



LIFE CYCLE INITIATIVE PROGRESS REPORT 2019



Life Cycle Initiative

hosted by



THE LIFE CYCLE INITIATIVE IN BRIEF

Hosted by the United Nations Environment Programme (UNEP), the Life Cycle Initiative is a public-private, multi-stakeholder partnership enabling the global use of credible life cycle knowledge by private and public decision makers, to support informed decision-making.

The Life Cycle Initiative (hereinafter referred to as the Initiative) is at the interface between users and experts of Life Cycle approaches. It aims at effectively bringing Life Cycle Thinking to the mindsets of decision makers with the practical knowledge and tools to enhance the sustainability of their decisions. The Initiative provides a global forum to ensure a science-based, consensus-building process to support decisions and policies towards the shared vision of sustainability as a public good. It delivers authoritative opinion on sound tools and approaches by engaging its multi-stakeholder partnership (including governments, businesses, scientific and civil society organizations and individuals).

The overarching objective of the Initiative is to facilitate the application of life cycle knowledge to the global sustainable development agenda, in order to achieve the Sustainable Development Goals faster and more efficiently.

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FOREWORD

The world is coming together around the need to transform our economy towards circularity and sustainable systems of consumption and production. Life cycle approaches are the foundation of the circular economy, and we need life cycle metrics to inform the decisions that will help us “bend the curves” of our linear systems and ways of thinking. In this sense, the Life Cycle Initiative has a lot to contribute from its solid foundations in science and clear hooks in relevant decision- and policy-making processes. Consequently, 2019 was a landmark year for the Life Cycle Initiative as we have received unprecedented attention to mainstream life cycle thinking at the global policy arena.

The resolutions adopted at the Fourth United Nations Environment Assembly (UNEA4), including the Ministerial Declaration, request UNEP to deliver specific studies, knowledge and support to member states related to life cycle approaches at different levels. The Life Cycle Initiative is in the best position to significantly scale-up its contribution for such request as its mission and vision is to support global sustainable decision making for both the public and the private sectors. The Initiative aims to provide technical advice for specific sectors (tourism, plastics, chemicals, and textile etc.), policy themes (national hotspots and footprints, measuring the progressive achievement of sustainable development goals for business), as well as to develop life cycle capacity and fundamental life cycle knowledge on environmental and social impact indicators and interoperable data.

In 2019, we have advanced significantly on providing policy support in the areas of national

environmental footprints (SCP-HAT), comparing LCA studies of single-use plastic bags and their alternatives, and advancing on the mapping of plastic flows in national economies to shape action in addressing plastic pollution, to name a few. We have also launched new e-learning modules on life cycle thinking for business and policy and published a guidance to recommend the methodological consensus and characterization factors on several environmental impact indicators.

We would like to take this opportunity to thank all the steering committee members for their dedication to make decisions; all the project leaders for their hard work to implement the Initiative’s activities, as well as the Initiative’s members and the life cycle community for their continuing support in contributing to and disseminating the outcomes of our collective hard work. Obviously, we kindly acknowledge and salute the on-going support to the Initiative’s activities provided by our funding partners.

Looking forward to 2020, the Initiative will continue delivering scaled-up activities and partnerships, engaging with high-level policy processes, as well as strengthening interactions with our members and users of life cycle knowledge. Among others, we will focus on the work towards delivering on relevant UNEA4 resolutions, as well as more in-depth work in sectors such as the plastics, textile, tourism and food system. We also expect to publish a new set of guidance and recommendations on plastics, guidance for establishing national LCA databases, as well as new methodology on Social Life Cycle Assessment.

Steven Stone

Head of the Resources and Markets Branch
UN Environment Programme



2019 HIGHLIGHTS



March | The fourth United Nations Environment Assembly (UNEA 4) acknowledged Life Cycle Assessments as 'a must' to achieve sustainable consumption and production.

March | The tool SCP-HAT launched during UNEA 4 attracted significant attention from the Member States of UNEP. New funding will allow for its further application and development of new functions in 2020.



May | The project MarILCA was officially launched and aims at developing a methodology to integrate potential environmental impact categories and characterisation factors of marine impacts into LCA.

June | The Initiative developed short life cycle thinking e-learning courses including an introduction to life cycle thinking as well as two courses targeting at business decision makers and policy makers. The courses are available in up to four different languages: English, French, Spanish and Arabic.



