



NETAFIM SUSTAINABILITY REVIEW 2018 - 2019

Helping the World **Grow More with Less™**
with Precision Irrigation



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Vineyard, France

INTRODUCTION



About this Review

This Netafim 2018-2019 Sustainability Review describes our approach to sustainable business practices and to our contribution to sustainable agriculture, and how we have performed over the past two years. The review provides our stakeholders with a transparent account of our impacts on people, society and the environment.

This review continues Netafim's long history of sustainability reporting with a full Global Reporting Initiative (GRI) compliant report every two years, and a short report in the interim years. Our last full Sustainability Report covered years 2016-2017, and in 2018, we published a short Communication on Progress as part of our commitment to the UN Global Compact.

In 2018, [Orbia Advance Corporation, S.A.B. de C.V](#) completed its acquisition of 80% of Netafim's shareholding. Orbia is a community of businesses united by a shared purpose: to advance life around the world. Orbia operates in the Precision Agriculture, Building and Infrastructure, Fluor, Polymer Solutions and Data Communications sectors. Orbia has commercial activities in more than 100 countries and operations in 44 countries, with global headquarters in Mexico City, Boston, Amsterdam and Tel Aviv. To learn more, please visit www.orbia.com. Since this acquisition, Netafim's contribution to Orbia's sustainability initiatives and performance have been integrated in Orbia's sustainability reporting and UN Global Compact communications. See [Orbia's most recent Sustainability Report for 2019](#).

However, in response to the specific interest and requests of our stakeholders at Netafim, this report delivers a focused look at our role in advancing sustainable agriculture, contributing to food security and improving farmers' livelihoods around the world. It provides additional detail to that contained in Orbia's global disclosures and demonstrates our commitment to sustainable development, transparency and responsible business practices, covering years 2018 and 2019. It does not adopt a specific reporting framework, as Orbia's Sustainability Report is in accordance with GRI Standards.

We welcome your queries and feedback. Please write to us at sustainability@netafim.com

Apples, Western Cape,
South Africa



Welcome from our CEO

It is my great pleasure to introduce our Sustainability Review for 2018-2019. I am pleased to confirm our ongoing commitment for conducting business in a way that benefits society and the environment.

As we publish this Review in 2020, we are facing a new global reality caused by the COVID-19 pandemic, which continues to disrupt lives, livelihoods and economies. Throughout this pandemic, we have taken relevant measures to protect our employees at work and enabling all to work remotely wherever possible. The pandemic has also impacted agriculture and food supply, in many cases affecting the most vulnerable populations. We have continued to support our farming communities with service and assistance, including digital farming tools, to help maintain continuity of agricultural productivity as far as possible. I'd like to thank all our team at Netafim for pulling together and supporting each other, our customers and our communities through these challenging times.

On a more general note, today, there are no doubts about the benefits of precision irrigation; it improves production (both yield and quality), enhances the livelihoods of farmers and communities and minimizes the use of water, land and other resources. Netafim's solutions have been making a difference for 55 years; we continue to innovate and deliver even higher precision in our irrigation solutions, utilizing our advanced digital farming solutions that provides farmers with better analysis, monitoring and control capabilities, resulting in a cutting-edge real-time decision-making tool. With mass adoption of drip irrigation, global food security can be a reality and we continue to pursue this as our mission. Our innovative partnerships, such as our Community Irrigation Model in India, shows how much can be achieved when willing partners come together to create new ways of working and sharing resources.

As the leading global business in precision irrigation, inspired by our majority shareholder Orbia's purpose of advancing life around the world, we are proud to play a significant role in improving sustainable prosperity on the way to the achievement of the Sustainable Development Goals of the United Nations.



As we advance precision irrigation, being a responsible, ethical and transparent business is always at the forefront of our decision making. We continue to expand our business to deliver the benefits of precision irrigation to more farmers and communities around the world and driving continuous improvement in adherence to responsible standards and practices.

Thank you for your interest in this review.

Gaby Miodownik
President and CEO



About Netafim

Netafim is the global leader in precision irrigation for a sustainable future. With 33 subsidiaries, 17 manufacturing plants and approximately 5,000 employees and contracted associates worldwide, Netafim delivers innovative, tailor-made irrigation and nutrigation solutions to millions of farmers, allowing smallholders to large-scale agricultural producers, in over 110 countries to Grow More with Less™. Founded in 1965, Netafim pioneered the drip revolution, creating a paradigm shift toward precision irrigation. Today, specializing in end-to-end solutions from the water source to the plant's root zone, Netafim delivers turnkey irrigation and greenhouse projects, supported by engineering, project management and financing services. Netafim is also leading the way in digital farming, integrating real-time monitoring, analysis and automated control into one state-of-the-art system. In 2017, Orbia, a global leader in specialty products and innovative solutions, acquired 80% of Netafim. Kibbutz Hatzerim holds the remaining 20%.


OUR BACKBONE

- Purpose** Helping the world Grow More with Less™
- Vision** As the world's leading irrigation company, we will drive mass adoption of precision irrigation solutions to fight scarcity of food, water and land.
- Mission** Together with our partners, we will revolutionize irrigation globally for a sustainable future. We will drive mass adoption of innovative, simple and reliable drip irrigation solutions. Our teams around the world will provide customers with the best agronomic and technical support to ensure outstanding results and peace of mind.

Values



OUR FOOTPRINT

 **> 5000**
employees and contractors

 **17**
factories
in **13** countries

 **33**
commercial
subsidiaries

 **>110**
countries served
with our products

OUR PRODUCTS

- Agriculture**  We offer precision irrigation solutions that are suitable for a broad range of crops, and support growers from the planning phase to crop management and harvest.
- Landscape**  Our products incorporate advanced water management practices and technologies for enhanced landscape irrigation, providing the basis for water conservation and recycling solutions while improving city and residential landscape planning.
- Greenhouses**  We offer comprehensive solutions for greenhouses, from planning and construction, through irrigation systems and other equipment, to after-sale agronomic support.
- Mining**  Our drip irrigation solutions for the extractive industries ensure uniform coverage, minimal clogging and optimal metal recovery in leaching processes for mining applications.



Supporting the Sustainable Development Goals

The UN's 17 Sustainable Development Goals (SDGs) call on us all to work together to end poverty, protect the planet, and ensure equitable prosperity. At Netafim, it is our privilege to have a business strategy that directly contributes to delivering 10 of the 17 SDGs.

Through policy support and cross-sector collaboration, we can help farmers to mitigate the growing challenges of climate change. We can make it economically viable for small-holder farmers to receive modern drip irrigation systems and digital farming tools, and agronomic knowhow and training needed to achieve sustainably higher farming incomes. By increasing incomes, farmers and their families can gain access to better sanitation, education and healthcare in a way that balances economic, social and environmental sustainability. To date, we've supported the drip irrigation of over ten million hectares of land and produced over 150 billion drippers for more than two million farmers.

Our core message is one of empowerment and optimism. Putting simple-to-use technologies in the hands of farmers really does transform lives.

“ Without doubt, the Sustainable Development Goals are embedded in Netafim's mission and influence our decisions and global initiatives. We believe that drip irrigation is part of the solution and we are tireless in forming partnerships to advance precision agriculture as a key to prosperity around the world.

