



**FEDNAV**

**2022**

**ESG REPORT**





## 2022 Operational Highlights



8

NUMBER OF OFFICES  
WORLDWIDE



1,389

NUMBER OF  
SHIPBOARD  
EMPLOYEES



220

NUMBER OF OFFICE  
EMPLOYEES



61% | 39%

OFFICE GENDER  
RATIO



61

NUMBER OF  
OWNED VESSELS IN  
SHIPPING FLEET



1,700

NUMBER OF VESSEL  
PORT CALLS



0

SPILLS



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# Overview

## Our Story

Taking to the water for the first time over 75 years ago, we've been innovating ever since. Known primarily for our successful navigation of the Canadian Arctic, the Great Lakes, and the St. Lawrence Seaway, we forged complex routes through unknown waters, always staying true to our purpose of doing things the right way for our clients. We have grown to become Canada's largest oceangoing bulk shipping company, mastering a multitude of complex international routes. With our arsenal of around 120 ships, of which 61 are owned, we offer a seamless shipping experience for our customers. We're proud to represent the highest standard of global service possible.

## IN THIS SECTION

- 05 – Our ESG Framework
- 07 – A Message from our President and CEO
- 08 – **In focus:**  
UN Sustainable Development Goals

## Our ESG Framework

Fednav is steadfast in its promise to deliver a higher standard of quality and operational excellence to international bulk shipping. This includes developing a healthy, sustainable business through a long-term commitment to the highest environmental, social, and governance (ESG) standards, across all of our activities. We recognize the impact of our business on our communities and our environment.



## OUR ESG PILLARS



### Environment and Climate Change (E)

We are dedicated to responsible environmental stewardship, making every effort to reduce our environmental footprint and emissions, working towards the decarbonization of the shipping industry, and integrating transparency and sustainability into all of our business decisions.



### People and Social Responsibility (S)

People and strong partnerships are at the heart of what we do. We ensure safety and security for our employees, partners, and all involved in our interconnected business, practicing and promoting ethical operations, and building strong and respectful relationships. The principles of diversity, equity, and inclusion are promoted through our practices and policies.



### Corporate Governance (G)

We maintain the highest level of sound corporate governance, overseeing the integration of our ESG framework into all activities, maintaining the highest level of compliance, and ensuring that our business remains strong and resilient.

Doing what is right is Fednav's ethos. We implement rigorous measurement and continuous improvement as we adapt to changing environments and work to make the world a better place, today and for future generations.

This ESG Report, our first, demonstrates our commitment to transparency and accountability to continue to nurture trust with our employees, our partners, our customers, and all who live in the many communities we serve around the globe.

It also aligns with Sustainability Accounting Standards Board (SASB) reporting standards and supports the United Nations Sustainable Development Goals (SDGs).



## Our **Mission**

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At Fednav, our mission is to deliver the highest level of service, professionalism, and reliability in the international ocean shipping industry with unwavering consistency and integrity. To do so, we approach every aspect of our business with four core values in mind.

## Our **Values**

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- |   |   |
|---|---|
| <b>1. Honesty and integrity</b><br>Doing what's right                       | <b>3. Regard for employees</b><br>Standing by our people                          |
| <b>2. Commitment to professional excellence</b><br>Being the best we can be | <b>4. Corporate Social Responsibility</b><br>Respecting community and environment |





**Paul Pathy**  
President and CEO

## A Message from Our President and CEO

The shipping industry is critical to the global economy, facilitating international trade and connecting businesses and consumers worldwide. It is also an industry that faces significant environmental, social, and governance challenges. From the energy transition to labour shortages, from safety to ethical practices, our industry must address a wide range of ESG issues to operate responsibly and sustainably.

Our company stands firmly behind its promise to deliver a higher standard of quality and operational excellence to international bulk shipping. We endeavour to develop a healthy, sustainable business through a long-term commitment to the highest environmental, social and governance (ESG) standards across all segments and activities. Fednav has continuously demonstrated its adaptability to shifting environments, and this is now more critical than ever. While doing what's right has always been part of our DNA, we understand that this is no longer enough. We need to continuously improve how we do things to leave the world a better place for future generations. We will engage with our customers, partners, agencies, and regulators to ensure that our ESG framework evolves and reflects the highest corporate social responsibility standards.

I'm excited to share our first ESG report, which aligns with our company's values and supports the United Nations' Sustainable Development Goals (SDGs). We believe these values of integrity, respect, and sustainability are essential for our success and the well-being of our employees,

customers, communities, and the environments where we operate worldwide. Our ESG initiatives speak to our ongoing commitment to be a conscious contributor to the betterment of all our internal and external stakeholders. We recognize that it is a journey of continuous improvement and are committed to sustained learning, innovation, and collaboration. We are setting ambitious ESG goals, tracking our progress, and reporting on our performance transparently.

I would like to express my gratitude to our employees, customers, suppliers, and other stakeholders for their support and collaboration in our ESG journey. I am proud of the dedication, resilience, and commitment our employees demonstrate to each other, those we serve, and the communities we support. We believe that ESG is a shared responsibility, and we are committed to working with all our stakeholders to create a more sustainable and prosperous future for all.