July | Following a request from UNEA4, UNEP and the Initiative aim to provide an insight into how Life Cycle Assessment (LCA) can be used to make informed decisions on single-use plastic products and their alternatives. UNEP commissioned a series of meta-studies to IVL (Swedish Environmental Research Institute), on single-use products including plastic bags, beverage bottles, and food take-away packaging.

September | The election of the new Steering Committee members took place after the 3rd Life Cycle Initiative General Assembly, welcoming two new government representatives, as well as one for the business and one for the civil society constituencies.

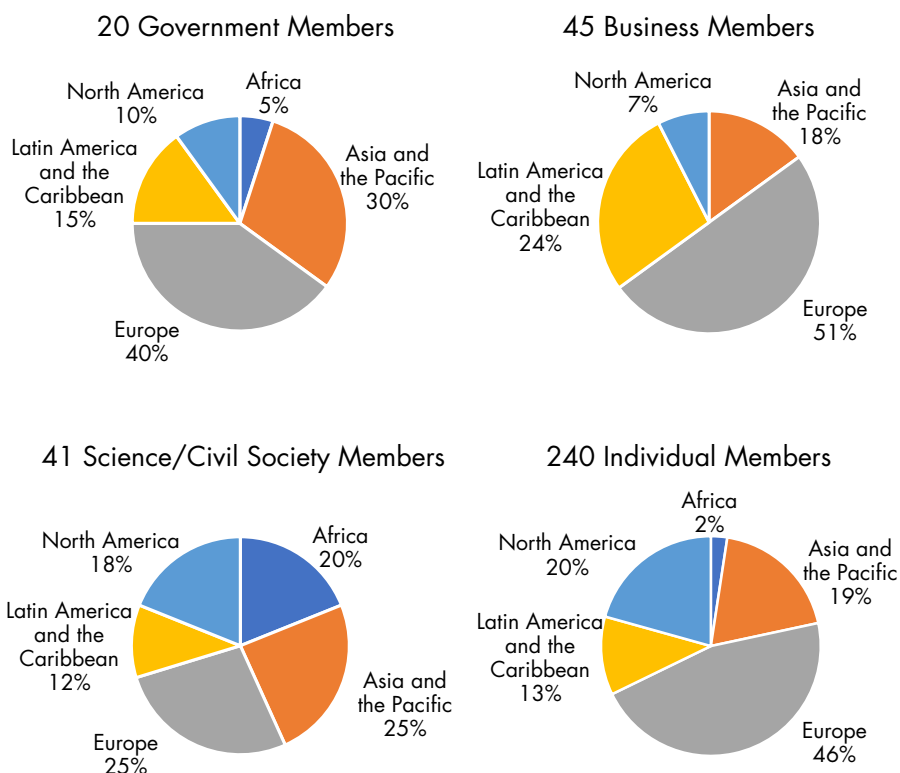


October | The second volume of the Global Guidance on Environmental Life Cycle Impact Assessment Indicators (GLAM) was published on the LCI website after peer review.

1. 2019 LC INITIATIVE GOVERNANCE

1.1 Membership

The engaged and active membership-base of the Initiative continues to expand. In 2019, 28 new Individual members, 5 new Business members as well as 3 new Science/Civil Society members joined the Life Cycle Initiative from a diverse set of backgrounds as well as from a variety of regions.



1.2 Resource Mobilization

The Life Cycle Initiative relies on funding partners and projects to provide core funding and additional programmatic funding. Core funding is needed to run the structure of the Initiative as well as to have available budget to provide seed funding to get projects off the ground. Direct project funding represents the largest share of the Initiative budget, and mainly comes from national governments, the European Commission and the Global Environment Facility. In the new strategy, projects also contribute to fundraising through resource mobilisation activities. The aim is to attract funding from both the public and private sector, to ensure high impact and uptake of the projects by its users.

Join us and enjoy the benefits of being a Life Cycle Initiative funding partner! Three of the many benefits include:

1. Gaining **VISIBILITY** as a supporter – through conferences, reports, our website and newsletters.
2. Exerting **INFLUENCE** – maintain close links to the debate, the discussion spaces and assembly.
3. Accessing **ADVICE** and **EXPERTISE** – through a global forum of experts and practitioners.

Follow this [link](#) for more information on the funding rules.

