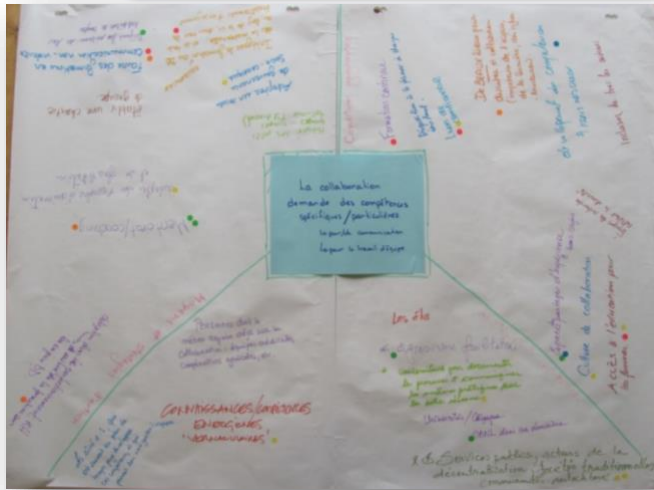
Create moments of collaboration (4)
 Communicate the positive effects of collaboration (1)
 Evaluate the impacts of collaboration (1)
 Ripen reflection
 Accountability
 Respect the limits of each
 Work as a team representing each structure or stakeholder to ensure sustainability in the event of the departure of a few
 Work on initiatives that work instead of working to change structures



Schema 2: Collaboration takes a long time!

COLLABORATION REQUIRES SPECIFIC / SPECIAL SKILLS

- For communication
- For teamwork



Actors to mobilize

Public service, decentralized actors, traditional society and indigenous communities (2)

Endogenous, vernacular knowledge / skills (1)

NPOs in these fields (1)

Facilitators (1)

Universities to document the process and share best practices with other networks (1)

Elected officials

People whose job is already based on collaboration: medical teams, agricultural cooperatives, etc.

Students who have often had more time to develop these skills and who can therefore guide / inspire us

Universities / CÉGEPs

Means and strategies for action

Mentoring / Coaching (3)

Do training in non-violent communication (2)

Adopt animation and facilitation approaches (1)

Adopt mode of sociocratic governance (1)

Define levels of accountability (1)

Integrate mandatory SD training from kindergarten through lifelong learning in all educational institutions (1)

Duty to undertake training on SD Issues in professional development (HR) (1)

Theory of small groups or optimal groups (St-Arnaud)

Establish a group charter

Winning conditions

Access to education for women (2)

Spaces for sharing experiences (2)

Trusted Link (2)

Collaboration culture (1)

BEAUTIFUL spaces to discuss and collaborate (importance of light, infrastructure) (1)

Skills development of our networks (1)

Continuing Education (1)

Availability to be formed at every moment

Research teams reflecting diversity

Inclusion of all actors

Schema 3: Collaboration requires specific / special skills

The diagram consists of a large purple rounded rectangle on the left and a smaller white rounded rectangle on the right. The purple rectangle contains the title 'CHALLENGES TO UNDERSTANDING EACH OTHER IN COLLABORATION' in white uppercase letters at the top, followed by a bulleted list of three items: 'Commun language', 'Making compromises', and 'Developing and sharing a vision'. The white rectangle contains the title 'Actors to mobilize' in purple bold letters at the top, followed by a list of actors: 'Artists (10)', 'Civil society (participa', and 'Academics (10)'. A thin purple line connects the two rectangles.

