

# Progressing on our valuing nature journey

## 2017–2020 Summary report

A collaboration of The Nature Conservancy and Dow, Inc.



Seadrift Tertiary Treatment Wetlands. Dow and The Nature Conservancy collaborated on a restorative burn of the wetland following damage incurred during Hurricane Harvey.  
*Photo courtesy of Jennifer Molnar*

# Foreword

In 2011, The Nature Conservancy (TNC) and Dow began a journey to demonstrate that **integrating the value of nature into business decisions can lead to better business and conservation outcomes**. The collaboration team conducted extensive research and developed new tools to demonstrate how a company like Dow can include nature in its business operations.

For much of the first six years of our collaboration, the focus was on developing research and tools that quantified nature's value in different types of projects, including coastal marsh restoration, reforestation, and watershed enhancement. In 2015, this research encouraged Dow to issue its groundbreaking 2025 Valuing Nature Goal, through which Dow became the first major corporation to **commit to considering nature** in nearly all of its business decisions, while committing to create \$1 billion in business value through projects that are good for business and better for the environment. Following the launch of Dow's Valuing Nature Goal, the collaboration focused its efforts on implementation of the goal across Dow's global operations. Although we had robust research and tools, we quickly learned that integrating the concept into Dow's culture required direct interaction with site staff, who lead project development and delivery and support Dow's everyday businesses and operations. Over the next few years, the collaboration team visited more than 25 sites on five continents to educate employees on the Valuing Nature Goal, leverage project learnings, and learn how to improve the research and tools to encourage broader adoption. Through this engagement, we have learned that much of the core efforts that Dow teams are already engaged in, through operational efficiency projects including waste, energy, and water reductions, have a benefit to nature, though not previously recognized as such.

To date, Dow has recognized more than \$500 million in net present value through projects that are better for business and better for nature. This recognition highlights the win-win proposition provided by nature-based solutions as well as our desire to stay at the forefront of developing cutting-edge analyses and tools needed to provide the robust science necessary for decision making and execution. Dow is well on its way to achieving its target of \$1 billion by 2025.

As we move into the 11th year of the collaboration, we have expanded the scope of the collaboration to include topics of mutual interest to both organizations: coastal resilience, watershed improvement, and climate. These areas of expanded focus align with TNC's vision of achieving a future where people and nature thrive. More specifically, the work of the collaboration will help tackle climate change, protect land and water, and build healthy cities. In addition, we will continue to work to implement Dow's 2025 Valuing Nature Goal.

As always, we will continue to share our progress. From published journal articles to media coverage and events around the world, we are always looking for new ways to reach the audiences that could benefit from the groundwork we have laid and join us in our journey to value nature.

We welcome any questions or feedback you may have and look forward to working with you on our collective sustainability efforts.

Sincerely,

**Mary Draves**

Chief Sustainability Officer & Vice President  
of Environment, Health & Safety  
Dow

**Lynn Scarlett**

Chief External Affairs Officer  
The Nature Conservancy

<sup>1</sup>The Nature Conservancy does not audit or collaborate with Dow on the tracking of its Valuing Nature Goal metrics. The Nature Conservancy supports Dow's implementation of the Valuing Nature Goal exclusively through the development of tools and processes related to integrating nature into business decisions.

# Overview



Dow and The Nature Conservancy team members after participating in a Nature Goal Workshop in Bahica Blanca, Argentina in 2018.

## Sharing the concept of nature in business

Following the announcement of Dow's 2025 Valuing Nature Goal (Nature Goal) in 2015, the TNC-Dow collaboration increased its work in making the case for businesses valuing nature, while pushing to expand into new areas of implementation. This report highlights the work accomplished by the collaboration during the last four years.

Since the Nature Goal requires a new way of thinking about how to make business decisions, it took time and communication to build trust, tools, and processes across Dow — and for the work to mature into actionable, tangible projects. The collaboration has also maintained momentum through significant organizational change in both Dow and TNC, including Dow's merger and subsequent separation from Dupont, and CEO changes in both organizations.