1.3 Steering Committee

The 3rd Life Cycle Initiative General Assembly took place on the 24th of September 2019. Members discussed the achievements over the past 12 months as well as future activities and cooperation. The 4 new representatives in the Steering Committee were also elected by the members within their constituencies.

Governments:

- » United states – Department of Agriculture (USDA-ARS-NAL) (North America)
- » South Asia Co-operative Environment Programme (SACEP) (Asia/Pacific)

Business: Federation of Indian Chambers of Commerce and Industry (FICCI) (Asia/Pacific)

Science and Civil Society (institutional member): CIRAIG (North America)

This results in the latest composition of the Steering Committee are in Table 1 below.

Results of the General Assembly participants survey revealed that people were generally satisfied from having a virtual General Assembly. Some of the positive things were time and emission savings, a clear agenda, and good communication. Improvements are to be made regarding members involvement, technical issues during the call, and the voting system.

As suggested last year, the Initiative organised throughout 2019 regular webinars to update members on the progress on specific projects – such as on SCP-HAT, S-LCA, SDGs and MarILCA – and seek the support and feedback from members. You can obtain the latest information on webinar dates and topics following our [Twitter](#) and [LinkedIn](#) accounts.

Are you generally satisfied with the outcomes of the virtual General Assembly?

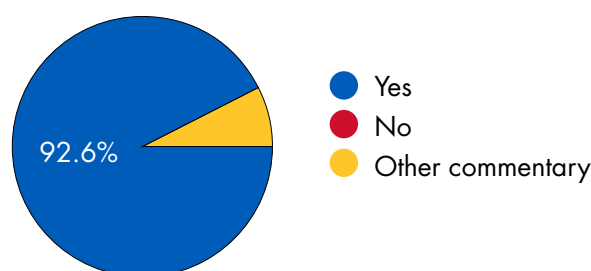


Table 1: Composition of the Life Cycle Initiative Steering Committee

Region	Government	Business	Science/Civil Society/Individuals
Latin America and the Caribbean	IBICT	The HUB EPD of Latin America	Bárbara M. Civit
North America	United States – Department of Agriculture (USDA-ARS-NAL)		CIRAIG
Asia and Pacific	South Asia Co-operative Environment Programme (SACEP)	FICCI	
Europe		Plastics Europe	World Resources Forum

2. PROGRESS IN 2019

2019 was a landmark year for the Life Cycle Initiative, as we have received unprecedented attention to mainstream life cycle thinking at the global policy level. Several [resolutions](#) adopted at the Fourth United Nations Environment Assembly (UNEA4), request UNEP to deliver specific studies, knowledge and support to member states related to life cycle approaches at different levels. In response to these requests, the Life Cycle Initiative has advanced significantly on providing policy support through the development of tools

and training modules to mainstream life-cycle thinking and facilitate evidence-based decision making in governments and businesses. 2019 was also the midterm point for the strategy 2017-2022 and we can celebrate significant successes on our three main programme areas as we pass this milestone: Technical and policy advice, Capacity development, and Knowledge. As an overall summary, and considering the high-level indicators defined in the [Life Cycle Initiative strategy](#) for this programme areas, the progress looks promising:

1. Technical and Policy advice target achievement towards 2022

Mainstream the use of Life Cycle Thinking into at least 4 global areas of decision/policy-making for sustainable	1. Plastics 2. Chemicals 3. Tourism 4. National SCP action Plans		
Positive impacts towards the achievement of global agenda goals through partnerships in at least 15 countries development.	13 National Governments Policies on circularity of plastics: Chile, Grenada, France, New Zealand, Peru, Portugal, Rwanda, Seychelles, the UK		LCA in tourism: Dominican Republic, the Philippines, Mauritius and St. Lucia 2
Positive impacts towards the achievement of global agenda goals through partnerships with at least 30 companies	6 pilots projects	24 Companies	
Achieved	Left to achieve target		



The Initiative has also engaged in technical support to the plastics, tourism and chemicals sectors, as well as delivered the SCP-HAT which is currently being used to guide national action

plans for sustainable consumption and production. In addition, a growing number of governments is being advised on life cycle-based approaches to solving plastics pollution.