Sincerely,



**Paul Pathy**  
President and CEO

## In focus: UN Sustainable Development Goals

In 2015, all members of the United Nations adopted the Agenda for Sustainable Development, a global agenda for peace and prosperity for all. At its core are 17 Sustainable Development Goals (SDGs), calls to action for all nations to work in partnership and contribute to achieving these ambitious economic, social, and environmental objectives by 2030.



“ ”

*ESG is about the sustainability of our business and we must put it at the forefront of our business decisions. Our leaders and employees understand that it is the way we work and an integral part of our DNA.*

**Isabelle Brassard**

Senior Vice President, Logistics and Sustainable Development

WHILE THE SDGs WERE DESIGNED FOR NATIONS, THEY ALSO SERVE AS A BLUEPRINT FOR RESPONSIBLE CORPORATE CITIZENSHIP. IN OUR DAY-TO-DAY OPERATIONS, WE FOCUS ON THE FOLLOWING 12 SDGs THAT ARE MOST RELEVANT TO OUR BUSINESS AND WHERE WE CAN TAKE ACTION, PROMOTE IMPROVEMENT, AND BRING ABOUT CHANGE:



SUSTAINABLE DEVELOPMENT GOALS



# Environment and Climate Change (E)

The world is facing significant climate and biodiversity challenges. Fednav is committed to a climate-resilient and sustainable future. To achieve this, we optimize our ships to reduce their environmental impacts and encourage employees to make better environmental choices. We are early adopters of the latest environmental solutions to reduce emissions and outpace international objectives as the entire industry progresses toward zero carbon emissions.

Working closely with communities, researchers, and stakeholders, we are leaders in innovative policy to protect marine biodiversity and ecosystems, and responsibly manage waste to eliminate environmental impact.

## IN THIS SECTION

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## SDGs



## Decarbonizing Operations and Reducing Emissions

It is an imperative that we continuously improve our environmental performance. Progress on reducing emissions is a win-win, creating long-term sustainability and business opportunities for our company. While shipping by sea is significantly more efficient than many other forms of cargo transportation, we recognize that the shipping industry has an impact on the environment, particularly through greenhouse gas (GHG) emissions. It is our responsibility to do our part to fight climate change. In becoming more efficient and sustainable, not only do we protect the environment, but we nurture a culture of innovation, strengthen our reputation as a responsible corporate citizen, and build trust with our employees, partners, and customers.

As an industry, we are regulated by a number of international agreements that aim to address environmental concerns and have influenced tighter environmental regulations. The International Maritime Organization (IMO), a United Nations agency, established the objectives for the industry to continually reduce GHG emissions, with the ultimate aim of reducing carbon intensity by 70% by 2050, compared to 2008 levels. Further, the IMO governs the Energy Efficiency Design

Index (EEDI) and the Energy Efficiency Existing Ship Index (EEXI), both measuring the carbon dioxide emissions performance of respectively new and existing ships, and sets targets to reduce GHG emissions.

Transitioning away from fossil fuels is an industry priority. Though this shift will take time, Fednav is committed to improving the environmental performance of its ships – both current and new. In addition to following the IMO regulatory framework, we rigorously align on the Sustainability Accounting Standards Board (SASB) standards in this report, offering a transparent reporting of our performance, and we monitor our carbon intensity indicator (CII) rating to determine the reduction factor needed for continued improvement of our ships' operations.

Fednav recognizes that the burning of fossil fuels has a harmful effect on the environment in the many jurisdictions where we operate. Where possible, we limit the use of heavy fuel oils, going beyond legislated requirements, and restrict our overall consumption through strategies such as weather-based routing and speed reduction.



### Blue Circle Award Recipient

Reflecting the Port of Vancouver's EcoAction Incentive Program, this award recognizes the marine organizations and shipowners that have an exemplary commitment to sustainability by reducing air emissions and their carbon footprint. Fednav was honoured to receive the award for its sustainable and high-efficiency practices and exceptional level of environmental compliance in 2019, 2020, 2021 and 2022.



First adopted in 2006, our *Environmental Policy* affirms our commitments and details the expectations and rigorous requirements for a wide range of environmental concerns that touch on all aspects of our business. This ranges from accidental oil spills or leakages, air emissions, ballast water, marine mammals, and waste management. The policy, which has been updated over the years, is the manifestation of Fednav's commitment to playing a leading role in environmental stewardship within the industry and is supported by strong internal controls, our standard operating procedures, and our dedicated team.

Fednav is quick to implement the latest upgrades and technologies as they become available in its pursuit of improved environmental performance. We have set ambitious targets to reduce our GHG emissions, not only aspiring to meet but to exceed, where possible, the IMO's benchmarks of 40% carbon intensity reduction by 2030 and a 70% carbon intensity reduction by 2050, compared to 2008 levels. We have reduced our scope 1 carbon intensity emissions by 22% since 2008 and are on target to reach our goal.



