



Sustainable Health in Procurement Project (SHiPP)

Impact Stories that *Inspire*



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Glossary

ART	Antiretroviral treatment
BEEP	Building Energy Efficiency Project
BP	Blood pressure
CCDC	Centre for Chronic Disease Control
CoEco	Ecological Procurement Programme
GEF	Global Environment Facility
GeM	Government E-Marketplace
HCRW	Health Care Risk Waste
HCWH	Health Care Without Harm
HIV	Human Immunodeficiency Virus
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
IT	Information technology
LED	Light Emitting Diode
MDL	Moldovan Leu
NCDC	National Centre for Disease Control
NGO	Non-governmental organization
NGHS	National Green Hospital Standards
NHS	National Health Service England
NSR	National Sea Rescue Institute
POPs	Persistent organic pollutants
PPE	Personal Protective Equipment
PVC	Polyvinyl chloride
SDGs	Sustainable Development Goals
SHiPP	Sustainable Health in Procurement Project
SOPs	Standard Operating Procedures
SPHI	St. Paul's Hospital in Iloilo
UNDP	United Nations Development Programme
UN	United Nations
USD	The United States Dollar
WHO	World Health Organization
WJMH	West Java Mental Hospital

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West Java Mental Hospital staff, rehabilitants and the local farmers union. 2021 © WJMH

Foreword

Impact Stories that Inspire: Sustainable Health in Procurement Health Project (SHiPP) amplifies the voices of incredible and extraordinary women and men passionate about introducing health sector practices that improve their working conditions, the lives of their communities and help protect the environment.

These local heroes are building more sustainable health care systems that will advance sustainable production and consumption and ultimately contribute to achieving the Sustainable Development Goals.

Nearly 60 million health workers worldwide deliver care and services to patients either directly as doctors and nurses or indirectly as aides, helpers, laboratory technicians and medical waste handlers. These individuals are our most valuable resource for health, and many of them are now leading the way to a more sustainable future by taking care of people in their communities and the environment.

In this unique collection of stories, you will hear directly from inspiring individuals who work in the field and push the limits of their societies and systems to move health care to a more sustainable development trajectory.

You will read a story about two Zambian women who challenged societal stereotypes and prejudices by training to become autoclave operators. These women contribute to safer waste management practices in a job traditionally perceived as a male domain.

You will hear from a nurse in Brazil whose charisma and leadership were catalytic to the adoption of new, environmentally-friendly cleaning products. Initially reluctant to make those changes, the staff has found that the introduction of more sustainable products has dramatically improved their health.

You also will read about an Indonesian team that cultivated a small-scale organic farm during the COVID-19 together with the support of rehabilitating mental health patients and the local community.

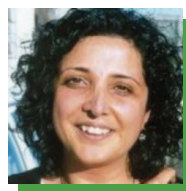
Today, the farm provides both for the needs of the hospital and the surrounding communities while also reducing the stigma associated with a mental hospital.

Impact Stories that Inspire features voices from all over the world. These stories show that no matter our role in society, we all have a vital part in creating a better, safer, and more resilient world.

These amazing stories have emerged from the Sustainable Health in Procurement Project (SHiPP), a joint programme developed by the United Nations Development Programme and Health Care Without Harm, with funding from the Swedish International Development Cooperation Agency. For the past four years, SHiPP has worked to reduce the harm to people and the environment caused by the manufacture, use, and disposal of medical products and the implementation of health programmes.

The stories featured in this book demonstrate the project's impact on people's lives worldwide and the potential of how much more we can do together to strengthen sustainability in health, in line with the 2030 Agenda for Sustainable Development.

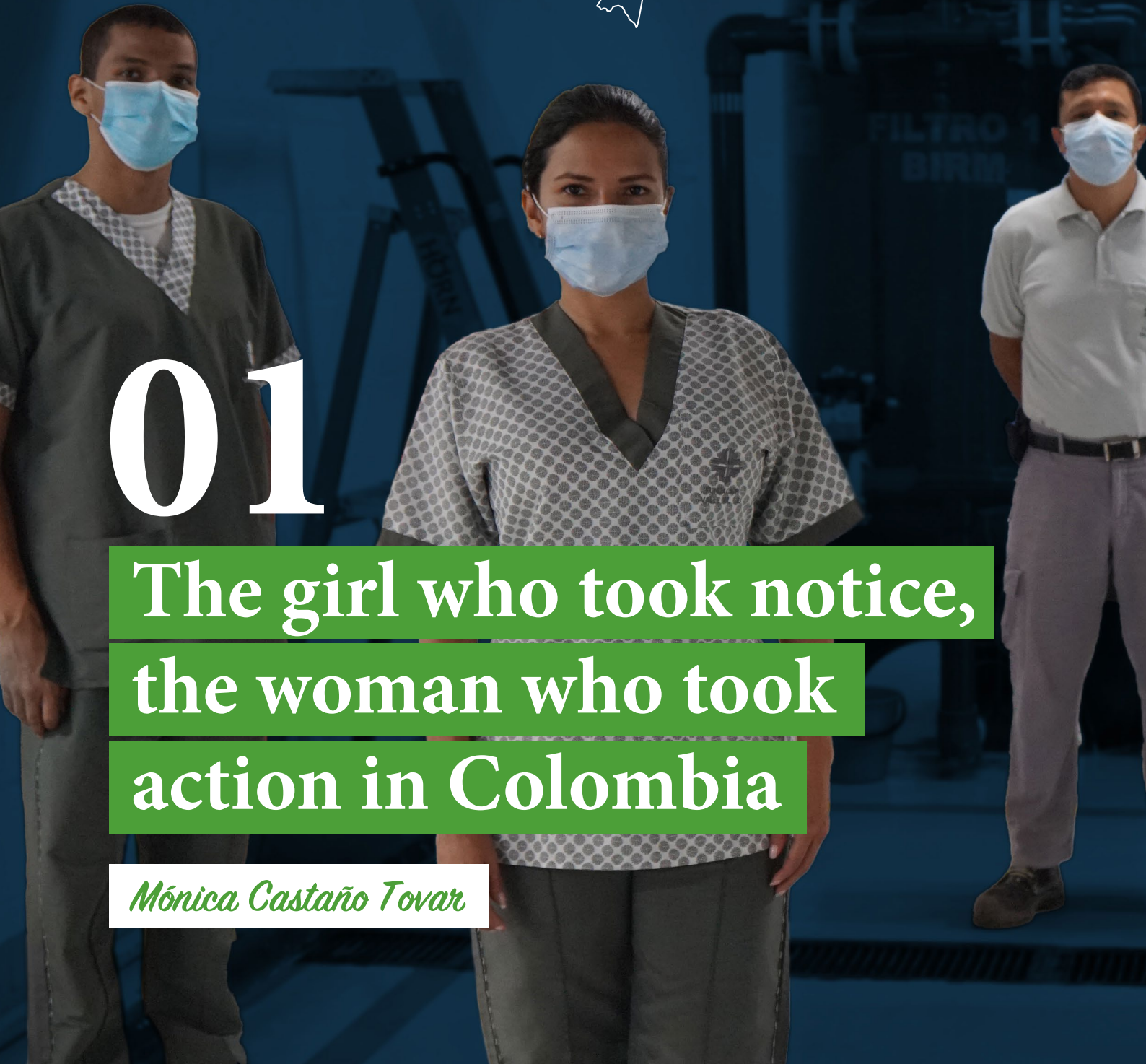
We thank you for taking an interest in these stories and hope that you will enjoy reading them.



Mandeep Dhaliwal
Director of the Health Group, UNDP



Josh Karliner
International Director of Program and Strategy, Health Care Without Harm



01

The girl who took notice,
the woman who took
action in Colombia


Mónica Castaño Tovar



Mónica Castaño Tovar (first on the right) and her team, Fundación Valle del Lili, a tertiary care hospital in Santiago de Cali, Colombia, 2021 © Communications department, Fundación Valle del Lili





Mónica Lisett Castaño Tovar, Environmental Management and Sanitation Coordinator for Fundación Valle del Lili (Colombia), shares details about her rich experience in sustainable procurement. Colombia, 2021 © Communications department, Fundación Valle del Lili 

Mónica Lisett Castaño Tovar was still a child when she observed how a bauxite mining operation polluted the Jamundi river in Valle del Cauca, Colombia. Awareness about the environmental damage caused by the mine left a deep impression on her. She was only 13 years old when she began using solid waste to decorate her room. Her mother and friends thought she was crazy. In a sense, maybe she was. She was crazy about protecting the environment and putting an end to the destruction of the planet.

“ *Almost every aspect of a hospital's environmental management depends on responsible consumption. It all begins with what you are purchasing.*

Castaño Tovar became a mother at age 16. Her family disapproved of her decision to start a family and she felt as if though her world was falling apart. Nevertheless, she forged ahead and completed her studies with

excellent grades. She also entered university and eventually graduated as an Environmental and Natural Resources Manager.

Since 2005, Castaño Tovar has been working as an environmental manager in Fundación Valle del Lili, a tertiary care hospital in Santiago de Cali that treats more than 90,000 patients a year. From the outset, she had to overcome obstacles. “Incredibly, one of the greatest challenges I’ve had to deal with was learning how to cope with chauvinistic prejudice,” she says. “Another issue was that we were the first health care institution in the country to introduce an Environmental Management System certification process. Mónica recalls that “I felt all alone in the world. I had no peers who could understand me and no one who spoke my language.”

Despite her fears and uncertainty, she did not back down. Determined to get to the root of problems, she analyzed unsustainable processes and practices. She also identified and substituted chemicals of concern to both for the environment and human health. As a result of efforts to promote sustainable laundry practices, the hospital eliminated the use of chlorine and mercury, reduced water consumption and introduced new and safe cleaning and disinfection alternatives. In addition, the hospital also phased out boiler fuel, modernized the cooling gas technology in air conditioners, and installed LED lighting throughout the building.