Natan Barak,
Director of External Affairs & Sustainability



ELEMENTS OF OUR CONTRIBUTION TO THE SDGs INCLUDE:



No poverty: We help transform subsistence farmers into commercial farmers and increase farmland productivity and income per farmer.



Zero hunger: We advance food security through enabling higher agricultural yields and mitigating dependency on rainfall.



Gender equality: We help empower women who make up 50% of the agricultural labor force in the developing world.



Clean water & sanitation: We contribute to water conservation by reducing water use in agriculture (responsible for 70% of global usage) and preserving its quality through integrated water resource management.



Decent work & economic growth: We support economic growth by increasing crop yields, supporting the adoption of modern farming skills and contribution to the capacity building of farmers.



Industry, innovation & infrastructure: We continue to develop Digital Farming and related technologies.



Climate action: We reduce the greenhouse gas emissions of agricultural activity by replacing flood irrigation with precision irrigation.



Life on land: We combat desertification and transform arid land into green and arable land.



Peace, justice & strong institutions: We are helping create a world with less hunger, equitable water distribution, less farmer debt, and reduced land constraints. With these outcomes, we contribute to reduced conflict and stronger farming communities.



Partnerships for the goals: We bring together public and private entities to achieve meaningful transformation and facilitate partnerships between farmers and markets for their produce.



“Orbia’s shared purpose to advance life around the world permeates our actions across all our business lines and addressing the world’s most pressing challenges is a key element of this. We are proud that Netafim, an important member of our community of companies, plays a strong role in supporting sustainable development. Thanks to Netafim, millions of farmers are able to significantly save water, preserve land and reduce the use of agrochemicals, all while increasing yields and improving food security. Together, we leverage our strengths and synergies within our global Orbia group to support precision agriculture, which is fundamental to realizing so many of the Global Goals.

Cristina Gil, Vice President, Sustainability, Orbia Advance Corp.



Netafim agronomist
with customer, India

SUSTAINABLE AGRICULTURE



Guizhou citrus project,
China

WHAT MAKES AGRICULTURE SUSTAINABLE?

At Netafim, we say it in four words: Grow More with Less™. This means using solutions based on our core expertise – precision irrigation – to help farmers achieve higher yields and better-quality crops, while using less water, fertilizer and energy. Regardless of the crop, climate, soil or region, our mission is to empower smallholder farmers and large farm operations of all kinds to grow more food in more efficient ways using fewer resources. In this way, agriculture is a means to generating sustainable livelihoods that enhance the lives of farmers, their communities and societies, and all those involved in the food value chain. In 2018-2019, we advanced several initiatives that drive sustainable agriculture across five strategic dimensions:

- ✔ Improving farmer livelihoods
- ✔ Advancing technology and innovation
- ✔ Engaging in agritech partnerships
- ✔ Sharing knowledge for better results
- ✔ Supporting financing for smallholder farmers



/ Improving farmer livelihoods

Most smallholder farmers need practical assistance to become self-sustaining. This is often a combination of financing support, technical capability, irrigation knowhow, and sometimes, even the willingness to change traditional farming practices that have guided generations of farmers before them. At Netafim, our mission to help farmers Grow More with Less™ doesn't stop with providing drip irrigation systems. We look at the whole challenge, in all its dimensions, in country and climate specific contexts, and we partner with governments and non-government organizations to help improve farmer livelihoods in ways that make sense in each situation. In 2019, building on decades of similar activity, we progressed several unique initiatives which we invite you to read about below.

In many low-income countries, smallholder farming accounts for the major part of food production and plays a major role in the local economy. Millions of farmers feel trapped by poor education, lack of access to water, climate instability and unpredictability, and outdated farming practices, and they see poverty as their inevitable destiny.

Farmers using our smart irrigation solutions achieve up to **50% - 100%** increase in income and up to **40% reduction** in production costs turning economic stress into sustainable opportunity.

Family drip system,
Kenya



India

HOW DO YOU HELP SMALLHOLDER FARMERS THRIVE WHEN THEY LACK FUNDS TO INVEST IN MODERN IRRIGATION SYSTEMS?

The answer is a unique, transformational solution: Netafim’s Community Irrigation model. Bringing together public and private sector decision-makers, this model organizes smallholders into “irrigation communities” that benefit from regular water supply through improved infrastructure, efficient irrigation equipment, modern farming practices and a hub of technical and commercial assistance that enables farmers to thrive and support their families and communities. Netafim trains farmers and helps them manage issues over a period of 5 years so that farmers can be confident of being self-sustaining over the long term.

In 2019, following the success of our first community irrigation initiative with 7,000 farmers in the Ramthal region of Karnataka in southwestern India in 2017, we commenced implementation of four new projects in different regions of India, engaging 55,000 rural farmers, spanning 108 villages and delivering water to 44,000 hectares of land. Similar projects are now under consideration in Zambia and Zimbabwe.

“ It’s truly rewarding to see the type of positive impact we’re having on local farmers by bringing them precision irrigation for the very first time. This is smart digital farming in the most rural of settings.

Randhir Chauhan,
Senior Vice President, Netafim India

In the meantime, the new India projects which span 5 years (2018-2023), are progressing in collaboration with Megha Engineering and Infrastructure Limited (MEIL). Water requirements for irrigation are expected to be 40% lower than current farming practice (based on the Ramthal outcomes), and yields are expected to be 20-30% higher across a broad range of planned crops including Bengal gram, corn, peanut, sorghum,



Farmer at work Ramthal Community Irrigation project, India



Ramthal Community Irrigation project, India



Ramthal Community Irrigation project, India

sunflower, wheat, beans, chilies, onions and vegetables. There will even be an improved capability to grow flowers for sale. By increasing incomes, farmers and their families can gain access to better sanitation, education and healthcare in a way that balances economic, social and environmental sustainability.

Netafim's Community Irrigation Projects in India

Accumulated	2017	2018	2020
PROJECTS	1	5	8
VILLAGES	28	136	202
FARMERS	7,000	62,000	97,000
HECTARES	12,000	56,000	106,000
VALUE	\$60 million	\$160 million	\$245 million

Main crops

- Corn
- Peanut
- Sunflower
- Bean
- Vegetables
- Flowers
- Onions
- Chili
- Rice
- Cotton

“ The government decided to move to drip irrigation where consumption of water is less. Netafim came at that point of time with the whole concept and helped us accomplish our goal.