In 2016, the collaboration launched the Ecosystem Services Identification & Inventory Tool ("ESII" Tool), which enables non-ecologists to collect ecosystem service data at sites to inform project design decisions. With this tool in place to support project managers, the collaboration then focused on implementing the Nature Goal.

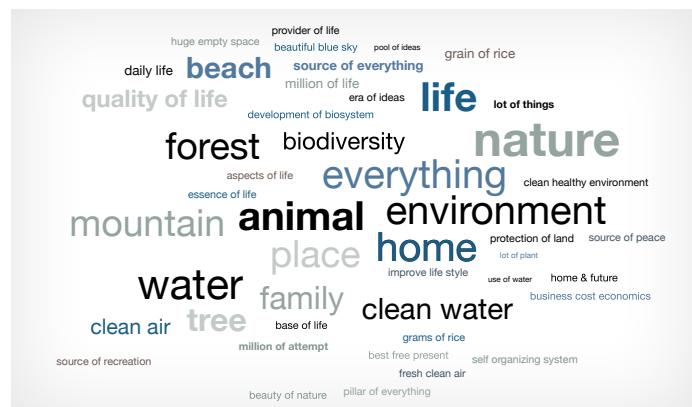
By focusing on process, communications, culture and science, the collaboration was able to effect change at Dow. The team started this multi-pronged approach by hosting workshops to introduce the Nature Goal process and related tools to sites around the globe. Since 2017, the collaboration team has led more than 35 of these workshops at Dow sites across five continents, including a new virtual workshop concept engaging 14 Asia/Pacific sites in 2020 to allow progress to continue when travel was restricted because of COVID-19.

At each site, a cross-section of local staff including team members from business units, operations, finance, facilities, internal technology centers, project managers, and project engineers learned about the Valuing Nature Goal and the TNC-Dow collaboration. Participants also presented current and future project concepts as well as operational challenges and discussed opportunities to reduce environmental impacts through optimization or incorporation of nature-based solutions. During the workshops the local team ran projects through the Nature Screen, a tool developed by the collaboration to determine if the projects would or could have a nature component or impact on nature and, thus, contribute to Dow's Valuing Nature Goal. By demonstrating a tangible tool for leaders at various levels, workshops not only served to educate Dow's global teams on what it means to value nature, but also equipped them to do so in the future.

In order to improve communication of the Nature Goal across Dow and enable its implementation, the team developed an internal working definition of "nature:"

*Nature is the Earth's collective inhabitants and nonliving environments interacting as functional ecosystems and providing services such as clean water, clean air, and healthy soil.*

This definition of nature was used to help Dow staff understand the ways in which their projects could be better for nature. In addition, the collaboration team leading the workshops would ask participants "How do you define nature?" The responses collected from around the globe have been captured in the word cloud below, the more frequent the response, the larger the word appears. These answers were used to illustrate the diverse ways in which we all experience and interact with nature. Helping staff see their connections to nature both personally and professionally has been part of the culture change aspect of implementing the Nature Goal.



Note: Based on 116 Nature Goal Workshop participant responses to the prompt: "What is Nature to you?"

## a. Refining the science

Based on feedback from global workshops and to support the continued adoption of the Nature Goal, the team identified a need to add more science to determining the “better for nature” component of the Nature Goal. As a result, the collaboration team initiated development of the Nature Scorecard with the intent of enabling assessment of a project’s impacts to nature in the context of a local ecosystem’s deficiencies, stressors and available resources. The scorecard intended to provide the user feedback on how good or how bad a project is for nature when compared to project alternatives or other projects in a portfolio, taking into account the location of a project. The Nature Scorecard’s output can be used to support the “better for nature component of the goal” and the project’s net present value can be used to support the “better for Dow” component.