As a manager, Castaño Tovar has focused on sustainable procurement. The CoEco program, otherwise known in Spanish as the Compras Ecológicas or Ecological Procurement, was launched in 2012. Thereafter, the initiative received support as a result of collaborating with Health Care Without Harm which increased the project’s sustainability focus within the SHiPP project. Castaño Tovar explains that “We established a series of assessment tools to ensure that all purchases undergo an environmental review.”

Sustainable procurement has played a vital role during the pandemic. “If it weren’t for the CoEco program, we’d have a different situation. It has allowed us to make very smart decisions, which have resulted in significant benefits,” Castaño Tovar states. For instance, the decision to purchase 18,000 reusable gowns for the care of COVID-19 patients prevented the disposal of 1,200 gowns per day and resulted in monthly savings of COP (Colombian Peso) 300 million which represents about US\$ 80,000 a month.

Despite these successes, there are a number of key issues that remain to be addressed, such as increasing engagement with suppliers, securing more support to effectively communicate Health Care Without Harm

and UNDP guidelines to leadership, and aligning the hospital’s strategic planning with the Sustainable Development Goals (SDGs), something the team is already working on. Castaño Tovar concludes that “Environmental management is not meant to be kept in the basement while the house gets a minor facelift. It needs to be made visible, leveraged, and strengthened.”



There are **135** active “environmental minders” from several departments of the Fundación Valle del Lili Hospital keep a watchful eye on environmental protection.



About **3,000** m³ of water were saved per month as a result of the introduction of specialized equipment designed to efficiently wash and disinfect COVID-19 contaminated PPE garments



US\$ 80,000 saved in one month alone by purchasing 18,000 re-usable gowns to replace single-use PPE gowns.



Fundación Valle del Lili @ Communications department, Fundación Valle del Lili

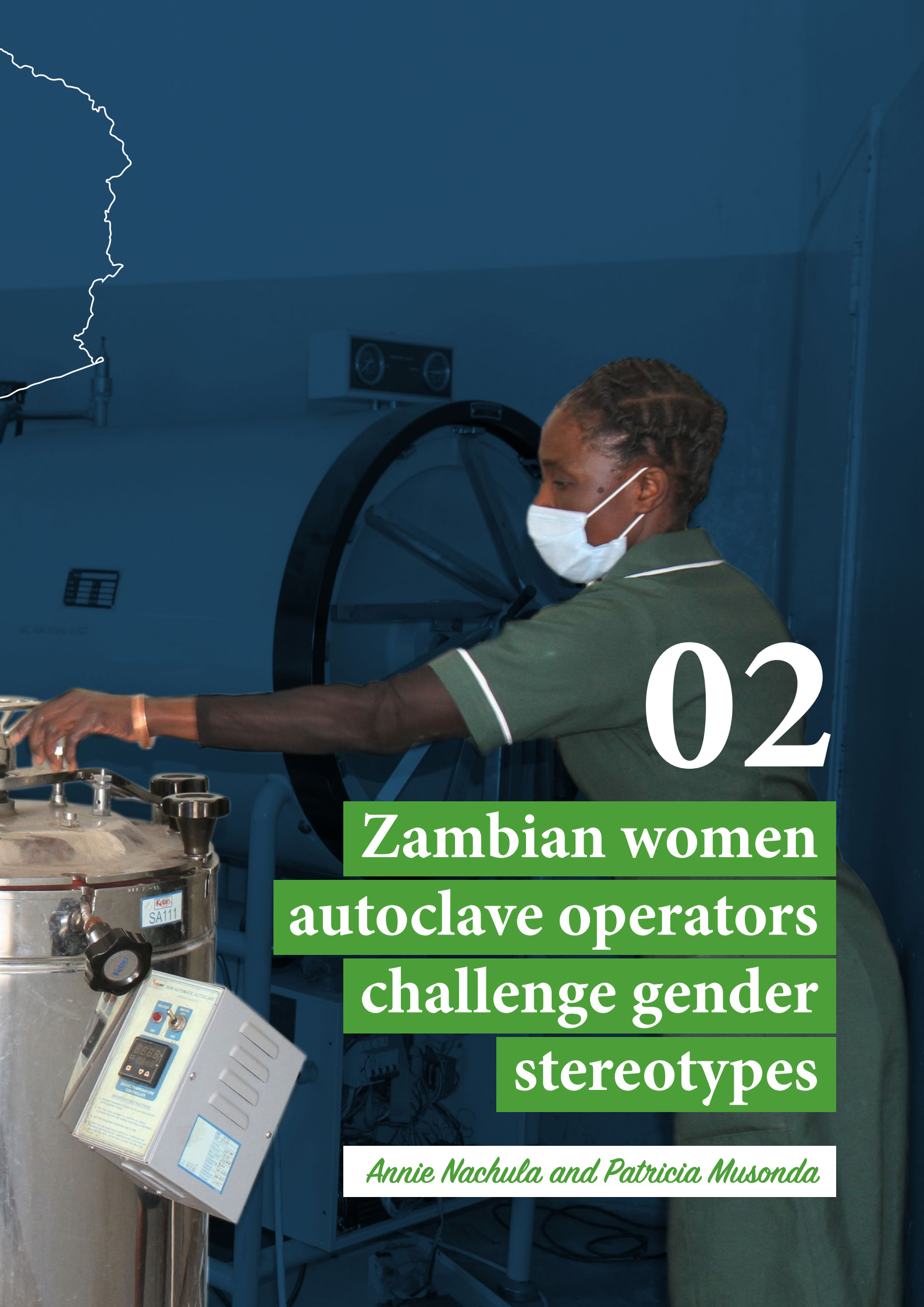




Zambia



What a man can do, a woman can do even better. Patricia and Annie work as autoclave operators. Zambia. 2021 © UNDP / Moses Zangar




02

Zambian women
autoclave operators
challenge gender
stereotypes

Annie Nachula and Patricia Musonda



Annie Nachula (left) and Patricia Musonda (right), the only two female autoclave operators at Zambia's Kapiri District Hospital. 2021 © UNDP / Moses Zangar | 

When Annie Nachula lost her husband, the only breadwinner of their family, it was a crushing blow. However, her tragic loss has not dented her spirit.

As do many other single mothers in Zambia, she struggled to make ends meet in a traditional, patriarchal society where age-old customs dictate a woman's life.

With four children to take care of on her own, the 49-year-old widowed mother was determined to change her family's fate.

Annie took many menial jobs as an operating theatre cleaner and a porter at the Kapiri District Hospital in central Zambia for several years to keep the family afloat.

Unhappy with her previous jobs, she signed up for an autoclave operator training organized by the Ministry of Health and funded by a UNDP Global Environment Facility (GEF) project. Thanks to the training, Annie is now one of the two women working full time operating autoclaves, a job that requires knowledge and specialized skills that would traditionally be perceived as a male occupation.

Patricia Musonda, 46, an autoclave operator who attended the same training as Annie, remembers that the training was challenging in many ways. Nevertheless, she soon discovered that she and her

colleague were just as competent as men in acquiring the necessary skills to operate the autoclave equipment.

Annie and her colleague Patricia are not doctors, nurses or specialized medical staff. They are just two ordinary Zambian women who, without fanfare, are uniquely helping to reduce medical waste in their communities.

“ *I had been taught that men are better at everything. But when I did the training, I realised that this was not the case. A woman can learn anything if she puts her mind to it.*
- Annie

The pair had no idea how operating autoclaves would completely change their lives and their views on how women can do work traditionally reserved for men.



Nephat Banda, the Head of Kapiri District Hospital’s Environmental Health Department, says he is delighted that women like Annie and Patricia have discovered hidden talents, resourcefulness and creativity and have proven that they can succeed at anything.

Women represent about 51 per cent of Zambia’s population. However, traditional community practices have previously marginalised women, particularly in rural areas. Every aspect of the country’s political, social, and economic life has limited their ability to play their part in sustainable development.

Activists in Zambia emphasize that gender restrictions are a significant cause of inequality that holds back economic and social progress and traps women and girls in poverty which ultimately limits their potential.

Lionel Laurens, UNDP Zambia’s Resident Representative says that Zambian women are increasingly aware that they have immense potential to engage fully in society’s economic, social, cultural, and political life. “Many women aspire to equal rights and opportunities and are fighting to reverse these inequalities,” says Laurens. “I am hopeful that the example set by women who challenge present norms and standards will change definitions of accepted boundaries of what are men’s and women’s jobs. The

younger generation will increasingly dare to embrace careers which were previously perceived as very masculine or totally male-dominated.”

Women face barriers to their inclusion in governance systems and decision-making that marginalize their roles, contributions, and rights. According to UNDP Zambia’s 2020 Human Development Report, a mere 18 percent of parliamentary seats are held by women whereas only 38.5 percent of adult women have reached at least a secondary level of education. In contrast, men hold 72 percent of parliamentary seats while 54.1 percent have graduated from secondary school.



30 tons of infectious health care waste are generated per day in 1,882 health facilities in Zambia. This figure is expected to increase with the completion of 650 new health care centers.



Only **10%** of trainees are women. They learn how to operate autoclaves, an environmentally friendly healthcare treatment technology.



Annie Nachula (on the right) and Patricia Musonda (on the left) - the only two female autoclave operators at the Kapiri District Hospital, Zambia. 2021 © UNDP / Moses Zangar





03

A Brazilian ambassador
for change for a
toxin-free future

Valdirene Araújo

RESÍDUO
INFECTANTE
SUBGRUPO A1




 *Brazil*

The operational team responsible for managing waste and disinfecting surfaces at the charitable Hospital Santa Casa de Belo Horizonte. Brazil, 2021 © Santa Casa BH 

**RESÍDUO
INFECTANTE
SUBGRUPO A1**



Valdirene Araújo, an ambassador for change, advocated to replace toxic disinfectants products. 2021 © Bruno da Silva Lima | 

Valdirene Araújo has always worked in the health care sector and has been inspired by the principle of helping others. Her professional journey began at the age of 18 when she moved from the rural town of Itamarandiba in Minas Gerais to São Paulo where she completed a nursing course. She has since been employed by health care institutions, which has included time working with indigenous peoples in Manaus located in the Amazon’s rainforest region. She eventually returned to Minas Gerais and has worked for the past six years at the Santa Casa de Belo Horizonte Hospital where she oversees hygiene and sanitation practices.