CHALLENGES TO UNDERSTANDING EACH OTHER IN COLLABORATION

- Commun language
- Making compromises
- Developing and sharing a vision

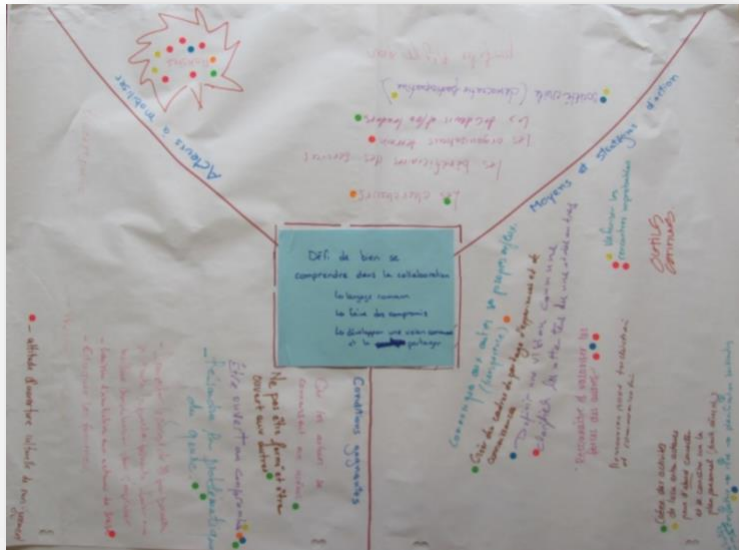
Actors to mobilize

- Artists (10)
- Civil society (participa
- Academics (10)

- ## Means and strategies for action
- Recognize and value the strengths of others (3)
 - Encourage improbable encounters (3)
 - Cascading Activities - 1. Empathy 2. Dreaming 3. Countdown (2)
 - Create leisure activities between actors to first connect and know each other on a personal level (family dreams, etc.) (2)
 - Clarify the expectations of each other (1)
 - Communicating to others its own issues (transparencies) (1)
 - Create frameworks for sharing experiences and knowledge (1)
 - Define a common vision (1)
 - Resources under translation and communication
 - Common tools

- Artists (10)
- Civil society (participatory democracy) (3)
- Researchers (2)
- Decision-makers and / or leaders (1)
- Field Organizations (1)
- Beneficiaries of the services
- Atypical profiles

- Be open to compromise (4)
- Address problems of gender (2)
- Non-judgmental cultural openness attitude (1)
- Leave the initiative to the basic actors (1)
- The actors know themselves (1)
- Do not be closed , be open to others (1)
- Demystify the concept of SD to allow all stakeholders to have a better understanding to get involved
- Write and speak
- Educate women



Schema 5: Challenges to understanding each other in collaboration

Actors to mobilize

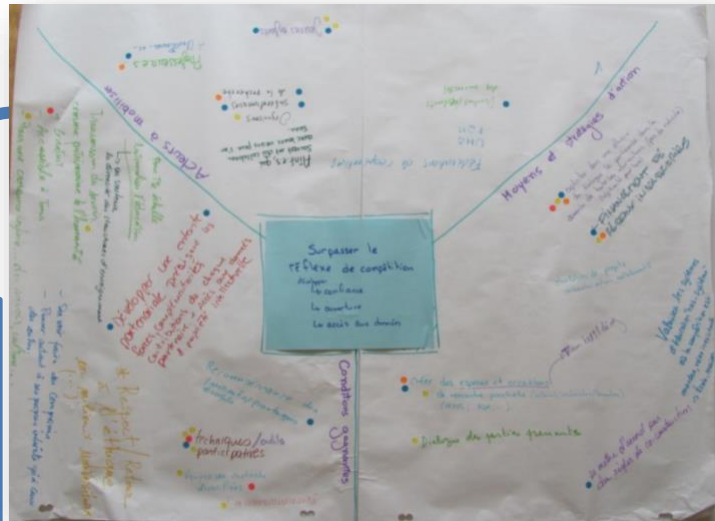
Research granting bodies (5)
 Young children (3)
 Professor (2)
 University Directorates / Rectorates (1)
 Elderly who often had to work with their neighbors to get by
 Cooperative federations
 UMQ
 FQM

OVERCOMING THE COMPETITION REFLEX

- Developing confidence
- Developing openness
- Developing access to data

Means and strategies for action

Explain in ethical dialogue relevance in the approach of all the interventions (not ridiculous, legitimacy for all) (4)
 Create spaces and occasional meeting opportunities (field actors / research / training) eg ACFAS, AGA, etc. (Team building) (3)
 Cross-sectoral network financing (3)
 Stakeholder dialogue (1)
 Agree on co-construction rules (1)
 Collaborative Research-Action Project Strategies
 Valuing "off-system" education systems where competition is less or non-existent eg: school at home