The concept of a Nature Scorecard had been pursued early in the collaboration, however, the early concept relied on subjective assessments of the environmental quality around a site. In 2019, the collaboration team began a partnership with researchers at the Natural Capital Project to improve the Nature Scorecard by bringing in cutting-edge global data on ecosystem service performance for a suite of different characteristics, such as a site’s drought risk, surrounding air quality metrics, and nearby water pollution. The updated scorecard will incorporate these global metrics to assess the baseline environmental condition of Dow sites globally. The scorecard is nearing finalization and the team is working towards developing a publicly available version.

## b. Sharing the results

Throughout the last ten years, we have focused on sharing results publicly—a foundational construct of the collaboration. Our aim is to share both our challenges and successes so that we can enable and inspire the adoption of similar corporate goals and nature-based solutions more broadly by external parties. During Phase 2, the team held workshops and discussions with several other companies on the Valuing Nature Goal, including 3M, Praxair, and TNC’s Business Council, which consists of 11 large companies from multiple industry sectors.

The collaboration also continued to engage with external groups to promote the Nature Goal. The team held a coastal resilience workshop with US Army Corps of Engineers in Texas and participated in the launch of the Army Corps’ Engineering with Nature Atlas through their Engineering with Nature initiative. The collaboration also participated in the Army Corps’ Natural and Nature-Based Features (NNBF) Symposium in 2018. Finally, the collaboration co-hosted a Texas Gulf Coast Nature Based Solutions (NBS) workshop with the Army Corps in December, 2020, where more than 80 participants from 30 organizations shared learnings about NBS.

The collaboration has presented at numerous other conferences and symposia, including: The Agricultural & Applied Economics Association (AAEA), National Conference on Ecosystem Research (NCER), UN Scoping Workshop on the System of Environmental

Economic Accounting (SEEA) and Business Accounting, the Ad-Hoc Industry Natural Resource Management Group, Sustainable Brands-New Metrics, Sustainable Brands – Detroit, Zofnass Program for Sustainable Infrastructure, National Academy of Sciences Board of Chemistry Science & Technology, and A Community on Ecosystem Services (ACES). In addition, collaboration team members have shared collaboration outcomes at several universities, including Yale University, George Washington University, and Arizona State University.

The collaboration has also worked with companies and external stakeholders to incorporate the ESII Tool into their toolkit. Most recently, the collaboration team worked with the Detroit River Conservancy to help them understand how to capture the value of the land they had enhanced in downtown Detroit.

The collaboration has authored a number of papers to disseminate the project work across various audiences, including:

- a. [“Evaluating the Role of Coastal Habitats and Sea-Level Rise in Hurricane Risk Mitigation: An Ecological Economic Assessment Method and Application to a Business Decision,”](#) which won the Integrated Environmental Assessment (IEAM) Best Paper Award in November 2017 at the Society of Environmental Toxicology and Chemistry (SETAC) North America conference.
- b. Effective Conservation Science, Data Not Dogma, a book published in October 2017 by editors: Peter Kareiva, Michelle Marvier, and Brian Silliman, included a chapter, written by Jen Molnar, on the TNC-Dow Collaboration discussing the pilot projects from Phase 1, and how they linked to Dow’s decision to issue the Nature Goal.
- c. [“From Ash Pond to Riverside Wetlands”](#) in Science of the Total Environment
- d. [“Incorporating Co-Benefits and Environmental Data into Corporate Decision-Making”](#) in American Journal of Agricultural Economics
- e. [“Strategies for Operationalizing Nature-Based Solutions in the Private Sector”](#) and related blog: [“Why Companies are Making the Case for Conservation”](#)



Photo courtesy of Jennifer Molnar

Dow, The Nature Conservancy, and external partners touring one of Dow’s closed landfills that was converted into a wetland.