Santa Casa de Misericórdia de Belo Horizonte is the largest charitable hospital in the Minas Gerais capital. In October 2020, the institution’s environmental team decided to replace disinfectant products with less toxic alternatives.

A committee was established with representatives from the environmental protection, supply, infection control, occupational safety, as well as hygiene and sanitation departments. This committee identified and introduced a unique product that could replace three products used to clean and disinfect surfaces, which produced operational, financial, environmental, and occupational benefits, as well as increased safety during the pandemic.

The new product was odorless and did not produce foam. As a result, housekeeping staff distrusted and

questioned the new product’s disinfection qualities. Valdirene Araújo’s advocacy and participation was essential in overcoming any resistance by staff members.

Valdirene oversaw hygiene and sanitation activities and was also a member of the Environmental Protection Committee. In addition, she managed the disposal of waste and coordinated the maintenance of the hospital’s green areas. With over 20 years of experience in the health sector and having lived in the Amazon region for many years, she’s fully committed to the environmental cause.

“ *We will not be able to change the world, but if we can help at least one person, we will already improve the situation.* ”

Initially, Valdirene was also suspicious of the new product, but her participation in the technical validation committee changed her mind. Her charisma and leadership facilitated a greater understanding of the new product’s advantages during operational team



trainings. Regular conversations with the operational teams contributed to the adoption of environmental improvements. In the end, Valdirene and other leaders trained more than 460 employees.

As a result, the operational team understood the benefits of the new disinfectant in terms of its safety, cleaning capacity, as well as its environmental advantages. Valdirene noted that employees ultimately came to understand that they were protecting themselves, colleagues, as well as patients. Many of them eventually reported a reduction in respiratory problems and dermatitis. “It is gratifying to see people feeling well,” says Valdirene who is proud of her role as an ambassador for change. She believes that savings from the purchase of disinfectants created more resources for patient care. From January to April 2021, the hospital reduced expenses by 30 percent compared to the same period in 2020. In addition, standard Operating Procedures (SOPs) have been revised to include the new cleaning protocols.

This experience strengthened the conviction that the institution must continue to search for products less toxic to people and safer for the environment. For Valdirene, each of us has the potential to contribute in some way to improving social and environmental conditions. She is motivated every day to do her best for her patients and colleagues and to contribute to a better planet for future generations.



More than **460** employees have been trained by Valdirene Araújo and other hospital leaders in environmental management



30% reduction of hospital expenses from January to April 2021 compared to the same period in 2020



New cleaning protocols are now mandated by Standard Operating Procedures (SOPs)



Valdirene and the operational team holding a conversation about the work routine at Santa Casa de Belo Horizonte. 2021 © Bruno da Silva Lima





Indonesia

04

Indonesian mental health hospital feeds the body and soul

The Green Hospital team



Transforming land into an organic vegetable farm, a partnership between hospital staff, convalescing patients whose condition has stabilised and a local farmers cooperative. Indonesia. 2021 © WJMH





The Green Hospital team in West Java Mental Hospital coordinated the initiative (front from right to left): Dr. Elly Marliyani, Sp KJ, MKM (Director), Drs. Adang Ajiji, MM (Vice Director of Planning, Finance and General Affairs), (back from right to left) Dr. Tintin Farihatini, MSc PH (Head of the Medical Division), and Yuyun Yulianti, SKM, MARS (Head of the Planning Subdivision). Indonesia. 2021 © WJMH



The strict COVID-19 pandemic lockdowns that began in early 2020 resulted in decreased access to food supplies across Indonesia.

The West Java Mental Hospital was also affected. While the food supply for hospital patients was secured through an annual contract with suppliers, the same did not hold true for health care workers, the nearby communities, local farmers, and even small businesses, which were all impacted.

To overcome this, the Green Hospital team from the West Java Mental Hospital (WJMH) created a small-scale farm according to green, healthy, and sustainable procurement principles using the fertile land within the hospital area to implement the concept of Kampung Walagri (recovery village). This initiative was a partnership established between hospital staff, recovering patients and the local farmers

union (Gapoktan/Gabungan Kelompok Tani Warga Pangguyap), which aimed to use the land to turn it into an organic vegetable farm which was given the name of Kebun Walagri.



Bokchoy harvested from Kebun Walagri being washed in the Café Walagri facility, 2021 © WJMH



As a result of this project, the Kebun Walagri harvest provided additional supplies and income for the hospital's needs and helped increase the food supply for the surrounding communities. In addition, the farm provided local farmers a source of income and helped with the rehabilitation of patients. It also encouraged community visits that lessened the stigma of psychiatric hospitals.

Food production, including crop cultivation, land use and supply chain management, is responsible for approximately 26 percent of global Green House Gas (GHG) emissions.¹ It's also part of the 71 percent emissions from the health care supply chain.

¹ Poore, J., & Nemecek, T. (2018). Reducing food's environmental impacts through producers and consumers. *Science*, 360(6392), 987-992.



The Kebun Walagri project demonstrated that the hospital can, by producing food on its site, lessen carbon emissions by simply eliminating the use of fertilizers, and reducing commercial processing, packaging and food loss, as well as the need for transportation. Furthermore, the initiative promotes conservation, biodiversity and a circular economy as waste is then used to produce animal feed.

Moreover, WJMH plans to use its agricultural produce to provide a plant-based menu for Café Walagri, a hospital cafeteria constructed prior to the pandemic which was made from upcycled materials. This small dietary change may contribute to the reduction of carbon emissions and thus help avoid 572,000 deaths worldwide.²

Ultimately, this hospital project was able to demonstrate convincingly that a resilient food supply system can both protect the health of human beings, as well as the environment.

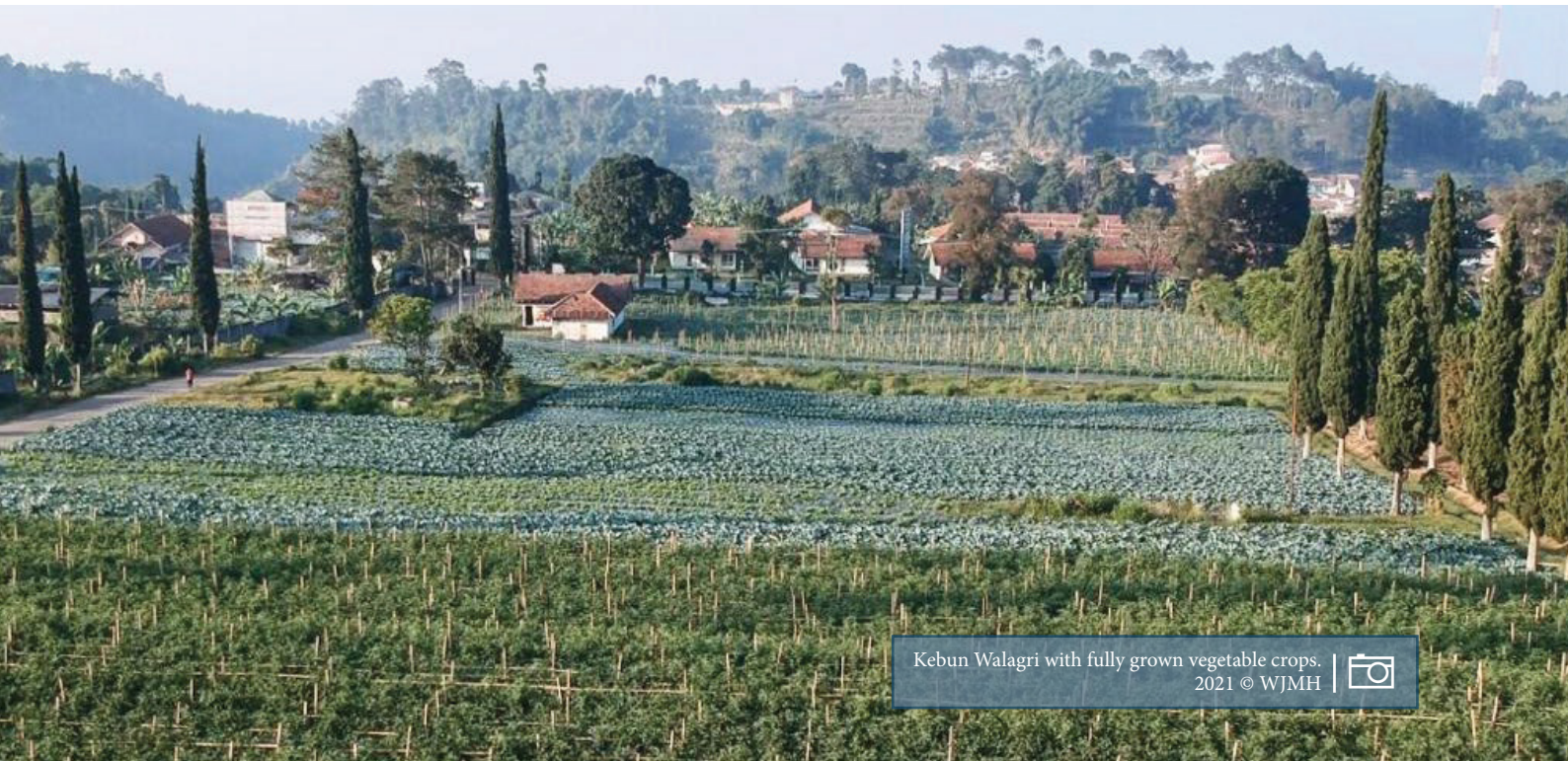
The WJMH Green Hospital team concludes their story with the realization that “This hospital farm encompasses multiple benefits for us. First, it is part of our patients therapy programme. Secondly, it encourages the community to help re-integrate recovering patients. Thirdly, it also lessens the stigma surrounding a mental hospital and lastly, it contributes to a resilient food system.”



More than **35** farmers and convalescing patients have been involved in cultivating the Mental health Hospital’s small-scale organic vegetable farm.