Winning conditions

Transmission of knowledge as a world heritage site: free, accessible to all, for unlimited growth of knowledge and culture (3)
 Develop a partnership agreement specifying the strengths, complementarities, contributions of each partner, access to data and intellectual property
 Nationalize education or support the diversity of educational structures
 Think as much about your own interests as about those of others
 Respect / Revert to ethics in university settings
 Knowing how to compromise

Schema 6: Overcoming the competition reflex

APPENDIX 3 – “Front page” posters of a fictitious newspaper in the year 2029

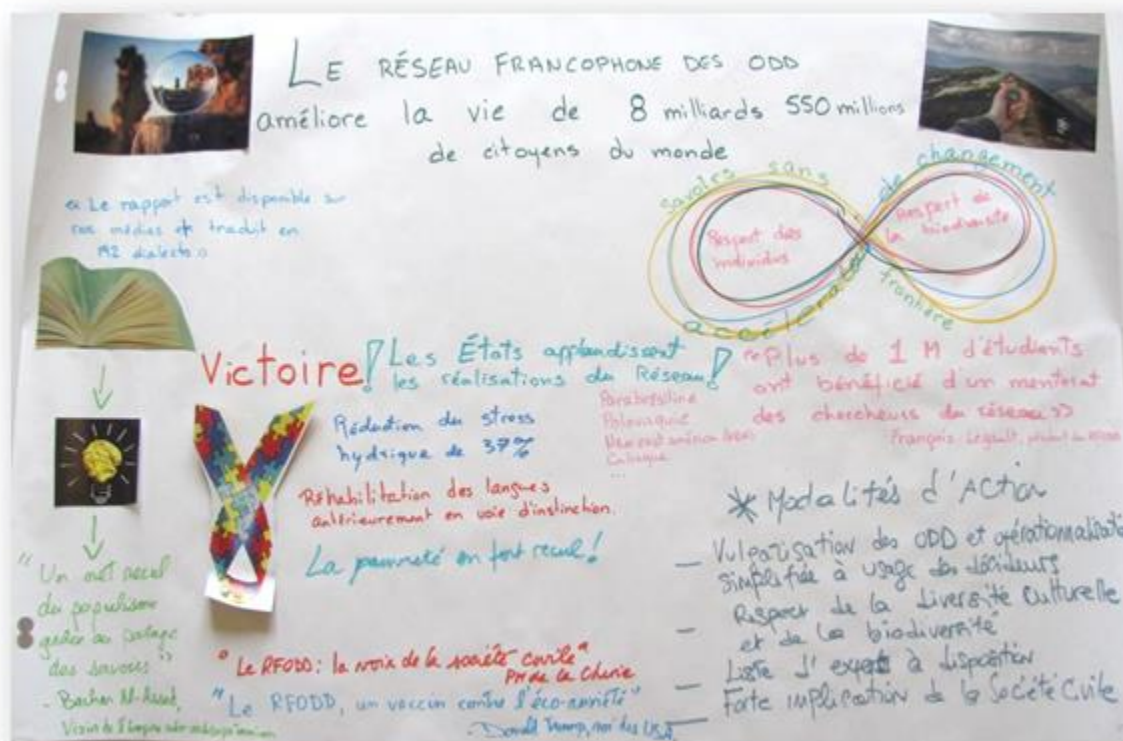


Figure 2 "One" fictional - The French-speaking SDG network improves the lives of 8 billion 550 million citizens around the world



Figure 3: "One" fictional - The French-language digital university: a model of collaborative success