*As a company, Fednav has always been extremely focused on doing what's right. We are leaders of regulatory compliance, we do things by the book, we have a very strong brand, we have an image to protect, we want to do things the right way, and to do them professionally.*

**David Grieve**  
Former Vice President, Operations

Mr. Grieve retired in early 2023 after spending more than 33 years with Fednav

**ENVIRONMENT**

2022

**DECARBONIZING & EMISSIONS**

CO<sub>2</sub> Emissions\* (Metric tons) 736,692

Total energy consumed (Gigajoules) 10,659,000

Percentage of heavy fuel oil 33.3%

Percentage of renewable fuels 1%

Average energy efficiency design index for new ships (EEDIs) (Grams of CO<sub>2</sub> per ton-nautical mile) 5.1

\*Calculated only for the vessels with EEDI values

Air emissions (NO<sub>x</sub> (excluding N<sub>2</sub>O), (2) SO<sub>x</sub> and (3) Particulate matter (PM10) (Metric tons) **NO<sub>x</sub>**: 17,536 **SO<sub>x</sub>**: 1,384 **PM10**: 1,536

\* Scope 1



## Decarbonizing our fleet through innovation

The rapid pace of technological advancement continues to influence and change the shipping industry and provide new options for environmental efficiency. Not only is technology powering the development of alternative fuels and biofuels, which could emit fewer GHGs over their lifecycle than fossil fuels, but it is introducing new tools to allow real-time monitoring, assessment, allowing us to respond to changing conditions.

On a larger scale, technology and computational modelling are changing the way the latest generation of ships is being designed. Using computational fluid dynamics, ship designers, architects, and engineers optimize the design and performance of today's ships. These improvements include more streamlined hull design and the optimization of rudder configurations that allow ships to move through the water more smoothly, leading to fuel savings.

Digital technologies, monitoring tools, and the use of data analytics have allowed for more precise and effective monitoring and control of ships fuel consumption while at sea, creating further efficiencies on old and new ships. Onboard and onshore technologies allow for greater fuel efficiency, including fuel optimization software that uses advanced algorithms and real-time data to optimize performance and reduce consumption. This software and other electronic charting and navigation systems further analyze data to optimize performance, making recommendations for speed and route planning based on factors such as weather conditions, cargo load, and the type of vessel.



*Our major challenge is to bring the environmental conversation where it matters – to the 1,400 seafarers serving our fleet day to day. Whatever we decide to do in the boardroom, if we don't reach the hearts and the minds of the people who are out there on the seven seas, it is a lost mission. We must win their hearts even though many come from places that do not yet have the same regard for environmental protections.*

**Martin Krafft**  
Vice President, Fleet Management



These digital tools are allowing us to more accurately track the performance characteristics of our ships which we use to evaluate and assess future technologies. This information is actively being used for the trial of biofuels as well as collaboratively studying the feasibility of cold ironing in the St. Lawrence Seaway and Great Lakes.

While technology offers new ways to optimize and improve, the human side of the equation is crucial to these systems' success. Not only does the introduction of new digital systems require training for seafarers and employees, but it also encourages changed behaviour, such as relying on data to inform decisions for the operation of a ship. Fednav recognizes that the human side of operational efficiency is a crucial contributor to reducing its GHG emissions and works to provide best-in-class

technologies and the necessary training so that they can be used to their full potential.

As we progress on the energy transition journey toward a net-zero future, Fednav prioritizes the implementation of the latest technologies to make small and large improvements to its environmental performance and meet the highest monitoring and reporting standards. We have been recognized for our efforts and our exceptional level of environmental compliance, with 12 of our vessels earning the US Coast Guard E-zero designation, part of the QUALSHIP 21 program certification. With fewer than 20% of foreign-flagged vessels that operate in US waters meeting the strict eligibility requirements of this program, we are proud that our 12 ships count among the 106 receiving the designation at the time of the recognition.



*Making environmental improvements is a tremendously interesting challenge. It's great working for Fednav, where we have strong leadership and want to do the right thing, but there are many technical and commercial constraints and many uncertainties. The prime energy source for ocean transportation has moved from wind power to coal and then to oil and it took a while - now we're moving from fossil fuels, which will take some time. It's an exciting challenge.*

**Dave Williams**  
Senior Manager, Technical Services

## Cold Ironing

Cold ironing, also known simply as shore power, provides ships with shore-based electrical power while they are docked in port. While it is common practice for ships to shut down their main engines without an electrical connection, ships use fossil fuel burning generators to power cargo equipment and the ships' systems. Connecting to shore power allows ships to reduce GHG emissions, pollutants, as well as noise levels while in port.

Working with Canadian partners, Fednav has contributed to making a case for increased shore power and the need to invest in port infrastructure to offer this service. Further, Fednav funds doctoral research through the Université de Sherbrooke's e-TESC Laboratory, a sustainable mobility lab, to support new studies into electrical engineering solutions.

## Biodiversity

As a company operating in several sensitive environments—including the St. Lawrence Seaway, the Great Lakes, and the Arctic—we are acutely aware of environmental vulnerabilities and the importance of minimizing the impact of our operations on biodiversity. Reducing GHG emissions and meeting strict limits for air pollutants, including NOx, SOx, and particulate matter, are the most critical steps in protecting biodiversity and the ecosystems in which we operate. Fednav follows rigorous reporting requirements on these important measurements. However, the shipping industry affects biodiversity—including life on land as well as life below water—and we have instituted standard operating procedures and best practices to limit these effects to the greatest extent possible.

The health of our industry and that of our waters is intertwined. Marine ecosystems are fragile, and it is the shipping industry's responsibility to protect them, the aquatic life they support, and the health and livelihoods of the people who rely on them. While governed by international agreements and regulations, robust management practices are required to reduce water pollution, introduce technological solutions, and properly maintain ships and equipment to reduce the risk of spills and leakages.