Approximately **1,7** million people living in the District of West Bandung benefit from the farm’s produce. Food is also sold in the Capital’s main market.



Kebun Walagri with fully grown vegetable crops. 2021 © WJMH |

² Hamilton, et al. (2021). The public health implications of the Paris Agreement: a modelling study. Lancet Planet Health 2021;5:e 74–83. [https://doi.org/10.1016/S2542-5196\(20\)30249-7](https://doi.org/10.1016/S2542-5196(20)30249-7)



05

**Fighting COVID-19 in the
Philippines by prioritizing
both people and the
environment**

Sr Ancelita Sarñillo



the Philippines

SPHI uses autoclave to disinfect its hazardous waste instead of incineration helped the hospital reduce its environmental footprint. © SPHI





Sister Arcelita Sarñillo, a hospital administrator, coordinates sustainability efforts at St. Paul's Hospital in Iloilo in the Philippines. 2021 © HCWH |

The large amounts of Personal Protective Equipment (PPE) waste became one of the most defining and distressing images of the COVID-19 pandemic. A surge in the utilization of face masks, gloves, and other personal protective equipment, including single use packaged products, such as plastic bottles and takeout containers had overwhelmed with waste local Filipino communities and to a significant extent health care facilities.

“Even with the COVID-19 pandemic, hospitals can reduce waste by switching to reusable and sustainable PPE, not to mention other means of disinfection like sodium hypochlorite,” said Sister Sarñillo.

Rather than use incinerators to burn PPE, the hospital introduced procedures, such as waste segregation and the use of autoclaves to disinfect infectious waste and to reduce its environmental footprint.




Proper doffing of the reusable PPE as demonstrated by a SPHI staff. 2021 © SPHI |

As a result of the project, SPHI has successfully protected their front line health workers without having to create significant waste in the process. Furthermore, the use of washable PPEs to protect the health of their staff and the planet resulted in savings of 64,150,000.00 Philippine Pesos (\$1.3 million) over eight months.³

Sister Sarñillo added that “the replacement of disposable PPEs with washable ones has been beneficial to the hospital not only for reducing medical waste, but also to save money for the hospital budget”. These savings now allow us to redirect funds to other health services, including to our pandemic response.”

Foreseeing a steep increase in waste generation, hospital administrator Sister Arcelita Sarñillo showed leadership at St. Paul's Hospital in Iloilo (SPHI) by asking its Linen Department to conduct research and develop reusable PPE to adequately protect frontline workers without creating significant amounts of waste.



\$1,3 million saved by using washable rather than disposable Personal Protective Equipment between April and December 2020

³ April to December 2020 savings.

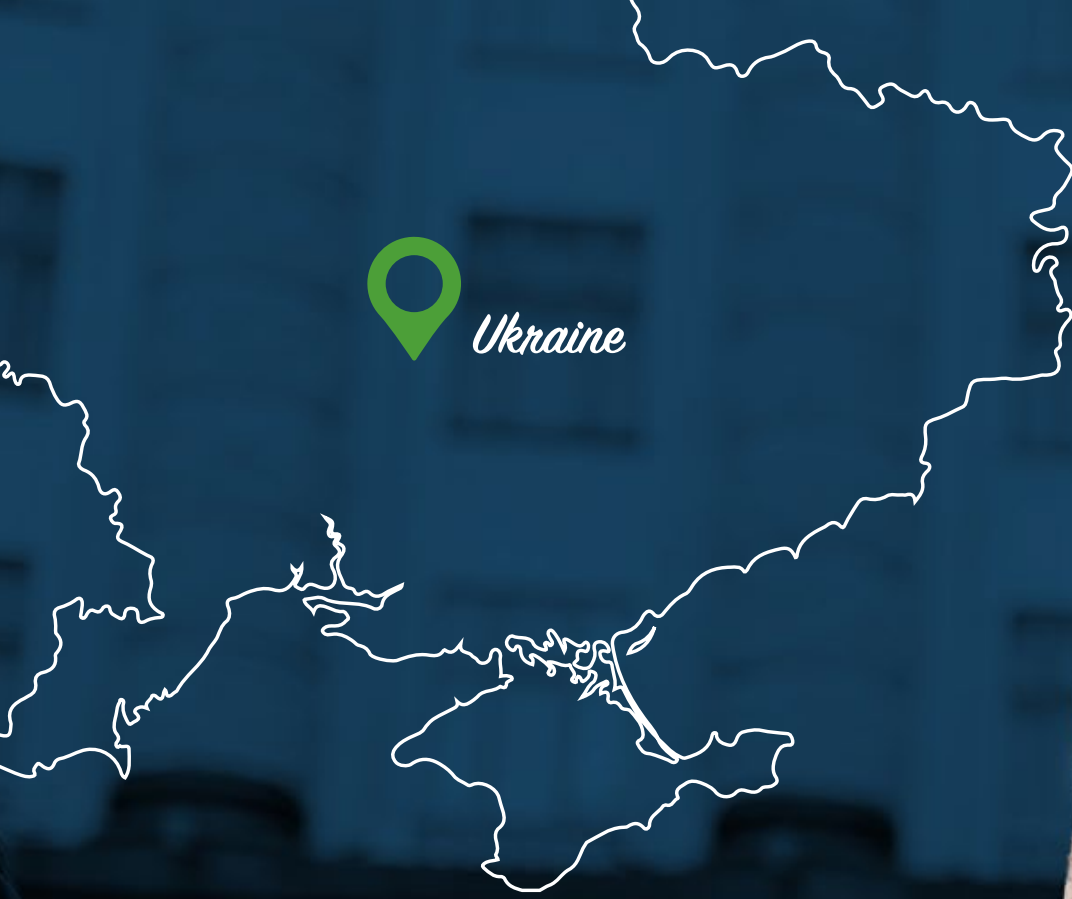


From the very beginning of our Covid response, it was clear to us that as front-liners we did not need to choose between the health of human beings and the environment. We can always prioritize both.

*- Sr Ancelita Sarrillo, Hospital Administrator,
St. Paul's Hospital in Iloilo, the Philippines*



Ukraine



06

When education is
the key to successfully
promoting health care and
understanding climate
change in the Ukraine

Taras Ostapchuk

...RE IS NO
...NET "B"
...B





Taras Ostapchuk, Public Health Centre.
Ukraine. 2021 © UNDP Ukraine



The World Health Organization estimates⁴ that between 2030 and 2050, climate change will each year cause an additional 250,000 deaths worldwide as a result of malnutrition, malaria, intestinal infections and the direct adverse effects of extremely high temperatures. Unfortunately, the Ukraine is no exception and follows growing global trends in terms of climate change's negative impact on public health.

The country has the Public Health Centre, which derives its mandate from the Ministry of Health and is responsible for protecting and strengthening the population's health, as well as monitoring and preventing diseases and controlling epidemics.

According to Taras Ostapchuk, the Director of the Public Health Centre's Department of Laboratory Research, the situation is complicated by the fact that until recently the issue of the impact of climate change had not been included in national, nor in regional policy agendas. This is not surprising considering that even health professionals lack specialized knowledge in this area.

To address this situation, a group of health care experts and representatives from the Kyiv-Mohyla Business School developed with UNDP support an online training course to assess the impact of climate change on public health, as well as means to introduce

sustainable procurement practices for the use of health care products.



I think we planted the seed for change, and this is very important. We provided health care professionals with tools they can use to monitor regionally what is happening and thus better understand the impact of climate change on public health.

Twelve video tutorials were produced to provide general information and facts. They also included specific case studies which demonstrate how to apply

⁴ World Health Organization. (n.d.) *Climate Change*. https://www.who.int/health-topics/climate-change#tab=tab_1



various concepts, methods, and tools to mitigate the impact of climate change on the country's health care system. The video tutorials also include content about the necessity to apply principles of sustainable procurement of health care commodities, as well as how to use these products in daily practice.

To test the content and to tailor it to specific regional contexts, experts organized a three-day online training for 43 representatives from the 12 regional Public Health Centres and the Ukraine's Regional Food Safety and Consumer Protection State Service.

Taras says they were surprised to learn that 90 percent of the information provided during the training was new to participants.

"I think we planted the seed for change, and this is very important. We provided health care professionals with tools they can use to monitor regionally what is happening and thus better understand the impact of climate change on public health," explains Taras. "As a result of this, we will change existing practices for a more sustainable use and production of health care products."

Some of the participants have already expressed a desire to create separate units within their regional centres to organise staff training and analyse locally the correlation between the detection of certain diseases and climate change.

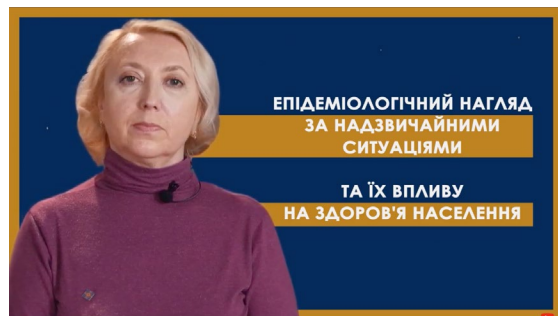
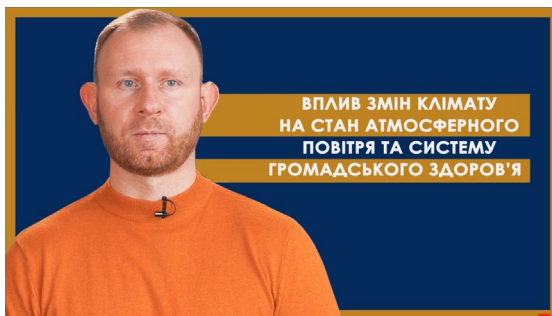
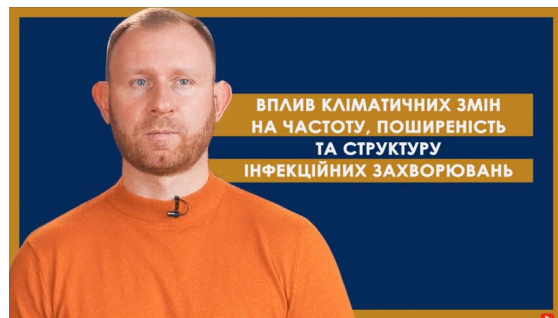
The next step would be to initiate discussion about the impact of climate change and its adverse effects on the country's regions which is where innovative solutions, practical measures and strategies are being developed and implemented.