## Outcomes

The collaboration team has made progress in supporting the implementation of Dow's Nature Goal – both through process and culture change. As a result of the global workshops during 2016 through 2020 time period, the collaboration saw increased adoption of the tools developed within the Nature Goal process. Further, Dow has updated its project delivery and capital approval processes to include the completion of the nature screen as a mandatory step for all capital and real estate projects. Consequently, there has been a rapid increase in use of the nature screen. Prior to making the screen mandatory, approximately 40 projects per year were screened or 10 projects per quarter. This however has increased to greater than 20 projects per quarter resulting in a 100% increase in the number of projects screened. This effort serves as an example to show how other companies can embed nature in their business.

The collaboration continued to have our joint efforts recognized externally. In 2019, the American Chemistry Council recognized TNC with its External Collaborator award. From the award press release: "In one of the first of its kind collaborations between a chemical company and environmental group, The Nature Conservancy committed its time, resources and reputation to work closely with Dow."

The collaboration has also been connecting local TNC and Dow staff for collaboration on specific projects. For example, in Elizabethtown, Kentucky, local TNC staff helped Dow staff design wetland plantings for the construction of a flood pond at a Dow manufacturing site. The input and expertise of the TNC staff helped ensure that the designed site included more native plantings and habitat than would otherwise have been created.

Finally, one of Dow's key metrics of success has been the monetary value generated from projects that are both improving the bottom line for Dow while also improving the nature profile of a project. With the help of engaged Dow colleagues, Dow reports that the Nature Goal surpassed its yearly target and had recognized more than \$534 million in net business value through December 2020<sup>2</sup>. Dow is well on its way to achieving its 2025 Valuing Nature target of \$1 billion in net business value.

Some examples of key Dow projects that contributed to its Nature Goal during this reporting timeframe:

- The landfill closure project in Barry, UK used a treatment wetland to process stormwater and created a wildflower meadow on the capped landfill improving local habitat;
- Using the power of information technology to develop a control scheme for a gas turbine allowing for hydrogen to be re-used as opposed to being flared creating savings on fuel purchase while reducing emissions;
- Installing a wind turbine within the green belt area of a site to generate clean electricity at a lower cost to Dow;
- Landscaping of a green belt area from a mowed lawn into a meadow, which improved habitat locally – the project paid for itself through savings in maintenance costs of the site;

- Creating an additional source of revenue by diverting waste from a landfill and turning it into a byproduct; and,
- Using recycled materials in engineering solutions to cut costs associated with the repair of a dike wall – this project created savings on materials costs while minimizing waste to a landfill.



Dow and The Nature Conservancy team members identifying plant species for fire retention pond plantings in Elizabethtown, Kentucky.



Dow and The Nature Conservancy team members using the ESII Tool at freshwater pumphouse in Lake Jackson, Texas.

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## Lessons learned

The collaboration team members from both organizations continue to learn together on how best to embed nature into a global corporation's toolkit.

Some key findings from our work together include:

- **Driving change from the bottom up:** Through the Nature Goal workshops and other outreach efforts, we saw firsthand how important organizational culture is in driving change. For example, once site leaders and project managers were made aware and empowered to incorporate nature-based solutions, they were more likely to use those solutions in the future and to communicate with others about them. We continue to find that Dow employees are excited about the potential of the Nature Goal.
- **Having a defensible scientific basis to define your work:** Science is critical to help explain why and how a proposed nature-based solution works. And, it builds trust and the outcomes of the work more transparent.
- **Communication is a critical element of success:** Without the ability to clearly communicate the science to others, the findings may lose their significance. More importantly, the science must be combined with on-the-ground considerations that may impact an actual project. Understanding the operational and regulatory environment, and culture in which one operates, is just as important as an understanding of the science.
- **Unpredictable things happen when you work together:** The collaboration has demonstrated the benefits of bringing together a diverse set of thinkers to solve complex problems. As noted above, in Elizabethtown, Kentucky, the collaboration between TNC ecologists and Dow project managers resulted in adopting the concept of a wetlands as a fire pond as a preferred alternative to a dry pond which greatly improved the habitat value. This novel approach is highly leverageable across several Dow locations.
- **Recognizing the good work that is already happening:** As we've traveled globally and talked with Dow sites about their current project portfolios. As we've traveled globally and talked to Dow sites about their current efforts around valuing nature, we've found that folks are already engaged in projects that have a positive benefit to nature. These projects include waste, energy and raw material consumption reduction. What the nature goal offers is a concrete call to action and a tangible venue and support for these efforts. Achieving this goal starts with a conversation that mobilizes action.