To further mitigate against environmental damage, Fednav uses biodegradable oil on vessels not already equipped with

the latest anti-pollution stern tube air seal system, which avoids any oil-to-water interface. Meanwhile, we also follow the latest developments in new systems that may further improve fuel efficiency and ecological factors. Notably, the latest air lubrication systems continue to evolve, with the latest generation injecting a layer of air between the hull and the water intended to reduce friction and save fuel as well as to reduce underwater noise levels. This is one technology Fednav is following closely as it considers optimizations for future ships. For existing ships, retrofitting waste heat recovery systems, which harness the heat generated by the engines to produce additional energy to use onboard, adds another layer of efficiency.

Through various technological upgrades and strong environmental compliance, our goal is to prevent spills and major leakage incidents entirely, with stated objectives for zero spills and zero incidents of non-compliance with ballast water regulations. Fednav is compliant with the different rules in different jurisdictions and works to minimize cargo residues discharged into the marine environment by all vessels in its fleet. We work with shippers, receivers, and stevedores to reduce the amount of cargo residues, such as grains or fertilizers, from being left behind in the cargo hold or on the deck after cargo has been handled and to collect and leave these on shore. We seek similar commitments from the charterers we work with.

Through the very nature of the business, ships pass through multiple ecosystems over the course of a single voyage. For centuries, ships moving from one area to another often inadvertently carried aquatic invasive species along with them in ballast water, used to increase a vessel's draft or for stability, when required. Today, IMO regulations require ships to exchange ballast water mid-ocean, to treat ballast water through an approved method, or to keep the ballast water on board the ship. Guaranteeing that water is neutral and that all aquatic invasive species have been removed from ballast water is challenging, and regulations cannot account for all situations and conditions. As the largest Canadian operator of international ships in the Great Lakes, Fednav was the first Canadian company to voluntarily begin equipping its oceangoing lakers with a ballast water treatment system. This was a first for the Great Lakes and this technology has been installed on the majority of Fednav-owned ships in the Great Lakes ahead of regulations. The three remaining Fednav-owned ships that do not have ballast water treatment systems are scheduled for installation in 2023. Using these systems, we aim to ensure every ballast water drop is treated before being discharged into a waterway. For ships that do not yet have the systems, Fednav employs practices such as ballast exchange, annual ballast tank inspections, and a Ballast Water Management Plan that includes guidelines for the handling of ballast for those overseeing the vessels.



Aquatic invasive species can be present in ballast water; but plants, algae, and small animals can also attach themselves to the bottom of ships and be spread to new environments, potentially causing ecological harm, a process known as biofouling. Fednav regularly inspects its ships for biofouling, including underwater drones, making the inspection process significantly easier than previous methods. When biofouling is discovered, a management plan is in place in which the ship is cleaned at the earliest possible opportunity to minimize the risk of transferring invasive species, in line with IMO guidelines.

The primary approaches across the industry to remove and prevent biofouling are hull cleaning and the use of anti-fouling paint. Increasingly, Fednav is conscious of the relationship between hull health and performance. When painting our ships, we choose anti-fouling paint optimized for ship-specific operating profiles,

considering sailing days, speeds, water temperatures and idle periods. This helps to prolong the effectiveness of the coating and significantly reduce the risk of sea life attaching themselves to the hull. Before applying the paint, we evaluate the condition of the previous coating and often blast the entire hull to ensure better uniformity of the paint application and reduce roughness and cavitation. This extends the life of the paint and leads to more efficient performance.

Fednav follows a standard docking cycle where we systematically repaint our vessels every five years until they reach age 15. At this stage, they are docked every three years. If the condition of the hull coating is seen to be deteriorating before the next scheduled docking, Fednav evaluates if an early docking is required to apply a new coating. While our approach requires additional investment, it improves fuel performance and prolongs the life of our ships.



*Everything we do in the shipping industry has an impact on the environment. With the evolution of environmental regulations, ship owners and operators need to become more efficient in order to remain in business. New ships can be designed to be more efficient, but we also need to think about how to make existing ships future-proof. The rules are getting stricter every year and continuous improvement is required to ensure these assets continue to trade. This means there is an ongoing evaluation of new technology and rethinking the way we operate ships. Our priorities are shifting with much more attention on sustainability and environmental consideration when making business decisions.*

**Dana Wandschneider**  
Manager, Fuel Performance

## Protecting ecosystems on land and below the water

The shipping industry shares the seas with a rich diversity of aquatic flora and fauna, and many commitments and regulations are in place to protect these organisms and their ecosystems. More than a hundred species of marine mammals share our waters, and they are susceptible to shipping operations, particularly underwater noise. Whales stay in geographic regions for long periods, including the St. Lawrence Estuary, and often spend time at the surface of the water making them vulnerable to collisions with ships. Fednav recognizes that encounters with marine mammals are possible and, aligned with IMO guidelines, we are taking steps to reduce underwater noise and prevent collisions through new practices and innovative approaches.

In 2017, seafarers onboard our ships began receiving training to observe and report marine mammal sightings. This commitment was fully realized in partnership with the World Wildlife Fund, the Marine Mammal Observation Network, and Green Marine. Fednav, along with others in the shipping industry, has implemented a collaborative digital platform that will be used by seafarers to register marine mammal sightings in the waters off Eastern Canada, offering a clearer picture of marine mammals' movement patterns and presence. Created in 2022, this platform is now in operation on all Fednav-owned vessels.