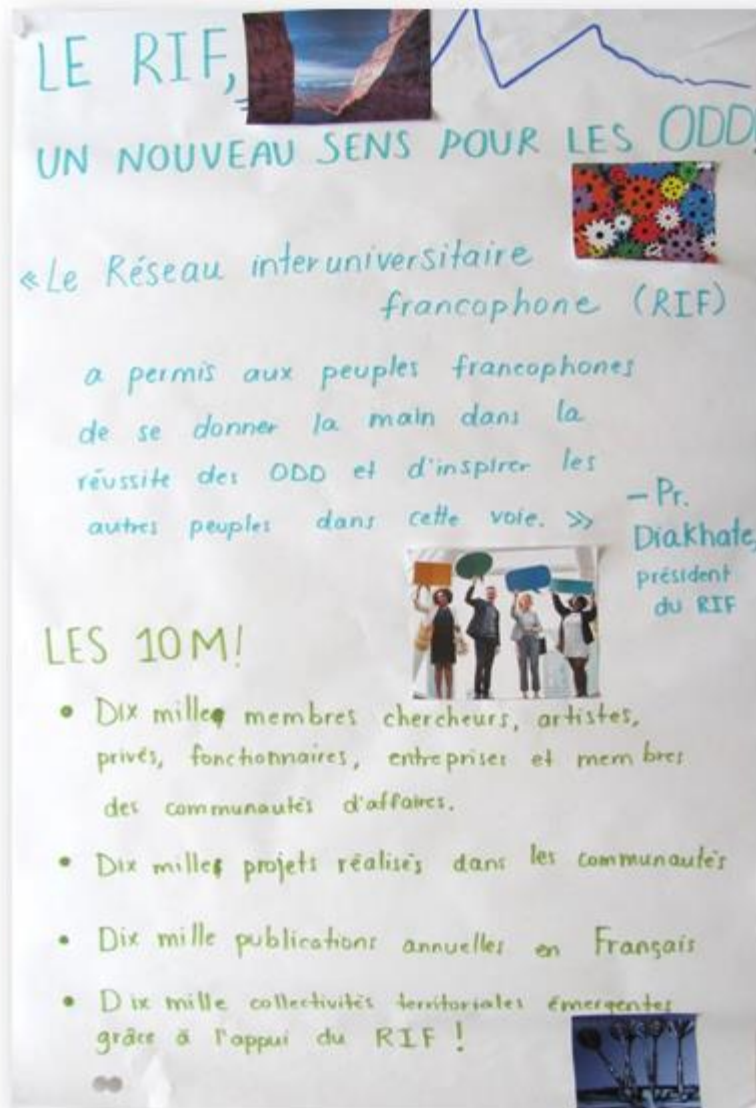


Figure 4: "One" fictional - The RIF (French-speaking SDG network), a new meaning for the SDGs!



Figure 5: "One" fictional - "Listen to future generations" The French-speaking university network a decisive role

APPENDIX 4 - List of contributors to the ACFAS conference

Workshop 1

André Potvin (Université Laval)
Darine Ameyed (ÉTS)
Mouhamadou Diakhate (Université Gaston Berger)
Sara Gustafsson (Linköping University)
Stefan Jungcurt (IISDD)
Issam Telahigue (UQO)

Workshop 2

Daniel Forget (Université Laval)
Luc Surprenant (Université de Montréal)
Véronique Bisailon (Université Sherbrooke)
Aladji Madior Diop (Université Alioune Diop)
Shirley Fagnen (Polytechnique Montréal)
Olivier Riffon (UQAC)

Workshop 3

Kodjo Marcel Klassou (Institut de la Francophonie pour le développement durable (IFDD))
Andréanne Martel (Conseil Canadien pour la coopération internationale (CCCI))
Jon Beale SDSN Canada (University of Waterloo)
Lorraine SIMARD (Comité 21 Québec)
Cynthia Legault (UQAC)
Médétonwan Olivier GUÉDÉ (UQAC)

Workshop 4

Universities, colleges, research organizations and partners:
Aligo Innovation
Canadian Council for International Cooperation
Cégep de Lévis-Lauzon
Cégep du Vieux Montréal
Centre interdisciplinaire de recherche en opérationnalisation du développement durable
Centre d'étude en responsabilité sociale et écocitoyenneté
Collège Lionel-Groulx
Comité 21 Québec
Conseil québécois de la coopération et de la mutualité
École de technologie supérieure
Institut de la Francophonie pour le développement durable
International Institute for Sustainable Development
Ministère de l'économie et de l'innovation
Polytechnique Montréal
Sustainable development solutions network - Canada
Université Alioune Diop de Bambey
Université Gaston Berger
Université Grenoble Alpes
Université de Kinshasa, CRSAT
Université Laval
Université Marien Ngouabi
Université de Montréal
Université du Québec à Chicoutimi
Université du Québec en Outaouais