2. Capacity Development Target Achievement towards 2022

Train at least 2,500 policy makers, business decision makers, and LCA practitioners on the ways Life Cycle Knowledge can be best used in enhancing the effectiveness of decisions / policies towards sustainable development	733	1,767
Share at least 20 impactful success stories on how Life Cycle Thinking has improved the positive impact of their decisions	18 Success stories shared	
Achieved	Left to achieve target	



3. Knowledge, Consensus

Offer a solution to access all LCA databases globally in an interoperable way, alongside a library of recommended impact assessment factors linked through a global nomenclature system for priority (environmental, social and economic) impact areas defined by policy and industry users. The Initiative continues to host the [Global LCA Data Access network](#), which should become fully operational in 2020, and provides [global consensus factors for life cycle impact assessment](#), towards the vision of an integrated platform for data and impact assessment factors.



2.1 TECHNICAL AND POLICY ADVICE/STEWARDSHIP FOR LCA APPROACHES

SCP Hotspot Analysis (SCP-HAT)

Shifting to sustainable consumption and production, including resource efficiency, is essential to achieve the 2030 Agenda for Sustainable Development and most of the 17 Sustainable Development Goals adopted by the United Nations Member States in 2015. Until recently, there was no harmonized methodology to help countries identify “hotspots” or high-impact intervention areas.

To bridge this gap the Life Cycle Initiative, the One Planet Network and the International Resource Panel (IRP) commissioned the Hotspot Analysis Tool for Sustainable Consumption and Production (SCP-HAT). SCP-HAT is an intuitive and online tool that helps countries identify “hotspots” based on a robust, science-based analysis of their national economies. Developed in partnership with WU Vienna and CSIRO, and the support of KGM & Associates, the tool was made publicly available at the end of 2018 and launched during UNEA 4 (March 2019). The SCP-HAT provides data for



the environmental and socioeconomic performance of 171 countries over the last 25 years, offering empirical evidence of hotspots where unsustainable consumption and production practices may be particularly prevalent, in relation to 26 economic sectors and product categories. The SCP-HAT integrates data on raw material use, GHG emissions and climate change, air pollution and health, land use and biodiversity loss. It also offers basic socio-economic data at both the national level (i.e. GDP; Human Development Index) and the sectoral level (i.e. added value, employment), in order to demonstrate decoupling trends.

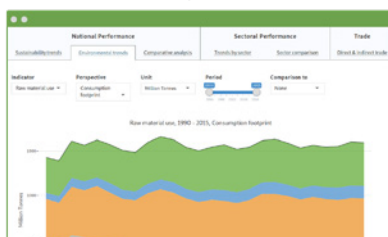
The tool has already been piloted in Argentina, Ivory Coast and Kazakhstan and provides three modules to analyse hotspot areas:

Country Profile module



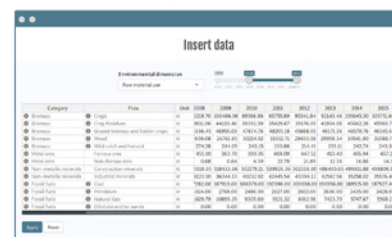
Provides the key information regarding the country's environmental performance, in the context of the most relevant policy questions.

SCP Hotspots module



Provides a wide range of SCP indicators to analyse hotspots of unsustainable consumption and production practices at country and sector levels.

Data Systems module



National Data Systems: Provides the option of inserting national data to receive more tailored results.

Overall, the SCP-HAT enables better science-based policy and governance by enhancing the capacity of policy-makers and stakeholders to design, implement and monitor cost-effective SCP policy instruments with a strong social dimension.

The tool gained considerable momentum and continues to receive support and recognition by governments (such as Argentina, Senegal and Bhutan) as well as within UNEP (PAGE, Ozone Secretariat, Climate Change sub-programme, the Environmental Situation Room). Webinars on the

SCP-HAT were organised during the year and are accessible in [English](#) and in [French](#). In 2020, the tool will be further improved from a methodological and technical point of view, including improvements of the database, expansion of the sectoral coverage, enhancement of the footprints representation, as well as improvements related to the overall usability of the tool.

A new funding has been secured to further improve the features of the tool in 2020, including the website, data, indicators and usability. Please stay tuned for the launch of SCP-HAT 2.0!

Information and actions towards marine plastics

With the global attention on plastics pollution, the need for harmonised methods for monitoring plastics leakage and its impact on the marine environment represent a key requirement to support decision making in the public and private sectors.