### Marine Acoustic Research Station (MARS) Project

MARS is an applied research project dedicated to understanding underwater sounds, particularly those caused by sonar or shipping, and their effects on marine life and the environment. Supported by the Canadian and Quebec governments, MARS' projects bring together a collection of academic institutions, research organizations, maritime stakeholders, and shipping partners, including Fednav. The initiative aims to develop a better understanding of the effects of noise pollution and to implement solutions to minimize the impact of underwater noise. As part of the project, four Fednav ships have or will carry equipment to register the noises they emit. Fednav also contributed financially to the project.





While there are many sources of human-generated underwater noise, we recognize that the shipping industry contributes to this form of pollution that poses a significant threat to marine mammals and ocean wildlife. Working closely with a range of private and public sector partners, Fednav is engaged in the Marine Acoustic Research Station (MARS) Project in the marine mammal-rich St. Lawrence Estuary, working towards solutions to underwater noise.

In accordance with international regulations, we improve the design of our vessels and the equipment onboard to reduce noise pollution. Our maintenance practices of regularly cleaning the hull and propeller systems of our owned and chartered ships and our policy to regularly repaint our owned ships further reduces cavitation, a

known source of underwater noise, which helps reduce noise pollution in addition to reducing GHG emissions.

Fednav is committed to rerouting vessels that travel through sensitive marine areas to minimize the impact on marine life. Ship speed is also a contributing risk factor for collisions with marine mammals in sensitive areas. It is Fednav's policy to follow all mandatory and voluntary speed limits to protect these ecosystems, provided it is safe and does not pose a risk to crew members. In 2022, Fednav ships were 99.3% compliant with speed reduction regulations in the St. Lawrence River. While Transport Canada's regulation for lower ship speeds was intended to protect marine mammals, it also contributes to the achievement of other environmental objectives, notably ensuring that shoreline erosion remains at a minimum.

**BIODIVERSITY PERFORMANCE**

**2022**

Percentage of fleet implementing ballast water exchange	Arctic Fleet: 0% International Fleet: 10%
Percentage of fleet implementing ballast water treatment systems*	Arctic Fleet: 100% International Fleet: 90%
Shipping duration in marine protected areas or areas of protected conservation status	10,036 (52 ships data)
Volume of spills and releases to the environment	0
Aggregate of spills and releases to the environment	0

\* In addition to treating ballast water, all Fednav vessels perform midocean ballast exchange operations before sailing into environmentally sensitive areas.



## Waste Management

There is mounting evidence exposing the dangers that plastic and other waste cause for marine environments and aquatic life. While there are multiple sources for this waste, including much that comes from the shore, shipping contributes to this problem. Fednav has instituted several measures to prevent pollution and raise awareness among its employees and seafarers.

Waste management begins with reducing waste creation in the first place through awareness training and instructions on limiting the use of packing material. For waste materials that cannot be recycled, our policies recommend disposal at a shore-based location while in port or, if at sea, using incinerators on board ships. Plastic is among the largest preventable causes of waste on board ships, with cargo packaging being the most significant source and used plastic water bottles accounting for a disproportionate amount of overall waste. Fednav is committed to the reduction of single-use plastics and measures progress year-over-year. In addition, Fednav, through its ship managers, supports the IMPA SAVE Council, a global shipping industry association dedicated to more sustainable practices to promote greater economic performance. We are firmly committed to reducing waste and pollution through recycling, conservation, and efficient use of resources.

Throughout 2022, Fednav continued to retrofit all owned ships with Reverse Osmosis Plants that purify the freshwater generated onboard to make it suitable for human consumption. The entire fleet will have this upgrade by the end of 2023. The technology serves the day-to-day water needs of those onboard. Fednav works to educate crew members and partners on its safety and the environmental benefits of avoiding bottled water, instead encouraging the use of reusable and refillable bottles that may be filled from this renewable water source.

Our ships are also equipped with an onboard sewage treatment plant, which safely manages human waste. All new vessels built for use in the Arctic, the St. Lawrence, and the Great Lakes are fitted with additional storage capacity for sewage-treated and gray water. This provides ample capacity to abide by regulations in an increasing number of no-discharge zones and to accommodate long voyages.

The most significant and delicate waste management effort is the recycling of ships themselves at the end of their operational lives. Ship recycling is a challenging process, given the size and complexity of the vessels and the potential presence of toxic substances or pollutants, which pose a threat to ecosystems where the ship



is dismantled, as well as potential health and safety issues. Fednav adheres to the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (2009), goes beyond the regulations at home and applies the highest international standards. This includes a commitment to green recycling, obtaining hazardous material certificates identifying potentially dangerous materials on board, and the selection of ship-breaking yards that conform to the convention. Throughout this process, Fednav puts the health and safety of workers and local communities first and takes every step possible to prevent harm to the environment.



## IMPA SAVE Council

Founded in 2020, the IMPA SAVE Council is an initiative by the International Marine Purchasing Association (IMPA), which brings together global ship owners and maritime suppliers to establish best practices and bring sustainable procurement practices into the industry. The program focuses on reducing the negative environmental and social impact of shipping while improving economic performance. Fednav is a member of the initiative and contributes to the goal of more sustainable practices for a more sustainable industry.