In 2019, there was a **4x** increase in weather-related natural disasters in the Ukraine

50x increase in the number of natural disaster victims when comparing the first six months of 2020 to 2019

More than **10** Ukrainian regions produced less drinking water when one compares 2018 to 2017.

* To watch 12 video tutorials (in Ukrainian) click on the photos:





 *Zambia*



Flashback to Isaiah Nkhata's previous operational use of a hospital incinerator. Zambia, 2021 © UNDP / Moses Zangar



07

The burning of mercury-
containing devices
has been consigned to
oblivion in Zambia

Isaiah Nkhata



Isaiah Nkhata (right) shows how to manage an autoclave. Zambia, 2021 © UNDP / Moses Zangar | 

Isaiah Nkhata, 35, had been working as an incinerator operator at a Zambian hospital for over a year, but had no idea about the toxicity of mercury-containing medical devices and the severe health risks they posed to him and his fellow workers.

One morning, Nkhata started choking and coughing up blood. It felt like his airways were collapsing. But he never thought this was caused by the amount of toxic ash and smoke produced from the burning chemicals he had been inhaling. He was treated by his doctor for respiratory insufficiency.

For incinerator operators like Nkhata, a father of two children, there were not many options. He needed to keep working to put food on the table and pay for his children’s education.

“The incinerator produced so much ash and smoke,” he said. “I was covered in smoke and breathing in smoke all day. Besides, I also had to regularly deal with cuts and needle-stick injuries.”

In 2019, Nkhata became an autoclave operator. He is one of the 20 former incinerator operators trained under a five-year UNDP project to address the country’s challenges in dealing with medical waste. He learned how to operate autoclaves, an environmentally friendly medical waste treatment technology. These devices typically use pressurized steam to sterilize, disinfect or neutralise infectious medical waste. Implemented by Zambia’s Ministry of Health, the

project was co-funded by the Global Environment Facility (GEF) and UNDP in partnership with the WHO and Health Care Without Harm.

“Health care facilities are one of the main sources of mercury release into the atmosphere due to emissions produced by the incineration of medical waste. As part of its environmental obligations, the Zambian government is taking steps to reduce and eliminate the use of mercury-containing devices,” says Florence Mwale, a senior Ministry of Health environmental health specialist.

“*I feel relieved since I became an autoclave operator. I no longer have to inhale the toxic smoke.*”

As part of this initiative, Mwale says that the government has chosen available non-mercury alternatives and plans for stronger coordination between government agencies to improve mercury trade monitoring and boost education for businesses and communities about the dangers of mercury.



Considering that mercury is a hazardous and toxic material, she said the government believes it is necessary to regulate its use in order to avoid any negative impact on citizens' health and the environment.

“Waste from broken mercury-based medical devices, such as traditional types of thermometers or blood pressure instruments often ends up in unregulated landfills and incinerators which causes a risk to human health and the environment. UNDP is partnering with the Zambian Government as part of a larger global effort to address the toxic impact that mercury pollution causes to the environment and the health of individuals. The continued spread and use of mercury undermines efforts to improve health conditions in communities,” says Lionel Laurens, Zambia’s UNDP Resident Representative.

Thanks to GEF funding, Zambia’s health authorities have begun recovering mercury-containing devices, such as thermometers and blood pressure machines from seven model health facilities. This will ensure that the recovered toxic metals are not returned into the supply chain. The overall objective is to implement best environmental practices and introduce mercury-free medical devices which will reduce harmful waste produced by the health care sector.

According to government figures, Zambia’s 1,882 health care facilities generate up to 30 tons of infectious health care waste every day. This figure is likely to increase following the completion of 650 health care centres currently under construction.

With Zambia now focusing on honouring its commitments to the Minamata Convention by reducing the use of mercury-containing medical devices and products, national health care institutions can significantly reduce the potential of exposing workers like Isaiah Nkhata, hospital patients and the environment to the effects of mercury.



30 tons of infectious medical waste are generated each day in 1,882 Zambian health care facilities. This figure is expected to increase with the creation of 650 new health care centres.



20 former incinerator operators trained to operate environmentally friendly autoclaves that treat medical waste.



A completed modified metal container and used for temporary storage of Mercury Containing Devices. © Moses Zangar Jr (18)



Working
Together



GAUTENG
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

08

The phasing out of
mercury as a public health
priority in South Africa

Azeeza Rangunwala

Gauteng
Together

Gauteng
To



SIZWE TROPICAL DISEASE HOSPITAL
DR
LOUW MC
GAUTENG DEPARTMENT OF HEALTH

Azeeza Rangunwala and Dr. Louw, CEO of Sizwe Hospital. Gauteng Department of Health. South Africa. 2021 © Azeeza Rangunwala





Azeeza Rangunwala, Assistant Director of Research and Policy Development, Gauteng Provincial Health, South Africa. 2021 © Tekano

When Azeeza Rangunwala, the Gauteng Provincial Health Department’s Assistant Director of Research and Policy Development, discovered following an inventory assessment that there were still mercury devices in the Sizwe Tropical Diseases Hospital, she decided to launch a phase-out campaign with the help of hospital staff.

Rangunwala explains that mercury impacts health care at different levels. “As a public health department, it is of local and global interest to ensure that humans are safe from all types of harm, including extremely dangerous chemicals such as mercury,” she says.

She further explains that “As a South African who has experienced a small part of our country’s history, I am driven by social justice. There is a lot of potential to make changes, and I believe that all social justice issues are interconnected. Saving the environment is more than an isolated climate change issue. It affects the quality of everyone’s life across the planet.”

With financial assistance from the Sustainable Health in Procurement Project (SHiPP), digital devices were procured, and hospital staff was trained during a workshop organised by groundWork, an HCWH strategic partner.

As a result of the initiative, mercury-containing sphygmomanometers and thermometers were replaced with digital devices. The workshops with staff members also helped raise awareness and build capacity to support behavioural change.

“The phasing-out of mercury devices at Sizwe hospital has helped raise awareness at other health care facilities in the Gauteng Department of Health,” explains Rangunwala. “This experience will also lead to improved sustainability clauses in tender specifications and influence procurement to ensure that products are safe to use for



Management team at Sizwe Hospital © Azeeza Rangunwala

“*It is of local and global interest to ensure that people are safe from all types of harm, including extremely dangerous chemicals, such as mercury.*”

staff and patients. Mercury spill kits are provided at all health care facilities. As a result of the phasing out process, we can look forward to a future when this will no longer be necessary,” she says.

Following this initiative, the Department also engaged with health care waste service providers to safely dispose of the mercury-containing devices to prevent them ending up in municipal waste streams.

“My love for nature is also what drives the initiatives I partake in. I believe the world is filled with beauty, and we need to conserve as much of it as possible. As a health care public servant, I want better health outcomes for all. I believe that everyone has a right to good health and that projects implemented in the health care sector can have a great impact,” she adds.



There are more than **400** provincial health care facilities that work under the Gauteng Department of Health.



Currently, there is no procurement of mercury-containing medical devices while a gradual phasing out of the use of mercury is taking place in Gauteng health care facilities.



13 hospitals in Gauteng Province that are members of Global Green and Healthy Hospitals have taken active steps to carry out inventory assessments and identify solutions in locations where there is a shortage of medical equipment.



Rico Europidou, groundWork, presenting at Sizwe Hospital during Mercury elimination workshop © Azeeza Rangunwala





South Africa

09

**Sustainable health care
waste management that
inspires change in
South Africa**

Michael Vonk



Health care waste treatment operators: Bjorn Paulse (front), Marshall Splint (back) alongside the onsite waste treatment machine at George Hospital. South Africa. 2021 © Michael Vonk





Michael Vonk, Chief Executive Officer, George Hospital, South Africa. 2021 © Kelvin Saunders | 

The treatment and disposal of Health Care Risk Waste (HCRW) was a problem to be solved for the George Hospital in George South Africa. Located in the rural Garden Route District, the hospital had to make a trip of 450 kilometres five times a week to transport infectious waste for processing to a Cape Town medical waste treatment plant. This was not only burdensome, but also generated a significant carbon footprint. The sharps waste also needed to be incinerated with a consequential environmental impact.

“*There is an urgent call to action for hospitals to move away from medical waste incinerators and engage in sustainable models of waste disposal.*”

Faced with this problem, Michael Vonk, the George Hospital’s Chief Executive Officer, and his team decided to apply the Proximity Principle of Waste Management by procuring and installing medical

waste treatment equipment on-site to deal with hospital infectious waste at the point of generation. The new equipment allowed for the mechanical destruction of the waste by using sterilising heat.

For Mr. Vonk, the on-site treatment of HCRW is “one more method for hospital staff to take meaningful action to reduce their impact on the environment and work towards achieving a sustainable future.” The task ahead was huge. But the benefits would also be great. Ensuring environmental responsibility was front and centre during the entire process. “To be a leader in environmentally responsible health care is one of our strategic priorities,” Vonk adds.

Prior to his position at George Hospital, Michael Vonk worked for ten years for the National Health System (NHS) in the United Kingdom. He’s passionate about the environment, the outdoors, and trail running. He is also a volunteer for the National Sea Rescue Institute (NSRI).

After selecting and sourcing the right equipment with support from the Western Cape Government, Vonk and his team worked on developing the protocols and procedures so that they were specifically tailored to George Hospital’s needs and the type of waste produced. The results met and exceeded their expectations. The chemical and microbiological analysis determined that following treatment, the HCRW is no longer classified as hazardous and can be disposed of in a local landfill located at a distance of

60 kilometres. Waste is currently only transported to the site every two weeks.