Dow and The Nature Conservancy team members assessing forest growth at The Nature Conservancy's Brazos Woods Preserve in West Columbia, Texas.



Photo courtesy of Jennifer Molnar

Dow rooftop garden at its office building in Sao Paulo, Brazil.

## Path forward

Now that the Nature Goal process is embedded within Dow's business, the collaboration will continue to refine and improve related processes and tools, while also focusing together on implementing larger scale nature-based solutions.

As next steps for the Nature Goal, we will be working to share publicly the tools developed, most notably the Nature Scorecard. The ESII Tool and screening tool have already been [shared](#), and we will be working on developing more guidance on how best to use them. Finally, we are developing a virtual format of Nature Goal workshops so that we can increase our ability to connect with Dow employees globally and are continuing to develop online resources to be shared with other companies and partners.

In addition, during the next three years, the collaboration will expand the scope of work that we focus on together to better align with core areas of focus for both organizations. We will seek to implement on-the-ground projects, which build on the analytical work done in the last decade together. New areas of work include:

- **Coastal resilience:** Building on the initial pilot work in Phase 1, we are assessing the potential of implementing coastline

resilience projects at several Dow sites along the Gulf of Mexico. For this work, we are engaging with other key stakeholders in the region, including the US Army Corps of Engineers, and major corporations near the project sites.

- **Water accounting:** We will be investigating corporate water pricing techniques with the aim of developing a robust internal full-cost accounting water methodology for Dow, which would be shared publicly. This work will inform Dow's corporate water goals.

- **Climate/carbon:** In support of Dow's newly released climate goal, the collaboration will work together to determine how Dow can incorporate Natural Climate Solutions (NCS) into its climate strategy, while investing in work to unlock the potential scale and improve the efficacy of Natural Climate Solutions as a corporate strategy.

The collaboration will continue to communicate our results and impact – through events and traditional media – as our work progresses during the next phase. By continuing to share our research, tools and lessons learned, we encourage other companies to follow the example of the collaboration demonstrating the importance of integrating nature into business.

## About

The Nature Conservancy and The Dow Chemical Company set out in 2011 to demonstrate that integrating the value of nature into business decisions can lead to better business and conservation outcomes. Ten years later, the Collaboration – at the forefront of innovative nature-based solutions – has produced extensive research and developed new tools to demonstrate how a company like Dow can include nature in its business operations. Our joint commitment to this new way of doing business is quickly becoming ingrained in the Dow corporate culture.

## Contacts

**Jennifer Molnar**, Managing Director, Center for Sustainability Science, [jmolnar@tnc.org](mailto:jmolnar@tnc.org)

[www.nature.org/dow](http://www.nature.org/dow)

**Jim South**, Director, Corporate Engagement, [jsouth@tnc.org](mailto:jsouth@tnc.org)

**Martha Rogers**, Natural Capital Economist, [martha.rogers@TNC.ORG](mailto:martha.rogers@TNC.ORG)

### US

Toll Free            800 441 4DOW  
                      989 832 1542

### International

Europe / Middle East	+ 800 36 94 63 67
Italy	+ 800 783 825
Asia / Pacific	+ 800 77 76 77 76 + 60 37 958 3392
South Africa	+ 800 99 5078

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