### Plastic Water Bottles

(data from IMPA SAVE)

1M

PLASTIC WATER BOTTLES SOLD GLOBALLY EVERY MINUTE

12,7M

TONNES OF PLASTIC ENTER OUR OCEANS EACH YEAR

### WASTE MANAGEMENT PERFORMANCE

2022

Reduction of Single-Use Plastic on Ships	15% reduction since 2020
Responsible Ship Recycling	100%
Fresh water generators and purifiers	97% of fleet



The invasive aquatic species we're screening for can only be seen under a microscope. It's so specialized that in Canada only Fisheries and Oceans Canada (DFO) can check it and with tight timelines on sampling requirements they essentially bring the lab on board the ship. As the biggest international operator in the Great Lakes, and with the vast experience of using ballast water treatment systems over the past decade, we're working with governments in Canada and the US to help provide data on operational issues. Since 2006, the rate of discovery of newly established non-native species in the Great Lakes declined by 85% to its lowest level in two centuries which indicates that the regulations are working.

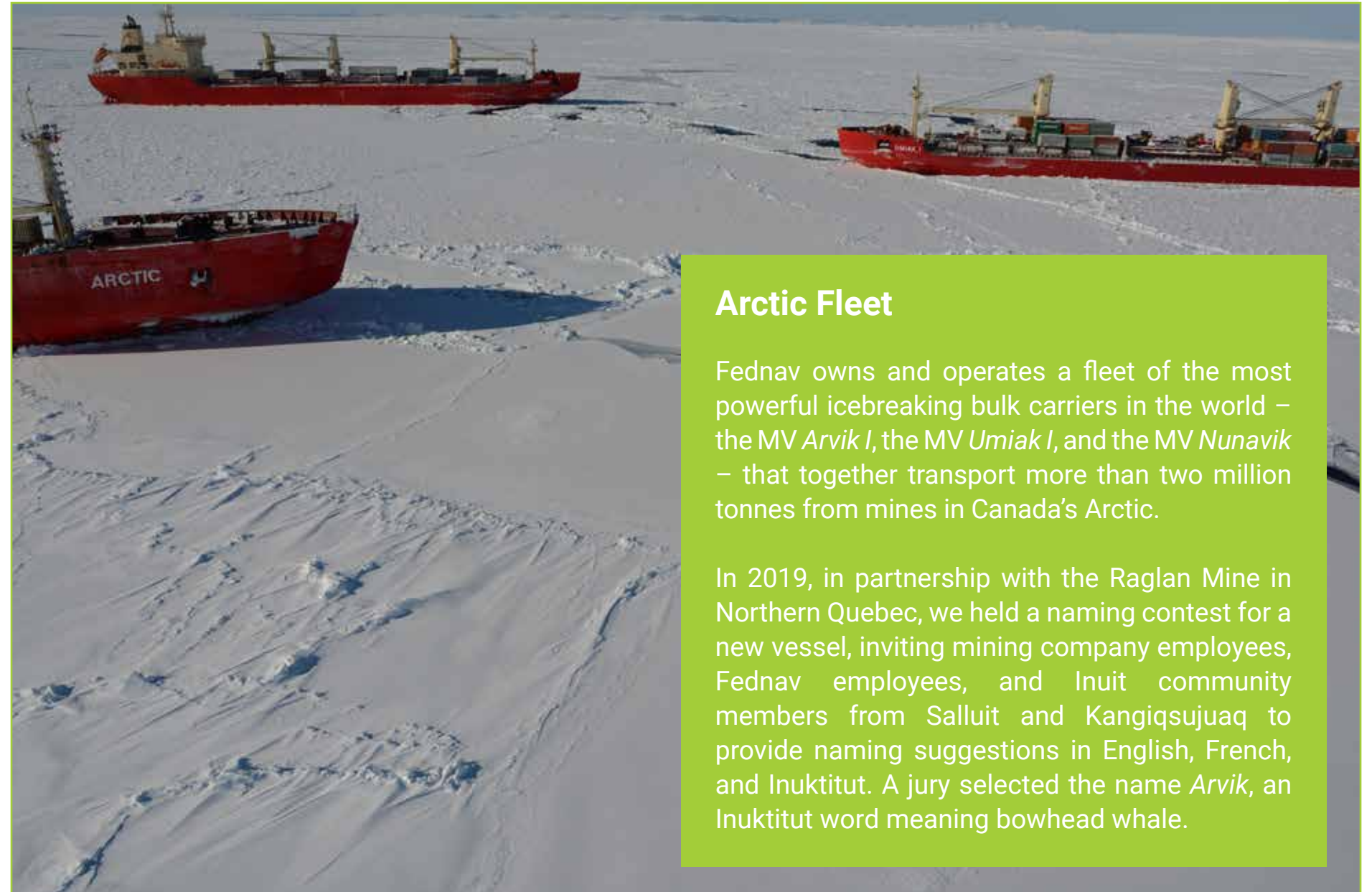
**Captain Mandeep Singh Makkar**  
Manager, Fleet Management

## Arctic Operations

For 70 years, Fednav has been a pioneering presence in Canada's Arctic, having participated in every major shipping project during that time and becoming the first company to provide year-round shipping without escort with a first winter voyage from Deception Bay in 1998.

Through our long experience, we understand the challenges the Arctic climate presents and recognize its unique and vulnerable environment. Fednav has contributed to national and international initiatives that have led to zero discharge regulations across the Arctic and has supported research to better understand different kinds of ice and how it moves and behaves. We continue to contribute to research initiatives in the North as a participant in ArcticNet, a network that gathers scientists and other professionals to study the impacts of climate change and modernization in the Arctic.