For staff at George Hospital, this process has the added benefit of raising awareness about waste management, encouraging ownership of the problem, as well as to promote action at the local level and within communities.

“This model has elicited great interest from other regional hospitals, which are also implementing this technology,” says Vonk. “There is an urgent call to action for hospitals to move away from medical waste incinerators and engage in sustainable models of waste disposal by procuring on-site treatment methods similar to this one. This will save on costs and will be more environmentally friendly.”



Health care waste treatment operators: Bjorn Paule emptying the waste treatment machine at the end of a cycle. 2021 © Michael Vonk

In addition to reducing the environmental cost of operations, this new treatment facility has allowed for the safe treatment of COVID-19 waste on-site rather than incinerating it as was previously the case.

“This is a safer procedure for staff and communities,” explains Vonk. “Waste is turned into homogenous granules which eliminate sharps or cutting objects. Among other benefits, there’s no risk for staff of contamination during transportation.”

“Transporting waste has environmental, social, and economic costs, says Vonk. “As a general rule, waste should be dealt with as close to the place of generation as possible.”

George Hospital is planning to work with local clinics and nearby hospitals to process their waste to prevent the need for it to be transported for disposal.

“As a public health facility, it is important to our patients and the community that we serve that we promote public health and community resilience in its widest sense. Transitioning towards a more sustainable and resilient health care facility and minimising the negative impacts on the environment is a goal that many staff identify with,” Vonk says. He adds that: “As a leader, I believe that I have the responsibility to take action to demonstrate accountability and make real changes towards achieving net-zero emissions. Through our actions, we can mobilise and inspire other leaders to take meaningful steps and work collectively to resolve health system challenges.”



75% reduction of the initial waste volume by treating infectious waste using the George Hospital method.



45% reduction of monthly operational costs by treating infectious waste using the George Hospital method.



99% reduction of transport emissions and carbon footprint by treating infectious waste on-site at the George Hospital.



10

**Predictability, reliance,
and savings during the
COVID-19 pandemic
in Moldova**

Sorina Vesiolii





Sorina Vesiolii, a health expert at NGO "Positive Initiative", a leading patient organization that advocates for a decent and healthy life for persons living with HIV. Moldova. 2021 © Ion Buga





Sorina Vesiolii, a health expert at NGO “Positive Initiative,” a leading patient organization that advocates for a decent and healthy life for persons living with HIV. Moldova. 2021 © Ion Buga



The current COVID-19 pandemic places unprecedented stress on providing health care services to the most vulnerable individuals. In Moldova, the demand for medical care exceeds available resources which forced the authorities to adapt to the medical reality. Chronic and non-urgent care in hospitals was restricted when coronavirus cases surged to increase the capacity of emergency care and post-Covid recovery.

Approximately 14,600 people live with HIV/AIDS in the Republic of Moldova. Among them, 6,810 are receiving antiretroviral treatment (ART). Thanks to the regular intake of one tablet a day, modern pharmaceutical technologies allow the body to function normally while the immune system fights the HIV virus.

Thankfully, Moldova managed to avoid shortages of HIV medicines. Neither beneficiaries, nor the authorities reported disruptions of HIV treatment or the provision of services. Thanks to good mobilisation and coordinated action between medical institutions, civil society and mobile clinics, people using ART could avail themselves of life-saving medicines for a period of half a year during the lockdown and during further periods of restrictions. This reduced the need for travel to ART centres and subsequently diminished potential exposure to COVID-19.

In Moldova, ART is covered by the state under the HIV/AIDS Prevention and Treatment Programme.

The limited resources available for the procurement of antiretroviral medicines (approximately 19 mil MDL or \$1 million) is necessitating careful consideration of quantities and needs prior to placing an order as the local market is small and there exists increasing competition on international markets for available medication.



It is essential that procurement is predictable and sustainable, which means that life-saving medicines are available when needed, in full quantity.

Sorina Vesiolii is a health expert at the Positive Initiative NGO which is a leading patient organisation that advocates for a decent and healthy life for persons living with HIV. She believes that it is essential that procurement is predictable and sustainable, which means that life-saving medicines are available when



needed and in required quantities. To achieve this goal, the national authorities need to predict patterns and determine which quantities are required, as well as when and to whom these should be provided to. “Both insufficient and excessive stocks are not desirable, as this implies on the one hand that patients are under risk, and that on the other hand there may be an inefficient use of resources and that medication might expire,” says Sorina.

In tandem with the planning of needs, a reasonable consumption of health commodities is essential. “Enormous amounts of products are consumed daily, such as alcohol swabs, gloves, medical caps, and syringes. A huge amount of waste is generated that subsequently harms the environment and contributes to climate change, biodiversity loss, as well as air and water pollution, says Sorina. “Thus, one of the main goals when procuring health commodities should be to produce less waste and to use fewer natural resources that would reduce the negative impact on the environment and human health.”

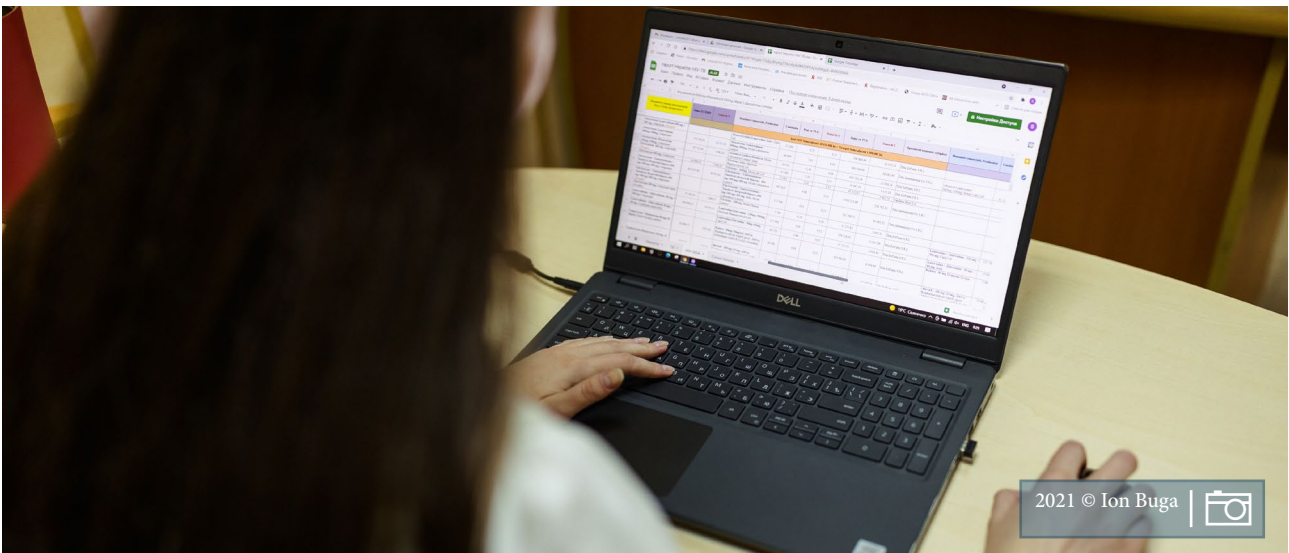
Supported by UNDP’s Global Project for Sustainable Health in Procurement (SHiPP), Sorina’s NGO “Positive Initiative” analysed during the 2018-2021 period sustainable procurement practices in Moldova. The report concludes that implementing sustainability criteria shall be approached with due complexity, which implies changes in legislation, training of contracting authorities, as well as implementing a



monitoring system. Sorina sees this process as vital to implementing the sustainability criteria in the medical field which will increase savings to the state budget. These savings can then be redirected to other critical needs that will improve the population’s quality of life.

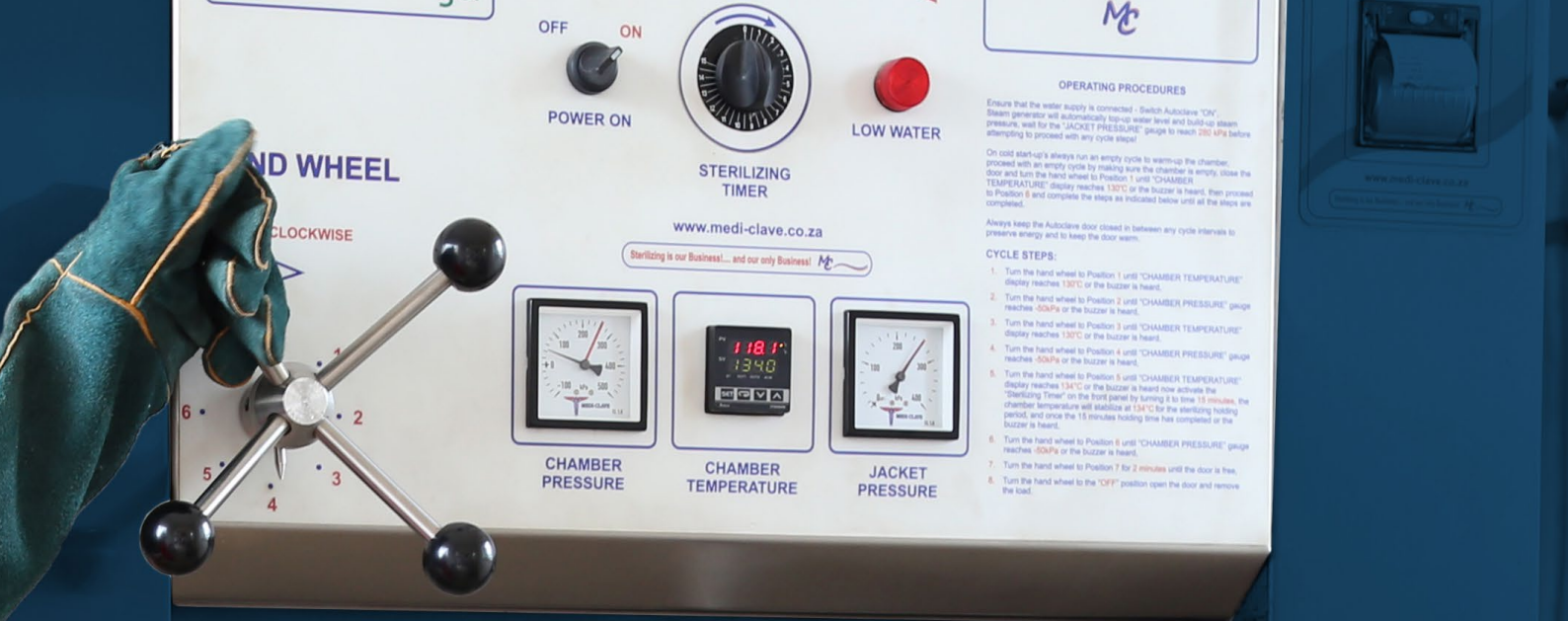
The report recommends developing an electronic stock management system, which will allow the monitoring of all health commodities that are available in medical institutions across the country.