Mr. Anjum Parwez, Senior IAS officer, Former MD, Krishna Bhagya Jal Nigam Limited, Karnataka, India

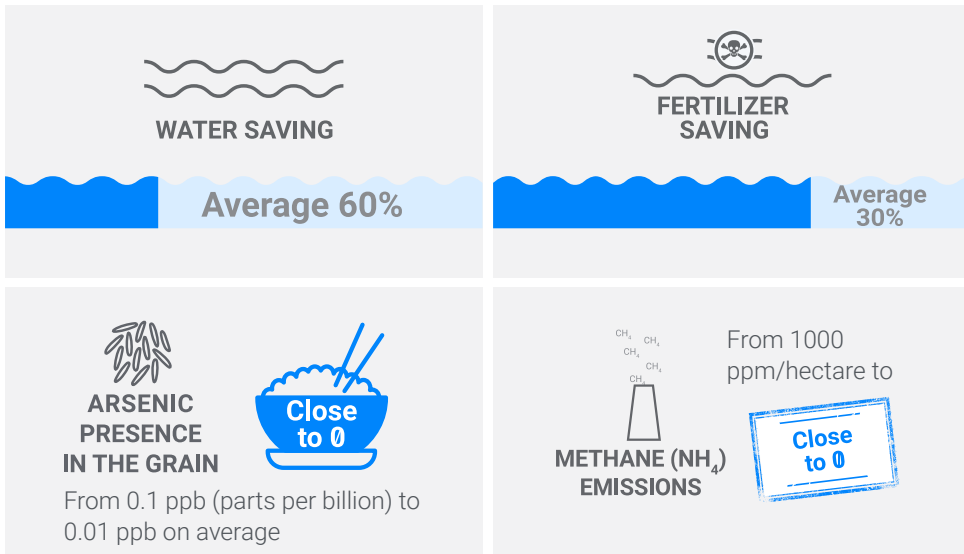


Turkey

HOW DO YOU OVERCOME MAJOR AGRICULTURAL CHALLENGES TO OPTIMIZE RICE CULTIVATION?

Farmers in Turkey have been wrestling with this question for years, as only 33% of Turkey's 28 million hectares of arable land has access to water for irrigation, and rice in particular requires cultivation on flat land since it is traditionally grown in paddy fields. The shortage of water for irrigation and other factors have led to a reduction in rice production in Turkey, making substantial rice imports necessary to feed the local population. In 2019, after a decade of field trials, we installed the first commercial-scale drip irrigation systems for rice fields to support sustainable cultivation across Turkey, enabling cultivation on sloped land which has not been possible so far with traditional methods. With positive outcomes expected, the reapplication for rice farmers worldwide is promising.

RESULTS FROM DRIP-IRRIGATED RICE CULTIVATION IN TURKEY



Drip irrigated rice, Turkey

“ Netafim was the only company that could provide us the innovative irrigation solution for rice that we needed. Drip irrigation makes weed control easier, boosts yield and leads to higher quality crops as well as optimizing our water savings right from the start.

Bülent Can, Rice Farmer in Beliksir, Gönen region, Turkey

▶ Growing rice on slopes using drip, Turkey



Rwanda

HOW DO YOU IMPROVE FOOD SECURITY WHILE BOOSTING LOCAL RURAL ECONOMIES IN RWANDA?

Improving food and economic security needs collaboration and we engage with others to implement innovative farming models. Netafim recently partnered with the government of Rwanda to launch the Gabiro Agribusiness Hub Project (GAHP), creating a commercial agricultural ecosystem across 15,600 hectares of arable land. Initially, farmers will grow maize, soybeans and high-value crops. 70% of the land will be leased to private investors to drive economic growth by boosting local agriculture, creating jobs and export revenues, while 30% is to be maintained by local communities for agriculture and raising livestock. Netafim's drip-irrigation systems will increase land utilization and support sustainable agriculture despite climate changes and drought while decreasing water use by 40%.

This program benefits the communities of Rwanda's Eastern Province who have long been affected by droughts that have prevented growth of food crops, as well as driving broader positive impacts for the country. GAHP will support the production of staple crops for local consumption and export, as well as value-added products like pastes, powders, oils and beverages intended primarily for export.

“ This project will significantly enhance private sector investments in Rwanda's agricultural sector, mitigate the risks of climate change and food security, contribute to job creation, increase export of value-added products and enhance rural community development and livelihood.

Clare Akamanzi, Chief Executive Officer, Rwanda Development Board (WRDB)

GABIRO AGRIBUSINESS HUB PROJECT (GAHP)

Holistic benefits in Rwanda through advanced agriculture

Improved housing standards in terms of size and infrastructure (electricity, water, sewage) and better health conditions

Major new source of export income from agriculture for the region and the country

Education for farmers on best agricultural practices, livestock technologies, agronomy, field management and machinery

Increased long term prosperity for the people, the communities, the region and the country

Job diversification and reduced unemployment through active participation of youth, women and the elderly

Access to the banking system, financing and credit to improve the local community's wealth

Additional and improved sources of income for landowners

Continuous food supply and food security



Gabiro Agribusiness Hub Project, Rwanda



China

HOW DO YOU HELP FARMERS GROW MORE WHILE REDUCING GREENHOUSE GAS EMISSIONS?

Today, farmers in the hot and arid Ningxia Hui region in western China are enjoying the growth of their wolfberry (goji berry) crops while reducing greenhouse gas emissions and air pollution. This is due to the introduction of a novel solar-powered plantation solution with drip irrigation technology. The solar panels produce electricity while providing an essential protective shade for growing high value crops underneath them. The project was supplied by Netafim in partnership with energy firm Baofeng. This initiative engages 12 villages across 700 hectares of land and provides work for 30,000 farmers. So far, around 450 tons of carbon emissions have been avoided through reduced use of coal as an energy source while producing high quality crops under the solar panel installation. The program is expected to expand 10-fold in the coming years, and considerably improve the livelihoods of smallholder farmers in the area while protecting the planet.

Wolfberry grower,
Ningxia Hui, China



Philippines

HOW DO YOU GROW MORE BANANAS WHILE PROTECTING BIODIVERSITY?

In the Philippines, Tagum Agricultural Development Company, Inc. (TADECO) is one of the highest yielding banana plantations in the world, thanks to Netafim’s custom designed low-volume irrigation system that reduces water use in banana plantations by 33% while increasing yields by 50%. As part of its mission, TADECO supports water conservation in the water-stressed region of Mindanao through advanced soil management practices and tree planting on riverbanks adjacent to its plantation. More than 60,000 trees across three kilometers have been planted to date. To support farmer capabilities and help them improve their livelihoods while preserving biodiversity, TADECO shares information on good agricultural practices with smallholder banana growers in the region.



Reduced water use
-33%



Yield increase
+50%



Drip irrigated banana field, Philippines



Peru

HOW DO YOU LIFT CHILDREN OUT OF POVERTY AND HUNGER IN PERU?

In 2019, we supported a non-profit organization, Kusimayo which works to improve the quality of life and boost the economy in rural communities in the Peruvian province of Puno. Puno is characterized by poverty and isolation, with most of its million inhabitants lacking access to water, electricity, education and healthcare – and, of course, nutrition - 16% of children in Puno suffer from chronic malnutrition. Kusimayo has provided more than 180 greenhouses for close to 1,000 families in the region, enabling them to live off their income and generate savings for the future. The greenhouses are guaranteed year-round water supply through Netafim's irrigation systems, and we have also undertaken an ongoing collaboration with Kusimayo to support the cultivation of orchards through donation of tools and materials.