National Guidance for Plastic Pollution Hotspotting and Shaping Action

UNEP, the International Union for Conservation of Nature (IUCN), and the Life Cycle Initiative have co-developed a harmonized methodological framework, under the project 'National Guidance for Plastic Pollution Hotspotting and Shaping Action' (hereinafter referred to as 'the Guidance'). The Guidance aims to provide a methodological framework that enables countries, regions or cities to prioritize actions through the identification of hotspots on plastic leakage and impacts along the full value chain. In 2019, the draft guidance was tested in South Africa, Thailand, Vietnam and Mauritius, with the support from national governments and local stakeholders. The Guidance will be further tested in new countries and cities in 2020, and an introduction document will be published in the first half of 2020. An online platform to host the



Addressing Marine Plastics A Systemic Approach

methodology, tool, case studies and data is also in planning.

Recommendation report from the GEF project

In 2019, the Global Environment Facility (GEF) funded project '[Addressing Marine Plastics – A Systemic Approach](#)' has been concluded, with the technical support from the Initiative. Building on the findings from two previous reports on stocktaking of the [global plastic value chain](#) and [existing actions](#), the final project reports were published. The report '[Addressing Marine Plastics – A Systemic Approach, Recommendations for Action](#)' identifies gaps to address marine plastics at each stage of the value chain, and finally recommends actions to achieve a circular economy for plastics at the global level. The brief document '[Addressing Marine Plastics - A Roadmap to a Circular Economy](#)' provides action-oriented solutions to be implemented by targeted stakeholders from the whole plastics value chain under different time horizons, to achieve circular economy for plastics at different geographical scales.

Strategic Approach to International Chemical Management (SAICM)

Launched in 2006, the overall objective of SAICM is to achieve the sound management of chemicals throughout their life cycle so that by

the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health. In



particular, the project “[Global Best Practices on Emerging Policy issues of Concern under SAICM](#)” aims at accelerating the adoption of national and value chain initiatives to control Emerging Policy Issues. This project is supported by the Global Environment Facility (GEF) through the policy brief titled ‘[Understanding Chemicals in Products](#)’. The Initiative is involved in the policy brief through the development of holistic assessment tools that consider the entire value chain to minimize the exposure and focus on cleaner and responsible production as well as chemical leasing. Through the USEtox International Centre, the Initiative contributes to the development of near-field consumer exposure models that will eventually be proposed for incorporation into the USEtox modeling framework for broad application in life cycle-based assessments around the world.

Progress made during 2019 includes:

- » The success of the USEtox summer school in Singapore in June
- » The identification of Chemicals of Concern (CoC) and potential suitable alternatives
- » The compilation of chemical properties databases
- » The adaptation of USEtox-related tools for priority CoC-product combinations in children toys and building materials
- » The progress in the development of new models for near-field exposure

Some of the key milestones for 2020 include the finalisation of models for new USEtox-related tools and testing in industry of the toys and building products sectors as well as capacity development, and pilot testing of new models in USEtox by companies in children toys and building products sectors.

Linking UN Sustainable Development Goals to Life Cycle Impact Pathway Frameworks

Implemented by the One Planet Foundation with participation from Pré Sustainability and 2.0 LCA Consultants, this project aims at developing a clear link between the top-down process that led to the creation of the SDGs and all the bottom-up knowledge, data and methodology in the Life Cycle Sustainability Assessment area. The objective is to develop an actionable and rational method for businesses and governments to integrate the SDGs into decision-making and progress monitoring to measure their contribution to the SDGs. Through screening approaches to fully quantified end-point metrics solutions, the project brings the qualitative and quantitative impact pathway thinking from LCA to the 17 SDGs. The outcome of this project should help coordinate action and increase efficiency in implementing the 2030 Agenda, but also help streamline and harmonise sustainability reporting.

At the end of 2019, two strong potential frameworks for linking SDGs to Life Cycle

Impact pathways were designed, using SDG 2: Zero Hunger, and SDG 3: Healthy lives. Consultation process have also been initiated both online and physically through various opportunities. The first framework approach focuses rather on a qualitative description of the cause effect mechanism using a 5-level scale. The second approach tries to capture the impact on all 17 SDGs in a comprehensive and consistent way, avoiding overlaps and gaps as much as possible using a single-score to measure the sustainable wellbeing.