Through our operations, we maintain many practices that go beyond regulations to protect the Arctic environment. Fednav took delivery of the first Canadian-flagged NOx Tier III compliant vessel operating in the Canadian Arctic. The means of NOx reduction is exhaust gas recirculation, with the addition of holding tanks, which go above and beyond the regulatory requirements to avoid discharges from the system in the Arctic. Though the emission control area limits for North America end at the Arctic Circle, 60 degrees latitude, Fednav makes every effort to honour these targets when operating in the Arctic.



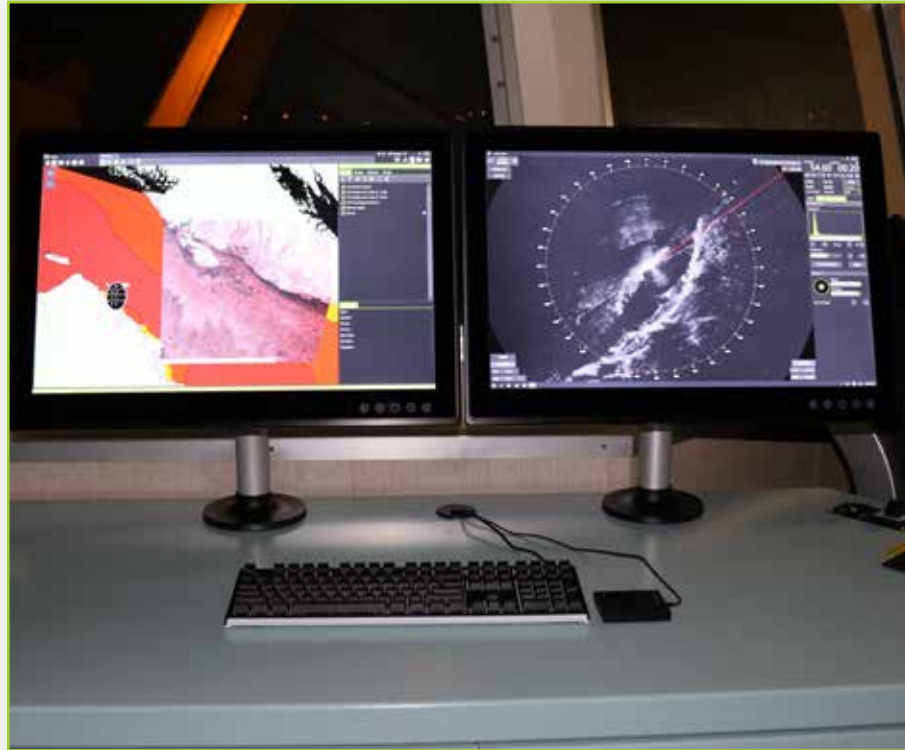
### Arctic Fleet

Fednav owns and operates a fleet of the most powerful icebreaking bulk carriers in the world – the MV *Arvik I*, the MV *Umiak I*, and the MV *Nunavik* – that together transport more than two million tonnes from mines in Canada's Arctic.

In 2019, in partnership with the Raglan Mine in Northern Quebec, we held a naming contest for a new vessel, inviting mining company employees, Fednav employees, and Inuit community members from Salluit and Kangiqsujuaq to provide naming suggestions in English, French, and Inuktitut. A jury selected the name *Arvik*, an Inuktitut word meaning bowhead whale.



## IceNav



Fednav's icebreaking vessels are equipped with IceNav technology, an onboard navigation system that supports ship captains as they determine the most efficient routes through icy waters. Developed by Fednav's Ice Services in collaboration with mariners, IceNav is an award-winning, cutting-edge, user-friendly system that allows for better ice detection as well as data-informed routing choices.

## Engaging Northern communities



Working with our mining partners in the Arctic, Fednav benefits from and contributes to the strong relationships these companies have developed with local communities. Fednav continues to respect the established black out periods to leave ice undisturbed in areas where Northern communities use ice as a means to travel. And during the COVID-19 pandemic, we carried additional food and supplies to remote communities.



*We are often connected to communities through the great relationships they have with our partners, especially in the North. Working with our partners and Indigenous communities, a few years ago we had a naming contest for the ship, the Arvik I. Just this past year, we had a big ceremony on board and named an Inuit elder as the Godmother of the vessel. We met with community liaison officers from our partner company and offered to do more community engagement projects to add to our existing support.*

**Courtney Legault**  
Head of Operations, Arctic

# People and Social Responsibility (S)

People are at the heart of what we do. We have a proven track record and a long-term vision to act in the best interest of our customers, partners, and employees. Investing in our people and the communities where we operate around the world is central to our culture. Our people and the policies, practices, and systems in place emphasize the value of diversity, equity, and inclusion. We work to ensure safe and respectful work environments and meet the highest standards of safety and protections for our seafarers. The partnerships and collaborations we choose support these efforts. These principles are reflected in everything we do.