Kusimayo has provided >180 greenhouses for close to 1,000 families

The crops grown in this project:



Carrot



Watermelon



Broccoli



Melon



Strawberry



Lettuce

Growing strawberries with drip, Peru



/ Technology and innovation

Netafim's consistent investment in technological and agronomical innovation has been key to our leadership in precision irrigation solutions for more than 55 years. In 2019, Netafim created a new center focusing on open innovation, partnerships, and fostering an even stronger innovative culture across all Netafim units.

“ Innovation is our core mindset. Our goal has always been to drive mass adoption of precision irrigation by providing accessible technologies to enable all farmers, from large-scale agri-producers to smallholders, to Grow More with Less™. To achieve this goal, we continue developing innovative solutions that are consistently more resource-efficient, durable and adaptable to the needs of different farmers, crops and climate conditions.

Assaf Yerushalmi, VP Strategy & Innovation



NetBeat™ NetRTU™



NETBEAT™ DYNAMIC CROP MODELS – AGRONOMY IN THE PALM OF YOUR HAND

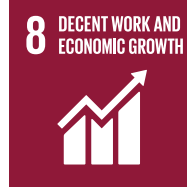
At Netafim, we have been steadily improving our development of digital farming solutions and enhancing our digital offerings as technology continues to evolve. In 2019, we introduced Netafim's Dynamic Crop Models™, part of our NetBeat™ technology, the world's best decision support system that helps farmers optimize irrigation and fertigation in real time. Based on more than 55 years of agronomic know-how and crop data, Dynamic Crop Models™ generate accurate irrigation and fertigation alerts for a week ahead and recommendations that help farmers save resources while improving yields. Operated from a smartphone by farmers, the system uses real-field data that is analyzed and processed by Netafim's leading agronomists.



NetBeat™ Dynamic crop models



Dynamic crop models - NetBeat™



USA

AWARD-WINNING TECHNOLOGY FOR EFFLUENT SUBSURFACE DRIP IRRIGATION

In 2019, the California Department of Agriculture recognized Netafim’s effluent subsurface drip irrigation (SDI-E) system for its conservation efficacy. Using advanced filtration and proprietary, patent-pending technology, SDI-E blends dairy wastewater with fresh water at an optimal ratio, reducing the freshwater volume required for growing feed crops. SDI-E was proven over three years of field trials with California dairy farmers, whose 1.7 million alfalfa-fed cows provide 20% of the U.S. milk supply. SDI-E is the fruit of a multi-year collaboration between Netafim USA, Sustainable Conservation, De Jager Dairy, McRee Dairy and Western United Dairies.

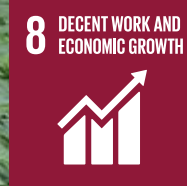
SDI-E System in dairy farm, USA

“ We were honored to be recognized alongside our project partners for our commitment to improve the sustainability, efficiency, and profitability of today’s dairy farmer. Through a collaborative partnership, we were able to help address the challenge of increasing productivity while achieving the environmental sustainability needs of the dairy industry.

Mike Hemman, President and CEO of Netafim USA

Effluent subsurface drip irrigation solution for dairies, USA

The SDI-E process not only re-uses water, but also recycles manure as a natural crop nutrient and soil builder, reducing the need for commercial (synthetic) fertilizer. In addition to the water savings provided by drip irrigation, field trials showed an increase in nitrogen use efficiency of up to 47% meaning that more of this organic fertilizer being taken up by the plant, preventing the leaching of excess nutrients from the soil to the groundwater below.



INNOVATIVE TECHNOLOGY FOR GROWING MEDICAL CANNABIS

Medical cannabis is a growing crop in many countries around the globe and is expected to reach an annual value of more than \$12 billion in 2020 in the U.S. alone. The largest medical cannabis growers are North America, Israel and Colombia. However, the cannabis plant is susceptible to disease, such as the fungus botrytis, which is very difficult to eliminate and risks wiping out the commercial value of entire crops and disrupting the supply of this medical treatment to many who need its pain relief properties.

At Netafim, we have developed world-leading expertise in complying with regulatory constraints on cannabis cultivation while combating the crop-specific challenges, by creating a system based on optimum water and fertilizer flows through drip irrigation.

Our technology enables the growth of cannabis using artificial substrates, allowing collection and recycling of drainage water, and delivering up to 4 cycles per year with up to 40% water and 60% nutrient savings versus traditional cultivation in open fields.

All over the world, Netafim's drip Nutrigation® solution has become industry standard for this growing crop.

(Note: It is our policy to comply with all applicable laws and regulations related to the supply of equipment and services in connection with cannabis growing in countries where cannabis cultivation is permitted.)




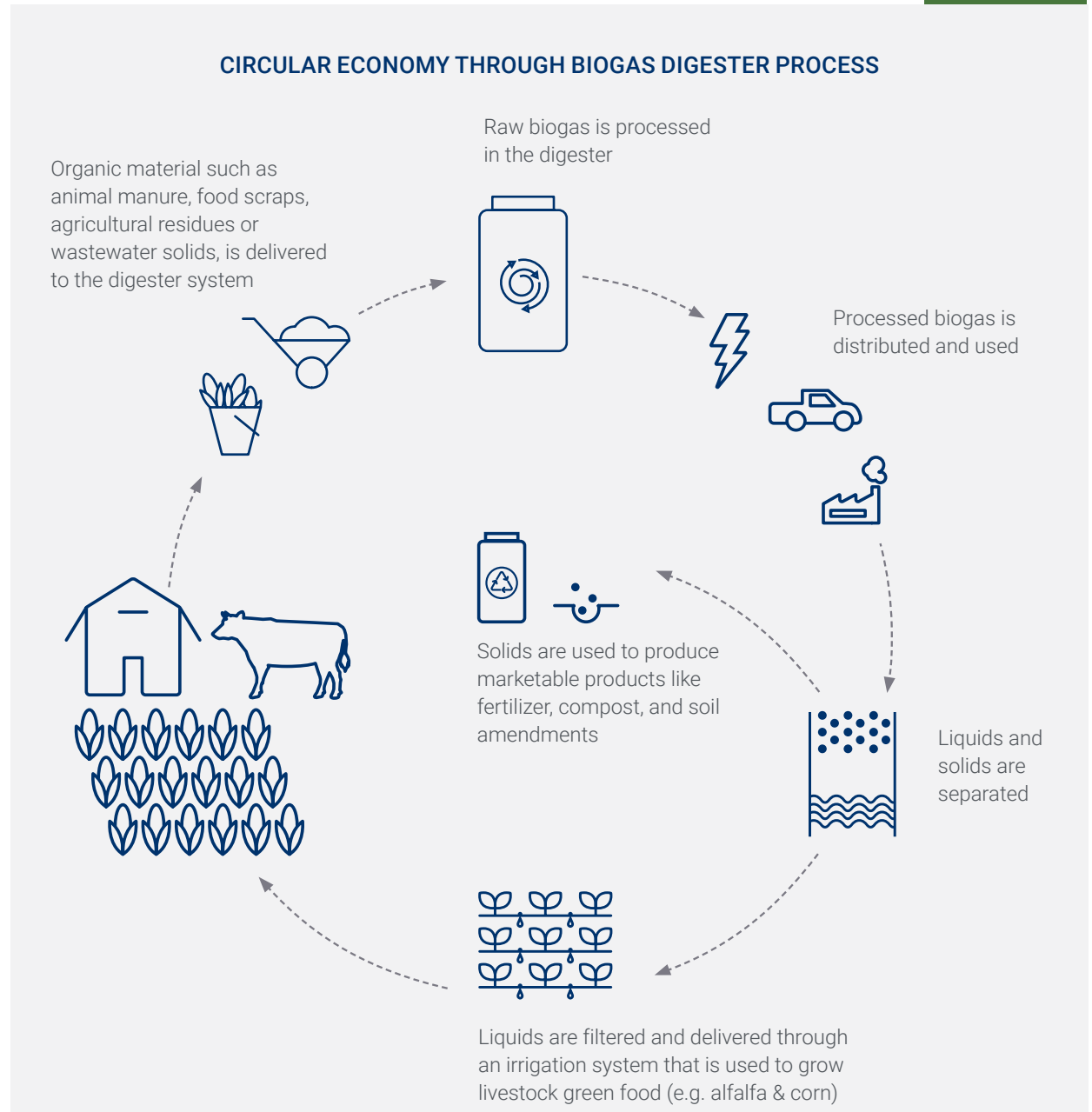
Growing cannabis with drip, South Africa