2020 will focus on developing draft for consultation, engaging with business and governments, and further refining as well as developing the framework through cases and links to environmental LCIA and social metrics.



2.2 LIFE CYCLE CAPACITY DEVELOPMENT

E-Learning Modules

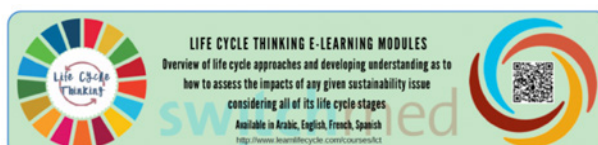
Under the project Resource Efficiency through Application of Life cycle thinking (REAL) funded by the European Commission, the Life Cycle Initiative co-developed e-learning courses that address life cycle thinking and approaches from different perspectives and in various levels of depth. These e-learning modules aim at giving all participants an overview of life cycle approaches while developing an understanding of how to assess the impacts of any given sustainability issue considering all its life cycle stages. As from the end of 2019, the platform delivers a completion certificate to those completing the modules.

Developed in 2018, the module "[Introduction to Life Cycle Thinking](#)" is available in English and French and continues to attract many subscribers, doubling 2018 numbers to reach 700 completions and 3122 registrations in 2019. Thanks to the financial support from the Switch-Med project, the module is now available also in Arabic and French.

Here are the details of the introduction course for the different languages:

	English	French	Spanish	Arabic
Registered	1314	28	1771	9
Completion	158	1	541	0

In September 2019, the Life Cycle Initiative launched two new short online courses available in English and Spanish targeting at business decision makers "[Life Cycle Thinking in business decision making](#)" and policy makers "[Life Cycle Thinking in policy making](#)". Each module presents the basic concepts of Life Cycle Thinking, and demonstrates application of the approaches, methodologies and tools in context, through a series of case studies. With busy schedules in mind, each course only takes one hour to complete and is self-paced. The



courses are made up of videos, quizzes and reading activities, and include links to additional resources.

Details of registrations and completion for the Business course:

	English	Spanish
Registered	58	111
Completion	10	5

Details of registrations and completion for the Policy course:

	English	Spanish
Registered	23	112
Completion	1	7

A market assessment was performed to consider necessary strategies and actions to disseminate such modules better. For now, the e-Learning modules have been disseminated across UNEP; the modules have already been used by the [IOYFP](#) Secretariat and by the SWITCH Africa Green project in the context of a UNITAR-led course on "Introduction to Sustainable Consumption and Production". SWITCH Med project is also disseminating them through their partners in the Mediterranean. In addition, 8 universities in the LAC region and Europe have been contacted to disseminate the tools amongst experts and students (Leiden University, Chalmers University, University of Costa Rica, Rafael Landivar University, University of Surrey, University College of London, Universidad Federal de Sao Carlos (Brazil), Universidad Gerardo Barrios (El Salvador)). UNITAR has formally integrated the e-Learning on Introduction to Life Cycle Thinking into their "Introduction to SCP" course.

LCA Technical Helpdesk

The [Technical Helpdesk for National LCA Databases](#) was launched by UNEP and is a forum for Life Cycle Assessment (LCA) data experts, developers of new national databases, managers of existing databases, and other interested individuals. The platform provides stakeholders wishing to establish and operate LCA databases with both training and support by international experts. It facilitates communication among experts and stakeholders, it provides key informational resources as well as guidance on responsible management practices and technical requirements for database setup and operation.

A number of experts are already listed and stand ready to answer any questions whether from an expert willing to share views or a beginner in the field of LCA Data in need of advice.

The key features of the help desk include:

- » Ask an Expert: a discussion forum that enables members to ask LCA Database questions to relevant experts.
- » Tasking: a function that allows members to submit tasks and assign them to other members.
- » Document repository: a repository of documents including downloadable training materials.
- » Agenda: a calendar populated with relevant conferences and events including those attended by the Life Cycle Initiative team.

To benefit from the services of the Helpdesk, contribute to its content and receive update notifications, it is enough to register to the One Planet Network and request a space membership directly on the Technical Helpdesk webpage. It is possible to register as an expert by sending an email to llorenc.milaicanals@un.org.