Following the report’s recommendations, the centralized health procurement regulations were improvised in September 2020 to streamline the procurement cycle of health commodities. In practical terms, the necessary quantities will be purchased in a timely fashion, and it will be possible to monitor the quantities in medical institutions and adjust the planning if needed.





An autoclave operator treating plastic health care waste. Tanzania. 2021 © UNDP Tanzania



11

Hospitals minimise plastic waste in Tanzania

Dr. Hussein Lujuo Mohammed and Miriam Mongi



Dr. Hussein Lujuo Mohammed is a lecturer at the Muhimbili University of Health and Allied Sciences in Tanzania. 2021 © UNDP Tanzania



Dr. Hussein Lujuo Mohammed is a lecturer at Tanzania's Muhimbili University of Health and Allied Sciences. He is an avid supporter of sustainable health care waste management, which is not regularly practiced in Tanzania. With support from the UNDP Sustainable Health in Procurement Project (SHiPP), Dr. Mohammed identified the potential challenges of recycling plastics, assessed the daily number of plastics procured by recyclers and developed an assessment methodology for all potential recycling companies.

In Tanzania, the growth of health care facilities has been one of the triggers of increased health care waste generation. With an estimated 60 to 70 tons of health care waste being generated every day in the country, plastic waste, such as syringes, infusion bottles, drug containers, feeding tubes, and catheters tend to occupy a large percentage of waste. Plastic waste has been widely discussed in terms of its non-biodegradability characteristics and the consequent problem of soil contamination.

Recycling of health care plastics is not a standard practice in Tanzania. This further complicates plastic waste management. UNDP, through SHiPP, is working with Muhimbili National Hospital, Mwananyamala and Sinza Hospitals in Dar es Salaam to introduce sustainability in procurement practices and waste management. These hospitals serve about six million people in Dar es Salaam and the neighbouring regions. The project works with the Ministry of

Health, Community Development, Gender, the Elderly and Children to encourage the minimisation of plastic waste by improving procurement practices and assessing, as well as identifying potential buyers of plastic waste from health care facilities.



The recycling of autoclaved health care plastic wastes is possible if regulations and decision-making organs are supportive. Development partners in Tanzania should continue supporting projects like the SHiPP.

*- Miriam Mongi
Environmental Health Officer,
Sinza Hospital Dar es Salaam,
Tanzania*



Recycling has played a significant role in protecting human and environmental health along with cost reduction in health care settings. “Recycling plastic waste is not a new concept. However, it becomes a complicated idea only when you refer to recycling waste from health care facilities. The infectious nature of health care waste is what raises concerns among people,” says Dr. Mohammed. He suggests introducing sustainable health care waste management technologies to facilitate recycling instead of burning waste.

According to Miriam Mongi, the Environmental Health Officer of the Sinza Hospital in Dar es Salaam, waste management is a source of income for hospitals, as waste is being sold to plastic industries for recycling. “Previously, we were receiving a lot of complaints from people living close to the hospital about the harmful smoke caused by the incineration process. After intensifying the recycling activities, the complaints stopped,” says Mongi. She adds that: “The

recycling of autoclaved plastic wastes from health care facilities is possible if regulations and decision-making organs in place are supportive. Development partners in Tanzania should continue supporting projects like the SHiPP.”



Approximately **60 to 70** tons of health care waste is generated in the country every day. Plastic waste tends to constitute a large percentage of this waste with items such as syringes, infusion bottles, drug containers, feeding tubes, and catheters.



Approximately **15** tons of plastic waste is recycled every month at Sinza Hospital which generates savings of \$3,200. Savings are then used to further support sustainable health care waste management activities.



Miriam Mongi - Environmental Health Officer, Sinza Hospital Dar es Salaam, Tanzania. 2021 © UNDP Tanzania |



Viet Nam

12

**Vietnam's National
Lung Hospital pioneers
sustainable procurement**

A.P. Dr. Vu Xuan Phu



Regaining Strength through Effective Treatment and Care. Viet Nam.
© The Global Fund / Ryan Quinn Mattingly





A.P. Dr. Vu Xuan Phu, Deputy Director-General of the National Lung and Pulmonology Hospital, 2021 © UNDP Viet Nam



Viet Nam’s National Lung Hospital is the country’s largest hospital to treat tuberculosis and lung disease related diseases. With 995 beds and 40 divisions, the hospital provides health care services for thousands of people every month. The hospital’s management understands its vital role in ensuring human health and well-being. However, they are also aware of the negative impact that the health sector can have on human and environmental health.

To address the adverse effects of the health sector on the environment, the hospital started reducing plastic waste by adopting environmentally-friendly green procurement procedures. These measures were introduced prior to the Prime Minister’s 2019 adoption of the “plastic waste control movement.” Currently, the hospital’s procurement department is aiming to replace hazardous products. The annual procurement plans set out principles with a roadmap that provides a step-by-step substitution of unsafe commodities. These principles include procurement of environmentally-friendly waste bags, utilising IT technology in X-ray diagnosis without film printing, introducing electronic thermometers, eliminating plastic cups, using inox food trays, as well as reducing printing and paperwork.

“The National Lung Hospital had proactively carried out activities promoting environmental protection even before specific directives were introduced by the Health Ministry,” says A.P. Dr. Vu Xuan Phu, who has been spearheading green procurement efforts as the National Lung Hospital. It’s good to see that our

mindset is relevant to Viet Nam’s international and national goals.

However, there have been challenges. According to Dr. Phu, several single-use plastic medical commodities, such as syringes and infusion tubes, do not have superior alternatives that are sustainable. In addition, not all environmentally sustainable products are commonly available on the market. Dr. Phu also emphasises the necessity to integrate products for environmental procurement within the production and supply chain. Furthermore, there are issues related to costs that must be taken into account. Environmentally-friendly alternatives to hazardous medical products can cause an added financial burden for hospitals.

By implementing the SHiPP in Viet Nam, Dr. Phu and his staff at the National Lung Hospital have been organising a series of advocacy activities to share the lessons learned from the project’s activities. Dr. Phu also frequently participates as a key speaker in training workshops on health and sustainable procurement in order to share his hospital’s best practices.




11,750 kgs of plastic bags, 1,025,000 pieces of syringes, 407,000 fluid transfusion plastic bottles, 324,000 X-ray films, 220,000 plastic cups for lab testing, and 11,850 aerosol and ventilator masks are used every year at Viet Nam’s National Lung Hospital.



The environmental activities have been proactively carried out by the National Lung Hospital even before the specific directions of the Ministry of Health. It is good to see that our mindset is pertinent to the global and national goals of Viet Nam.

- A.P. Dr. Vu Xuan Phu, Deputy Director-General of the National Lung Hospital



13

Indian nurses pave the way for environmentally friendly procurement

Vincy Tribhuvan



The first assessor training was conducted on September 7, 2019, at the Public Health Foundation of India, Delhi. 2021 © HELP





Vincy Tribhuvan, Chief Nursing Officer, Jupiter Hospital Mumbai. © Vincy Tribhuvan | 

Vincy Tribhuvan is the Chief Nursing Officer at Mumbai’s Jupiter Hospital. In 2019, she was one of 24 participants who participated in the National Green Hospital Standards’ (NGHS), workshop which introduced a guidance document to help health care institutions reduce their impact on the environment.

There she met India’s Sustainable Health in Procurement Project (SHiPP) team, which had contributed to the development of criteria for the NGHS sustainable procurement document. During the workshop, Vincy was familiarised with the different sustainability methodologies and actions health systems can adopt to reduce their environmental impact.

When she returned to her workplace, she was determined to bring Jupiter Hospital to the next level in order to apply for NGHS accreditation. She worked with nurses and midwives to promote the implementation of standards and advocated for the replacement of PVC gloves with nitrile alternatives.

The nurses worked with hospital staff to implement energy conservation strategies to introduce a robust heating, ventilation, and air conditioning system designed by the Building Energy Efficiency Project (BEEP). As part of these efforts, the hospital introduced waste minimisation techniques, including Zero Liquid Discharge, a treatment process designed to remove all liquid waste from a system, as well as from

rainwater harvesting systems. These sustainability efforts resulted in cost savings of more than \$270,000 in a year.

For Vincy, nurses play a vital role in advocating, educating and leading action to mitigate risks associated with climate change. She looks forward to supporting and increasing the contribution nurses can make to reduce the negative environmental impacts caused by the health care system in which they work.

During the workshop, staff at Mumbai’s Jupiter Hospital familiarised with the NGHS standards and criteria, and are working to implement them and apply for accreditation.

“The National Green Health standards are a great resource for training and educating health workers about climate-smart health care, including environmentally friendly purchasing,” Vincy says. “Nurses play a critical role in the health care sector and in procurement.”

	<p>There are 380 beds in Mumbai’s Jupiter Hospital</p>
	<p>650 nurses and midwives work at the hospital.</p>



**Small efforts can create
big differences.**

*- Vincy Tribhuvan, Chief Nursing Officer,
Jupiter Hospital Mumbai*



ETP & STP Plant at NCDC.
2021 © Pankaj Bector

A photograph of industrial water treatment equipment. A large, vertical, yellow cylindrical tank is the central focus, connected to a network of white PVC pipes. A black valve assembly with a pressure gauge is mounted on the pipes. In the background, there's a green wall and a blue structure, possibly part of a building or a covered walkway. The overall scene is outdoors.