ADVANCING A CIRCULAR ECONOMY WITH WASTEWATER FROM BIOGAS PRODUCTION AS A SOURCE OF PLANT NUTRIENTS

For several years, we have been perfecting a unique solution for the use of wastewater from biogas digesters for farming. Our program is implemented in Italy where many of Europe's biogas plants are located. Our solution allows wastewater from the digestors to be distributed as field fertilizer by drip irrigation, reducing the need for chemical fertilizers and reducing aquifer contamination. It is an example of circular economy in the European biogas market, where there are almost 20,000 biogas plants all over the continent that demand a sustainable and economically viable solution for wastewater treatment as part of their biogas production. In this way, we are helping turn waste into a useful resource for precision agriculture, offering energy usage reduction, greenhouse gas emission avoidance and zero nitrogen leaching to groundwater. Several farms are already using this solution while others are in design and implementation stages.

 Wastewater from biogas digesters for farming, Italy





/ Agritech partnerships

Netafim's strategic goal is to engage in partnerships to advance technology uptake and to adapt to the needs of local farmers. We recognize that the best solutions are generated when players come together and contribute their best expertise and knowledge to meet specific needs. In 2019, we advanced several agritech partnerships, and invite you to read about them below.

PLAYING AN ACTIVE ROLE ADVANCING WATER CONSERVATION AND FOOD SECURITY

We share our knowledge and expertise in water conservation, access to water and agricultural efficiency as part of the global dialogue for advancing sustainable development. Netafim actively engages with governments, academic institutions, environmental organizations and other businesses in a range of collaborative initiatives at local, regional and global levels. We participate in global conferences on water and food sustainability and are active in several UN frameworks, supporting specific programs and advancing the UN Sustainable Development Goals.



JOINING A GLOBAL INITIATIVE TO ACCELERATE SUSTAINABLE RICE CULTIVATION

More than half of the world's population depends on rice for more than 20% of its daily calories. However, rice production uses over a third of the world's irrigation water and accounts for up to 10% of global methane emissions. As part of our ongoing initiative to advance sustainable rice production (see our example of rice cultivation in Turkey in the section on 'Improving farmer livelihoods'). in 2019, Netafim joined the [Sustainable Rice Platform](#) (SRP), a global multi-stakeholder alliance hosted by the UN Environment Program. As part of the program, we are collaborating with different partners to find new sustainable ways to grow rice while reducing environmental impact and increasing productivity. Netafim is also taking an active role in the [Medwaterice](#) initiative, a consortium of universities, research centers and companies operating in 19 Mediterranean countries. The initiative explores the sustainability of innovative irrigation methods to extend rice cultivation outside of traditional paddy fields to meet growing demand. Among our recent activities are water-saving trials of rice cultivation in Spain, Italy and Egypt.



/ Advance knowledge sharing

We aim to increase practical support and technology knowledge sharing for small and large farmers to enable tailored irrigation solutions. Sharing knowledge and best practices with farmers around the world helps them achieve sustainable livelihoods and benefits for their families, communities and the planet. Their success demonstrates the contribution of precision irrigation to advancing food security, managing water and land scarcity and improving livelihoods and prosperity. In 2019, we can share several examples of knowledge sharing with farmers around the world.

MAINTAINING TRAINING FOR FARMERS, CLIENTS, DEALERS AND PARTNERS

Anyone can install drip irrigation but only those who benefit from detailed expertise and knowhow can optimize the power of irrigation with optimal results. That's why, at Netafim, we offer several training platforms for all drip irrigation users and potential users – from smallholder farmers in India to professional dealers in a range of countries. Our training platforms include:

- ✔ Netafim's Precision Irrigation Academy for clients and partners, an online knowledge center on precision irrigation



- ✔ Netafim Learning Management System (LMS) for Dealers – an online training platform, which offers professional training in agronomy, irrigation solutions and Netafim's products.

- ✔ Field and in-person training for smallholder farmers which reached many farmers each year. In 2018, for example, we provided training to more than 110,000 farmers:



CSS sugarcane project, Senegal

2,728 educational events including field tours, training, lectures, workshops and roadshows

13,729 hours of training in total.



USA

SUPPORTING FARMING COMMUNITIES THROUGH SHARING PERSONAL EXPERIENCES

In 2019, Netafim commissioned an online docu-series to show how it is possible to grow an organic hemp farming business with economic and environmental benefits for entire communities. The films are set in Branchville, in rural South Carolina, and chronicle the real-life story of Kevin Summers, who aspired to create a technology-based farming model for restoring the economy and creating development opportunities in his hometown. Touching on every aspect of organic hemp farming from soil preparation and planting methods, to nutrient delivery, drip irrigation, fertigation, digital farming, and pest control strategies, Kevin built a template that can be replicated to help current and future hemp farmers in the area.



Docu-series There is no place like home, Branchville USA

“ We want to share with our farming neighbors the secrets to our success and how to grow amazing hemp that creates high-quality products. We’ve created a results-driven, seed-to-sale product line that will be launched in the spring.

Kevin Summers, Branchville USA farmer

“ The Branchville story gives a first-hand look at many of the challenges and solutions that come with organic hemp farming.

Ze’ev Barylka, Marketing Director, Netafim USA

Organic hemp farming in Branchville, USA



Financing farmers for drip irrigation

We recognize that the initial investment in drip irrigation solutions is beyond the reach of many smallholder farmers. On the other hand, it's a guaranteed investment with a relatively short payback time. Helping farmers navigate access to finance, with positive terms, is core to delivering our mission of extensive adoption of sustainable irrigation solutions. Therefore, over the years, we have developed several financing channels, with different partners, that support farming communities worldwide. Our expertise enables us to develop specific, targeted financial products which are not typically offered by primary financial institutions.