In September 2018, a project to develop national LCA database roadmaps was launched as part of the REAL project. Under this project, the Life Cycle Initiative Technical Helpdesk has continued progressing the exercise to develop national LCA database roadmaps in 6 countries: India; South Africa; Uganda; Sri Lanka; Brazil and Ecuador. The experiences of these countries are being gathered in a publication for early 2020.

2.3 LIFE CYCLE KNOWLEDGE CONSENSUS AND PLATFORM

Global LCA Data Access network (GLAD)

In April 2018, the [Global LCA Data Access network \(GLAD\)](#) was launched for nodes during the 6th meeting of the International Forum on LCA Cooperation in Brussels. GLAD aims to achieve better data accessibility and interoperability. The network is comprised of independently operated LCA databases (nodes) from around the world and provides users an interface to find and access life cycle inventory datasets from different providers. GLAD delivers two main services including i. finding datasets – through a search component, with globally agreed metadata descriptors – and ii. using datasets – by allowing their conversion and download into the user's software, in the desired format.

In 2019, the process moved forward so that users can explore a more comprehensive set of globally available LCA datasets via GLAD. The connection of nodes to GLAD has continued slowly due to

technical glitches reported by nodes; but a consultant has been recruited at the end of June 2019 to support in this process. The recruitment of the IT consultant is proving very effective, with some initial successes with smaller nodes now connected to GLAD; conversations resumed with major players (thinkstep and ecoinvent); and several technical glitches identified and resolved. Users can access a total of 3884 datasets from databases including: IDEA (Japan), USA LCA Digital Commons, SICV Brazil (Brazil, IBICT), ELCD (European Life Cycle Data Network), worldsteel, Ostfold Research, USDA, Thinkstep, USDA Crop, USFS Syngas.



Global Guidance for Life Cycle Impact Assessment Indicators and Methods (GLAM)

The aim of the Life Cycle Initiative through GLAM is to initiate a global process to reach consensus on recommended environmental indicators and characterisation factors (CFs) for life cycle impact assessment (LCIA). This project is split in three phases starting with the publication of [Global Guidance for Life Cycle Impact Assessment Indicators Volume 1](#) (Frischknecht & Jolliet 2017; Jolliet et al. 2018) focusing on climate change, fine particulate matter impacts on human health, water use impacts (scarcity and human health impacts), and land use impacts on biodiversity.

The second phase started in 2017 and finished in 2019 with the publication of [GLAM Volume 2](#). The second report focused on additional environmental topics, namely 1) acidification and eutrophication, 2) human toxicity 3) mineral resources 4) soil quality and related ecosystem services, 5) ecotoxicity, as well as 6) crosscutting issues. The delivery of this report involved academic domain experts, LCIA method developers, consultants, industry associations, and users of

life cycle information, including intergovernmental organisations (IGOs), government, industry, and non-governmental organisations (NGOs). This enabled to maintain the balance between scientific rigour and practicality, to bridge the gap between scientific complexity and the call for meaningful and well-tested environmental indicators, while carefully defining the domain of applicability for which the developed indicators are appropriate.

The last phase starting in 2020 will focus on defining a scientifically robust and applicable method and agreeing on the findings and conclusions regarding life cycle impacts of products on human health, ecosystem and natural resources or ecosystem services.



Guidelines for Social Life Cycle Assessment (SolCA)

In April 2018, the Life Cycle Initiative formally launched a new project on Social LCA, to provide revised guidelines, and to road-test it in different organisations for practical application. The project is implemented by the Social LCA Alliance and has two phases. A first set of guidelines published in 2009 provided a map, a skeleton and a flashlight to guide stakeholders engaging in the assessment of social and socio-economic impacts of the life cycle of products. Since the first publication, the relevance of S-LCA has increased, and a plethora of initiatives promoting value chain due diligence have been positioning social issues as a central concern, for private and public sector actors alike. In the wake of this development, the Life Cycle Initiative continues to be closely involved in making the methodology for S-LCA more approachable and practical for anyone who wants to become familiar with and start applying the method.



The 2009 guidelines were revised, and the open-source guidelines were updated in August 2019. The Guidelines revision process involved several technical workshops and the participation of topic-based experts and users, and the new guidelines will be published in 2020. The project will also start a series of road tests in 2020, where the Guidelines are applied to a range of products or organizations and industrial sectors. The results of these pilot projects will enable the generation of additional resources to support implementation (Q&A, advice, testimonies, examples), as well as training materials. The road-testing process is planned to last two years.