14

**When training inspires
procurement to take
the driver seat for
sustainability in India**

Pankaj Bector



Mr. Pankaj Bector, Procurement Officer, National Centre for Disease Control (NCDC). © Pankaj Bector 

Mr. Pankaj Bector is the Head of Procurement at India's National Centre for Disease Control (NCDC), an agency under the Ministry of Health and Family Welfare that focuses on disease surveillance and the enforcement of public health regulations.

He wasn't familiar with sustainable procurement until 2018 when he participated in a Sustainable Health in Procurement Project (SHiPP) workshop. Organised by India's Centre for Chronic Disease Control (CCDC) and Health Care Without Harm, the workshop's goal was to raise awareness among suppliers and procurement officers of the impact that various products have on communities and the environment.

Mr. Pankaj actively participated in the different sessions. "It was an enriching experience during which we addressed many possible actions to introduce sustainability front and center into our operations," he says.

At NCDC, Mr. Pankaj procures materials and supplies from the Government's E-Marketplace (GeM) portal for eight divisions within an institutional network of more than 12 laboratories. Following the workshop, one of his first actions was to work with suppliers and health care staff to phase out PVC gloves, one of the most widely used supplies across the organisation, and worked to replace them with nitrile gloves. His efforts were successful. Currently, 100 percent of the insti-

tute's laboratories have moved to using nitrile gloves, and the guidelines for the use of nitrile gloves are widely adopted in the divisions of GeM.

Over time, he also tackled the widespread use of sodium hypochlorite in the laboratories and its replacement with safer alternatives.

“ *We need to encourage suppliers to reduce environmental impact throughout their supply chains, and educate users and suppliers about the environmentally responsible procurement choices.*

"We started to work with suppliers to support locally-produced goods and services. We did this not only to minimise the impact of waste management, but also to reduce the footprint of operations by sourcing products from local suppliers," he explains.



Under Mr. Pankaj's initiative and as a result of new knowledge gained during the workshop, NCDC further implemented changes, such as expediting the installation of effluent treatment plants and sewage treatment plants for the efficient and improved handling of liquid biomedical waste.

But one organisation cannot achieve change without a network that supports it. "We need to encourage suppliers to reduce their environmental impact throughout their supply chains and educate users and suppliers about environmentally responsible procurement choices," he says.

Mr. Pankaj also worked on networking and connected the SHiPP team with other procurement officers in public and private health facilities. The goal was to raise awareness about the critical need to incorporate sustainability criteria during procurement processes. "It's necessary to assess your needs and options for products and services prior to starting the procurement process," he adds.

With SHiPP's technical assistance, NCDC will soon release a national guidance book which will include sustainability initiatives and targets to promote environmentally friendly procurement. Furthermore this book will also develop roadmaps to guide green practices and promote policy transformation within the Indian health care sector.



During the 2020-2021 period, NCDC procured **100,000 nitrile gloves**. The number drastically increased due to the increased use of gloves during the pandemic. In 2019, India's National Centre for Disease Control (NCDC) only procured 12,000 latex and 31,000 nitrile gloves.

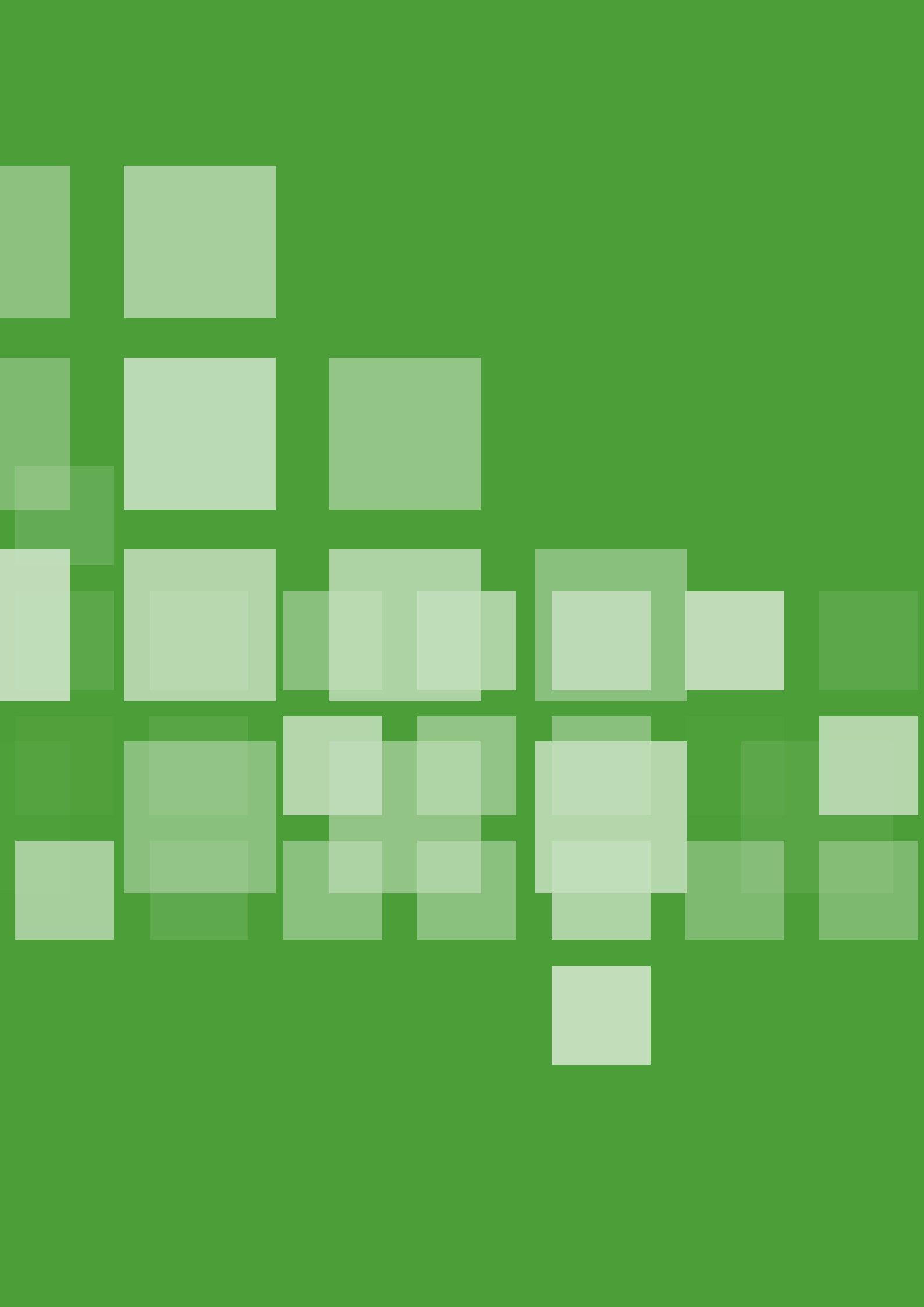


Pankaj Bector **supervises the procurement** of NCDC supplies and materials **for eight divisions and more than 12 laboratories**.



Credits

- Alessandra Azevedo, Sustainable procurement specialist, Healthy Hospitals Project, Brazil
- Alexandru Cocirta, Effective Governance Programme Analyst, UNDP Moldova
- Ana Belluscio, Global Communications Manager, Health Care Without Harm
- Carolina Gil Posse, Associate Director of Programs and Communications for Latin America, Health Care Without Harm Latin America
- Claudia Paz Giraldo, Technical projects facilitator for Latin America, Health Care Without Harm Latin America
- Deogratias Mkembela, International Development Expert, UNDP Tanzania
- Diego Peluffo, Communications Consultant
- Dorin Rotaru, Health Programme Specialist, UNDP Ukraine
- Dr. Dao Khanh Tung, Programme Analyst, UNDP Viet Nam
- Dr. Rosemary Kumwenda, Team Leader, HIV, Health and Development, UNDP Eastern Europe and Central Asia and SPHS Coordinator
- Ecimara Silva, Waste and Climate Specialist, Healthy Hospitals Project, Brazil
- Ian Milimo, Project Manager, Sustainable Health in Procurement Project (SHiPP), UNDP
- Ishika Jharia, Senior Research Associate & Project Officer, Centre for Chronic Disease Control, India
- Krizzia Allanigue-Diaz, Global Green and Health Hospitals coordinator, Health Care Without Harm Southeast Asia
- Laura Bohanțova, Communications Analyst, UNDP Moldova
- Laura Sinyama, Programme Associate, UNDP Zambia
- Luqman Yesufu, Sustainable Health in Procurement Project (SHiPP), Africa Regional Coordinator, groundWork, South Africa
- Megha Rathi, Project Coordinator, Sustainable Health in Procurement Project (SHiPP), Health Care Without Harm
- Mirjana Milic, Advisor, Strengthening Sustainability in the Health Sector in Developing Countries, UN Interagency on Sustainable Procurement in the Health Sector (SPHS)
- Monique Lima, Communication specialist, Healthy Hospitals Project, Brazil
- Moses Zangar, Communications Specialist, UNDP Zambia
- Nadiia Kaidanovych, Communications Officer, UNDP Ukraine
- Nevra Gomdeniz, Communications Specialist, UN Interagency on Sustainable Procurement in the Health Sector (SPHS)
- Paeng Lopez, Sustainable Health in Procurement Project (SHiPP) Philippine Coordinator, Health Care Without Harm Southeast Asia
- Pats Oliva, Communications Campaigner, Health Care Without Harm Southeast Asia
- Poornima Prabhakaran, Senior Research Scientist, Centre for Chronic Disease Control, India
- Susan Wilburn, International Sustainability Director, Health Care Without Harm
- Vital Ribeiro, President of the advisory council, Healthy Hospitals Project, Brazil





Sustainable Health in Procurement Project (SHiPP)

UNDP | Health Care Without Harm

<https://savinglivesustainably.org/shipp/shipp.html>