Over the past 3 years, Netafim has offered structured financing of over **\$100 million** to support farmers and dealers around the world, especially in Africa, Latin America and Europe

Our success is based on continued cooperation with, for example, Rabobank, in which we participated in the Agri3 Fund which allocates \$1 billion in finance towards deforestation-free, sustainable agriculture and land use. We also leverage our global presence to provide financing solutions through leading ECAs (Export Credit Agencies) such as Atradius, US EXIM, Euler Hermes, SACHE and others that enable our customers to access diverse financing options based on sustainable agriculture.





EXPANDING NETAFIM FINANCIAL SOLUTIONS IN THE U.S.

Netafim USA has extended its financial solutions services to include financing of drip irrigation systems and components for use in hemp growing applications. The Netafim Financial Solutions program is the industry's only program that offers end-to-end financing of complete drip irrigation systems - including, design, materials, installation and labor costs and offers hemp growers convenient financing options to improve profitability in this growing market through the use of drip irrigation.

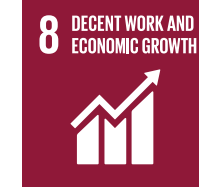
“Despite the fact that more U.S. acres of hemp are grown today than at any point since the 1940s, hemp growers are still challenged by the limited number of agricultural financing programs available to them.”

“The Netafim Financial Solutions program provides hemp growers convenient financing options to improve profitability through the use of drip irrigation. By incorporating drip irrigation on the farm, growers can achieve significant yield increases through precision input and water management.”

Mike Hemman, President and CEO of Netafim USA



Drip irrigation for growing hemp, USA



Niger

SUPPORTING CLIMATE SMART AGRICULTURE FINANCING IN NIGER

Over the past three years, Netafim has been helping Niger develop a sustainable agricultural ecosystem to strengthen the country's resilience in the face of climate change and maintain livelihoods and food security. Our involvement is part of the International Finance Corporation's Niger Irrigation Program (NIP) to introduce a climate smart approach to agriculture in Niger, one of the poorest countries in the world. One of the major challenges identified by IFC was access to credit that farmers would rely on to finance their investments.

Drip irrigation was selected as the target technology and a project was launched to increase access to drip irrigation technologies and training of farmers, underpinned by an ecosystem that guaranteed effective initial financing. Our systems have been deployed in partnership with community farmers who received drip irrigation equipment and training. The project also integrated solar pumping methods.

To date, 900 farmers were trained in the use of Netafim's drip irrigation system and 644 farmers were trained in supporting solar pumping technologies. In both cases, women represented the majority of participants, significantly elevating the contribution of women to growing Niger's agricultural development. Similarly, a full infrastructure of cooperatives, distribution, and financial support was established to ensure a sustainable supply chain and further growth.

NIP continues through 2020 and at Netafim, we continue to advance partnerships supported by state and international institutions to scale the world-changing possibilities of drip irrigation.



Okra harvest, Niger



India

COLLABORATING TO PROVIDE FINANCING SOLUTIONS IN INDIA

An early venture into financing for drip irrigation was the establishment in 2013 of our Netafim Agricultural Financing Agency (NAFA) - a non-banking company that provides fast financing solutions to smallholder farmers who cannot secure loans for drip irrigation by other means. NAFA is a collaboration between Netafim India (51%), Atmaram Properties, an Indian real estate group, and Granite Hill India Opportunities Fund, a private equity fund.

NAFA's financing solutions enable farmers to make progressive changes in agricultural practices by adopting precision farming technologies. Many farmers have shifted from subsistence crops to cash-crops such as banana, pomegranate and turmeric, which has improved their income without placing further burden on local water resources. Overall, results have been very positive for farmers in India:



Between 2013 and 2019, **50,000 farmers** from 8 states in India benefited from loans totaling **\$127 million** enabling them to install drip irrigation across 60,000 hectares



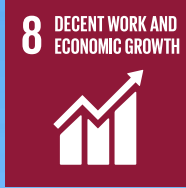
More than 80% of farmers testify to **reduced labor & fertilizer costs**

Yields of cotton, sugarcane, sweet lemon and turmeric and other crops have **increased by 25%-90%**



15% of farmers testify to **doubling their income,**

while more than 70% of farmers observed an increase in income of 20%-80%.



Cotton farmer in Gujarat, India



Netafim manufacturing
plant, USA

SUSTAINABLE BUSINESS



WHAT MAKES BUSINESS SUSTAINABLE?

First and foremost, it's a purpose that reflects our contribution to a sustainable and prosperous society. Helping the world Grow More with Less™, our purpose at Netafim, is the way we contribute to global food security, economic development, land preservation and social inclusion. Agriculture remains at the heart of so many communities, and we proudly engage around the world to help farmers achieve more than at any time in the past from their land. Embedded in our purpose is also a set of core values and ethical practices that guide our day-to-day conduct in five core areas:

- ✔ Conducting our business responsibly
- ✔ Empowering our people
- ✔ Operating a lean and efficient supply chain
- ✔ Protecting the environment
- ✔ Helping communities thrive

In this section of this review, we present the ways we have demonstrated these practices in 2018-2019.

Aries drip line in the field, India



Conducting our business responsibly and transparently

Netafim's [Code of Ethics](#) is our guide to doing business in a compliant manner, and ethically, responsibly and transparently. The Code represents our business culture and values and helps employees and all those with whom we do business know what we stand for and what to expect from Netafim in all our activities and transactions. New employees are briefed in our Code of Ethics as part of their induction plan and employees receive ongoing training, most of which is completed via an eLearning module, covering all aspects of responsible business conduct including respectful and inclusive behavior, upholding human rights, anti-bribery & corruption, safeguarding confidential information and data privacy, anti-trust and fair competition and more. In 2018-2019, we maintained our ongoing training and communications that support ethical conduct across our global business.

We also maintain an [Anti-Bribery and Corruption Compliance Policy](#) that supports ethical and responsible relationships with our business partners. We invite reporting of suspected violations of improper conduct through our [Whistleblower Policy](#) and encourage employees and others to do so without fear of retaliation.

/ Empowering our people

More than 4,000 employees and some hundreds of contract-based professionals and support staff spread across 110 countries contribute to advancing Netafim's mission to help the world Grow More with Less™. They drive our spirit of innovation and our business success. We aim to provide a stable, safe and empowering workplace and encourage the inclusion of women and men from diverse backgrounds. Our goal is to provide development opportunities for our employees, support improving their wellbeing, and engage them in our sustainability goals.

NETAFIM'S DIRECT EMPLOYEES AROUND THE WORLD (2019, year-end)						
	North America	LATAM	Europe	Asia	Israel	Total
Women	35	196	79	149	235	694
Men	206	622	309	1,307	867	3,311
Total	241	818	388	1,456	1,102	4,005

We aim to create a culture of inclusion throughout the business, encouraging people of different genders, ethnicity, backgrounds and perspectives to join our company and develop with us. We maintain family-friendly policies to enable equal participation of women and men in the workforce. Typically, we have struggled to attract women to field sales roles in agriculture, and we continue to strive to increase women in our overall workforce (17% in 2019) and specifically in management roles. In the last two years, for example, we have appointed accomplished women to senior management roles such as Country General Manager in Turkey and Central Asia and agronomist roles in Brazil and elsewhere.