Marine Impacts in LCA

The objective of [Marine Impacts in LCA \(MarILCA\)](#) is to foster the harmonised development of environmental impact pathways and characterisations factors for marine impact assessment in LCA. The primary focus is marine litter, and plastics in particular.

The project is spread across three phases starting in 2019. The first phase was to develop a framework document on different impact pathways associated with marine litter and to identify the gaps and building blocks. The framework paper was prepared in 2019 and currently in the publication stage for peer-review in a scientific journal.



The major objectives of the second phase finishing in 2022 is to fill in methodological gaps in LCIA related to marine litter. The last phase finishing in 2025 is to build consensus to deliver a harmonised and consensus-based impact pathway framework and methods addressing plastic litter impacts in LCA.

2.4 OTHER HIGHLIGHTS

Meta-analysis of single-use plastic products

UNEP was requested by UNEP/EA.4/Res.9 to make available existing information on the full life cycle environmental impacts of plastic products compared to products of alternative materials. Guided by this mandate, UNEP and the Initiative aim to provide an insight into how Life Cycle Assessment (LCA) can be used to make informed decisions on single-use plastic products and their alternatives. In order to provide insight in a comprehensive manner on this product perceived as problematic by most governments, a series of studies has been commissioned by UNEP to compare the impacts of single-use plastic bags, beverage bottles, food take-away

packaging, and their alternatives, from existing LCA studies. IVL Swedish Environmental Research Institute was selected as the implementing project partner for these three studies.

[The first report developed in 2019 is on plastic bags](#) and has been published in March 2020. A high-level summary report for policy makers will be published in October 2020.



3. OTHER EVENTS

World Resources Forum 2019: the global platform for resources expertise

The theme of the WRF 2019 conference was 'Anchoring Natural Resources and Raw Materials Management for Achieving Sustainable Consumption and Production'. The Life Cycle Initiative had the chance to organize two workshops during the WRF conference 'Apply life cycle thinking to achieve green business and sustainable development', as well as 'Towards

a Circular Economy for Electronics'. The workshops had a rich mix of presenters and panelists who exchanged experiences and viewpoints on the barriers and opportunities to apply life cycle thinking in business and policies. This conference also served as a great way to disseminate the Sustainable Consumption and Production Hotspot Analysis Tool (SCP-HAT).



IBICT presented life cycle thinking in the SNCT conference

Dr. Thiago Rodrigues from the Brazilian Institute of Information in Science and Technology (IBICT), steering committee member of the Initiative, presented life cycle thinking at the 16th National Science and Technology Week in Brasilia titled "Bioeconomy: Diversity and Wealth for Sustainable Development". Thiago demonstrated the importance to adopt LCA as a tool to measure the use of natural resources and environmental

impacts caused by a product all along its value chain, from raw material extraction to its disposal. The tool is a support to making decisions that will improve the environmental, economic and social performances of products. He also introduced the international network on the Global LCA Data Access (GLAD), in which IBICT has been playing a strong role.

The [avniR] Conference

The [avniR] conference is an international event that gathers nearly 250 public decision-makers, companies, researchers and consulting firms every year. The 2019 conference focused around the application of Life Cycle Assessment (LCA) and Ecodesign for the implementation of the circular economy. The objective of this conference was to share the latest best practices, scientific insights and innovations leading to the successful implementation of Life Cycle Management to boost competitiveness.

The Life Cycle Initiative had the chance to participate to the plenary on 'implement a more circular future', where Feng Wang presented a wide variety of UNEP projects on the circular economy and further disseminated the Sustainable Consumption and Production Hotspot Analysis Tool (SCP-HAT), drawing a connection between this tool and circularity.

4. OUTLOOK FOR 2020

2020 is not only a new year, but also a start of a new decade which many have labelled as the make-or-break decade for the environment. We all need to step up our action and ambition to influence decisions that shift human development to sustainability, faster and more efficiently. We all need collective effort to bring life cycle thinking where it matters the most.

In 2020, the Initiative will continue the work to further adapt its efforts towards achieving the relevant UNEA4 resolutions, as well as more in-depth work in sectors such as the plastics, textile, tourism and food system. We expect to publish a new set of guidance and recommendations on plastics, as well as new methodology on Social Life Cycle Assessment.

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