Pinar Parmaksiz is our newly appointed Managing Director in Turkey and Central Asia. After 13 years with Netafim in different roles, she now leads our business in this important subsidiary.

“ I'm proud and excited in this role, and yet fully aware of the challenges it brings. I need to take decisions and be present in the field, look at things from a far broader perspective, and partner for success with our sales teams and end customers. I am confident that my wide experience with our company and dealers will contribute to my success.



Maíra Coimbra is an agronomist at Netafim Brazil visiting clients in the field, showcasing Netafim's product portfolio, and supporting sales and after-sales activities for the entire line of Netafim products.

“ As a woman, I was met with a lack of confidence in my field work, as well as with resellers. Gradually, I showed them the value of my work, my competence and competitiveness in a masculine environment. I realized these things can only be proven by working and delivering results.



LEADERSHIP, DEVELOPMENT AND TRAINING

We operate a suite of leadership, development and training frameworks for employees to develop their capabilities and enhance their contribution to delivering our shared mission. Specific programs differ from year to year, according to prominent or emerging needs. We keep track of overall development and training through our performance management system that helps ensure consistent processes across the organization and equitable opportunity for all to build their knowledge. In 2019, employees completed.

More than

4,000 training hours

with an average 14 hours of training per employee per year



Leadership development program: Our core leadership development program is called our Leadership Compass and each year we advance different leadership initiatives within this framework. More than 200 managers have already participated in this program from around the world.

Mentoring program: In 2018, we started a pilot mentorship program directed at middle managers, focusing on a core Leadership Compass component- leading by example. In this program, Netafim executives engage in a six-month mentoring program with newly appointed managers. The initial rollout in Israel involved 16 mentors and the program will be implemented globally in 2020.

In 2019, we started a program of mentoring for recruitment where 18 Netafim managers received interview and recruitment skills training. The goal of the program was to support out-of-work managers aged 50+ through the job search process and prepare them for re-entry into the job market.

Management and professional skills webinars: We maintain an extensive online training calendar with dedicated webinars throughout the year covering a range of subject areas such as products, soft skills, leadership and more.



Netafim India employees

In 2018-2019, more than

800 employees

participated in



Additional training and development programs: We provide focused programs for sales staff that are available in five languages, and programs to support skill enhancement for employees in roles that require new capabilities, such code writing or other digital capabilities, freely available to all employees. Our offerings are reviewed and updated as needed to meet new learning and development requirements.

Performance reviews: We support ongoing development through constructive feedback and support in the form of annual performance conversations with direct managers. In 2019, more than 3,732 employees completed performance reviews.



Injection department, Netafim Magal manufacturing plant, Israel

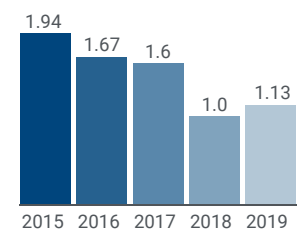
MAINTAINING A SAFE WORKPLACE

We are committed to maintaining a safe and healthy work environment that is compliant with occupational health and safety regulations and applicable standards across all our operations. We offer comprehensive training in safety procedures for employees when they join the company and throughout their employment. All Netafim factories track maintain safety programs that include nominated safety officers, training, hazard assessments, safety performance standards, safety incidents review and corrective action processes as required. In Israel, Netafim is certified to the international Occupational Health and Safety Standard 18001 at all three manufacturing sites.

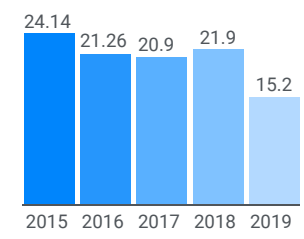
 In 2019, 5 manufacturing plants (of our total 17 facilities) reported **zero lost-time injuries**

NETAFIM GLOBAL SAFETY PERFORMANCE

Injury rate (TRIR)



Lost day rate (Severity)



Injury and lost day rates are calculated per 100 employees and based on production employees only until 2018. In 2019, safety data includes contractors. Minor injuries are not noted. There were no fatalities as a result of workplace injuries in 2014-2019.



Operating a lean and efficient supply chain

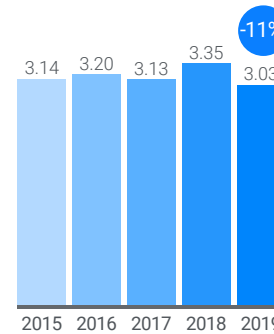
As we grow our business, helping farmers Grow More with Less™, we grow our contribution to the achievement of key Sustainable Development Goals, specifically Goal # 13, climate action. Beyond the positive climate impact of our products, we also practice lean supply chain management and environmental stewardship through our own operations.

We comply with environmental legislation and applicable regulations in every country in which we operate. In addition, we aim to operate efficiently and reduce our direct footprint as far as possible. Our factories around the world operate to similar standards, running similar processes, so we have opportunity to learn from each other and share best practice for energy efficiency, water conservation, reuse of scrap materials and all other aspects of lean operations. We invest approximately \$3 million annually in operational improvements, most of which serve to improve our energy efficiency. In early 2020, we established an Energy Forum led by our Chief Engineer of Innovation and, together with our colleagues at Orbia, we aim to drive initiatives that will help reduce greenhouse gas emissions through the use of renewable energy and other efficiencies.

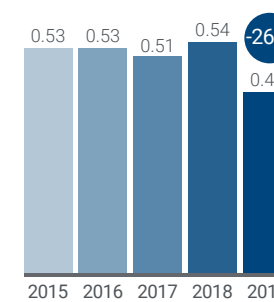
Our positive energy and emissions performance has been enabled by environmental investments in LED lighting in factories and warehouses, solar energy generation, replacement of equipment including chillers and forklift trucks and other measures.

ENVIRONMENTAL PERFORMANCE DATA

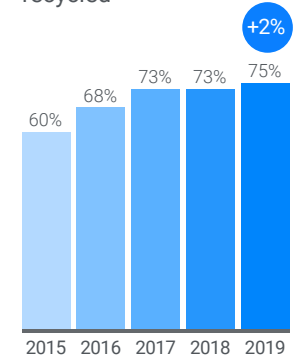
Electricity consumption (GJ/ton raw material)



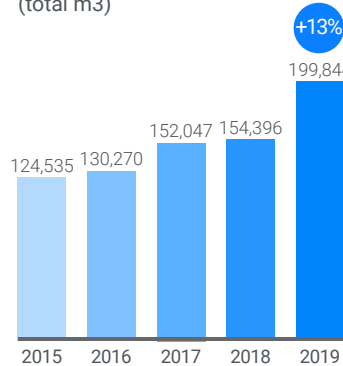
Greenhouse gas emissions (Scope 2 - tons CO2e per ton raw material)



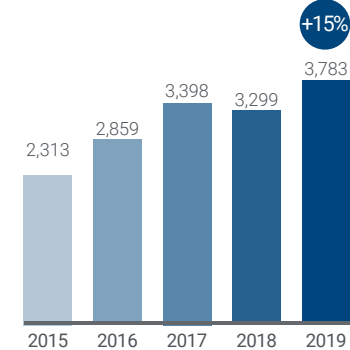
Percentage of waste recycled



Water withdrawal (total m3)



Total waste (tons)



Notes:

- We report energy as electricity consumption. Use of other energy sources such as fuel are insignificant.
- Water withdrawal data covers all facilities worldwide - Brazil was added in 2016.
- All water is sourced from municipal supplies except Ribeirão Preto, Brazil, where water is drawn from an onsite well. Water withdrawal data for this factory was added in 2016.
- Emissions for Israel and U.S. are tons CO₂e (CO₂, CH₄ and N₂O). Emissions for all other sites are tons CO₂.



Protecting the environment



USA

INCREASING RECYCLING OF IRRIGATION DRIPLINES

Since 2010, we have recycled more than **25,300** metric tons of used plastic driplines from more than **3,672** end-users.

In 2019, we vastly expanded our recycling facilities in California to accommodate the retrieval of higher volumes of used driplines from customers around the region. This was a response to the need of local farmers, who were pleased to gain the benefit of a single-season thin-wall dripline (our new Streamline X ReGen) for optimum performance and reduced labor and maintenance costs, but also required a solution that reduces the plastic footprint at the farm.

Netafim USA first pioneered the process of utilizing recycled content in the manufacturing of driplines for mining and landscaping market sectors and established a recycling facility in 2007. Significant investments in research and testing have allowed us to perfect a proprietary process for integration of recycled content in driplines without sacrificing performance and quality standards.

In March 2019, we introduced the first thin-wall dripline containing a high percentage of recycled content with the launch of Streamline X ReGen. At the same time, the California Department of Resources Recycling and Recovery (CalRecycle), in its aim to increase circularity in the State, awarded Netafim USA a grant of \$2.01 million for investing in recycling capacity. Using this grant, we procured new state-of-the-art equipment for washing, grinding, processing and pelletizing returned driplines. The new installation is on track to quadruple our recycling capacity from around 3,000 tons per year to 12,000. This is the first completely closed-loop business model in our industry.



Streamline X ReGen™

Recycling facility in California, USA



Israel

RESTORING THE EVRONA NATURE RESERVE

Another way we support environmental stewardship is through our involvement in restoration projects. For example, we provided innovative technology to rehabilitate the Evrona Nature Reserve, following one of the most serious environmental disasters in 2014, when a spill of approximately 5 million liters of crude oil leaked and contaminated a large part of the Reserve.

Israel Parks & Nature Reserves Authority selected a solution provided by [LiquidGas, an Israeli chemical solutions company](#), to lower the level of pollution, measured as TPH (Total Petroleum Hydrocarbons) to the point where the organisms in the reserve can handle the oil residue without further intervention. This was to be carried out by applying a unique bacterium that would decompose the oil residues. The challenge was in spreading the liquid across a vast terrain in the middle of the desert in extreme climate and topography while creating minimum disturbance to the wildlife in the reserve. Working with LiquidGas, Netafim installed custom-designed water distribution solutions that allow fast installation and retrieval and accurate flow of the biological material that removes the spilled oil with minimum disturbance to the natural environment.

“ The Evrona Project is a fine example of a situation where reality required an innovative and creative solution to reduce ecological damage. Through the use of micro-sprinklers, flexible and lightweight conduits and a cloud-based remote-control system that can be regulated with constant monitoring of the water flow, we were able to restore the Nature Reserve for the benefit of local populations and nature-lovers.

Ziv Ribak, Head of Netafim Israel



Oil leak in Evrona Nature Reserve, Israel



Community garden

Helping communities thrive

We support the communities in which we live and work by sharing our expertise, the time and passion of our employees, and donating equipment to advance sustainability and agriculture education, construct community gardens, and promote industry and technology for young people. Around the world, we engage locally with multiple community initiatives.

COMMUNITY INVESTMENT

GLOBAL COMMUNITY INVESTMENT (\$)	2016	2017	2018	2019
Cash donations	402,541	454,844	103,807	122,000
Product donations (cost value)	176,541	110,435	87,715	153,886
Total	579,083	565,279	191,521	275,886
Hours volunteered by employees	6,850	4,892	8,122	4,268

Notes:

- Community investment data includes eight countries representing about 80% of our global workforce.
- Employee volunteering is not tracked in all countries.

HEALTHY GARDENS FOR HEALTHY COMMUNITIES

Around the world, we advance food security through supporting community gardens where we provide equipment, seeds, drip irrigation systems and training in schools and local communities. In 2019, Netafim supported more than 45 initiatives in Israel, Brazil, Colombia and the U.S. These included, for example, ongoing programs such as our Learn2Live program of installation of drip irrigation for small vegetable gardens with 40 preschools in South Africa and in the U.S., where we collaborate with Common Vision to plant fruit trees at schools in California and Nevada.

In 2019, Netafim supported school agriculture programs for **1,400** pupils in 5 schools in the U.S. by creating food gardens and teaching cultivation skills.

At Netafim in Israel, community gardening programs were delivered by our employee volunteers, reaching more than 1,300 children with garden kits, teaching them how to plant and grow herbs and vegetables. In 25 Arab villages in Israel, Netafim also provided “green walls” and all the equipment necessary to teach sustainability awareness and growing fruit, vegetables and herbs in vertical spaces.





India

SUPPORTING EDUCATION IN INDIA

Our teams at Netafim India maintain longstanding relationships with local schools with the aim of giving local schoolchildren the best chance of success in their studies. Our initiative involves upgrading equipment and school facilities and engaging in meetings and activities with the schoolchildren through employee volunteering.

In 2019, Netafim India supported 6,500 students at 41 schools with distribution of books, meetings with the schoolchildren and several other activities.



South Africa

MENTORING IN THE COMMUNITY

We advance a range of community mentoring programs that add value for local communities and enable us to support our neighbors in meaningful ways. In Israel, In the past two years, Netafim employees have engaged in mentoring programs lasting six months to a year for older job-seekers from low-income communities. The second cycle, in 2019, was dedicated to women specifically in an initiative called "Women to Women" 12 mentors from Netafim helped them prepare for career opportunities. In a school in South Africa, our local Managing Director volunteered for a year to mentor a school principal in a program called Partners for Possibility.



Bedouin female leaders, Israel



Israel

SUPPORTING WOMEN LEADERS IN OUR COMMUNITIES

In Israel, Netafim supports the Desert Stars youth project that empowers Bedouin female leaders and improves lives in their community in the Negev desert. Desert Stars is a nonprofit organization that aims to develop a new generation of young Bedouin leadership and to change the reality of the Bedouin community in the Negev region. We have been working with 15 female schoolgirls aged 16-17 from the Bedouin community, helping them gain skills to enter the labor market. Netafim employees support these schoolgirls throughout the school year in a program that includes visits to our Netafim site and work on projects that can benefit their communities.

“ We met a quality group of schoolgirls and were delighted to discover their ambition, motivation and determination to make a change and improve their lives. I was excited to see their thirst for learning and for a better future.

Avi Kontente, Director of the Extrusion Department at Netafim Hatzerim manufacturing plant

GROW MORE WITH LESS™



www.netafim.com