## SDGs



## IN THIS SECTION

- 23 – Safety and Well-being
- 25 – Workforce Engagement
- 27 – Diversity, Equity, and Inclusion
- 28 – Our Partnerships





## Safety and Well-being

Fednav is dedicated to practicing and promoting ethical operations. This begins with our unwavering commitment to offering safe, secure, and respectful environments for all, with particular attention to protecting the health and wellbeing of seafarers. Fednav and its fleet management partners are recognized for their leadership and commitment to safety, and we have implemented a robust safety management system to prevent incidents. We invest in safety and the physical security of our crew, with extensive training for use of equipment. All members of our onshore team are required to undergo annual training on policies such as our *Code of Business Conduct and Ethics* and our *Prevention and Resolution of Harassment and Violence in the Workplace*. Although harassment and violence training is generally required on a biennial basis, Fednav believes that yearly training keeps concepts fresh and ensures a safe work environment.

During the pandemic, when lockdowns came into force, many seafarers who were at sea were in limbo due to border closures and unable to return home. The industry united in the face of shared challenges, finding ways to safeguard their crews and, when possible, return them to shore. This was particularly important for more remote locations, including the Arctic. As the pandemic persisted, seafarers were given priority for vaccination as workers essential to the continuation of trade and supply chains.

These conditions prompted the drafting of the Neptune Declaration on Seafarer Wellbeing and Crew Change, a joint initiative of various international shipping organizations. Intended to prevent such circumstances from happening again, the Declaration calls for the recognition of seafarers as "key workers" with additional rights of movement and that the international community treat seafarers with dignity and respect.

A signatory to the Neptune Declaration, Fednav regularly takes extraordinary steps to protect its employees, crew members, and their families. Following Russia's invasion of Ukraine in February of 2022, Fednav offered logistical support and financial assistance to Anglo-Eastern, our ship management partner, as they moved quickly to protect their Ukrainian staff and their families. These actions helped seafarers and their families evacuate Ukraine and receive relief compensation to allow those onshore to access immediate financial support for their families. Fednav also supported families in India during the pandemic where the principal provider had served on Fednav ships. This included monetary support for immediate needs and educational support for children. Closer to home, when Hurricane Fiona hit the East Coast in the fall of 2022, Fednav was quick to offer support to crews who had weathered the hurricane on board a ship on the coast of Newfoundland and Labrador.



### Focused on safety

Fednav works with ship management partners – Anglo Eastern, Zeaborn, and Canship – that prioritize safety and have been recognized for their records. This includes extensive training and professional development for crew members, often exceeding industry standards, and programs that promote safety and recognize those who outperform in their roles. Anglo Eastern, which manages 95% of Fednav's fleet, has won several awards including the Safety at Sea: Innovation Award, the Hong Kong Flag Outstanding Port State Control (PSC) Performance Award, and placed first in Lloyd's List of top 10 ship managers in the world.

While recent years have included several exceptional threats, safety is an integral part of our day-to-day operations and is covered by a range of company policies. Our *Code of Business Conduct and Ethics* is the centrepiece of our policy framework, outlining expectations for legal compliance, ethical behaviour, and discrimination and harassment. It is further supported by a comprehensive *Policy for the Prevention and Resolution of Harassment and Violence in the Workplace* that outlines our conditions for protecting fairness, respect, and dignity to safeguard the safety of all employees. Other policies and practices in place for employees, seafarers, and partners add additional layers of protection for individual safety, including a *Whistleblower Policy* that provides a confidential external channel to report suspected violations of laws or company policies.



SOCIAL	2022
<b>SAFETY AND WELL-BEING PERFORMANCE</b>	
Lost Time Injuries (LTIs) (lost time incidents) / (1,000,000 hours worked)	0.53
Percentage of marine casualties classified as very serious	0
Number of Conditions of Class or Recommendations	13
Number of port state control (1) deficiencies and (2) detentions	(1)134 (2)1*

\* There is one detention of a Fednav vessel in 2022, however this vessel has subsequently been sold.





## Workforce Engagement

The COVID-19 pandemic caused waves of disruption across sectors but presented unique challenges for the shipping industry. While many other industries were faced with a sudden halt in operations due to lockdowns, we continued to operate to support the global supply chain. When so many around the world stayed home, our seafarers continued to sail the seas, supported by our team of employees, facing unprecedented challenges in crew changes and border closures and experiencing the stress and exhaustion that came with that uncertainty.

Fednav is committed to ensuring that its employees, contractors, and all those who are connected to its business remain safe and secure. We count "Regard for employees" among our core values, and this comes to life through our employee-centric work environment and commitment to employee health and wellbeing. We believe this sets Fednav apart and we know that standing by our people means they are more likely to enjoy their workplace and be more engaged with colleagues and the company itself.

Fednav is firmly dedicated to attracting and retaining the best talent and providing an inclusive work environment where our people can perform at their best. In today's competitive labour market, we believe our culture as well as our compensation and benefits are attractive to job seekers.

As a company with a high retention rate, a remarkable 40% of Fednav employees have spent more than 10 years working at Fednav, of which 23% have spent more than 20 years with the company. We also offer a modernized employee experience, including support for those who choose to use environmentally-friendly solutions to commute to work and offering further support for healthy choices. While our family culture is made stronger through face-to-face engagement between team members, employees who can perform their duties working from home have the flexibility to do so.

Maintaining an engaged team also requires listening to their questions and concerns. Fednav seeks feedback from its people as well as its stakeholders to take the pulse of current practices. The most recent polling was a voluntary, confidential survey to better understand our employees' needs and measure our strengths and areas of improvement as we work to deliver on our promise of a diverse workplace. Using surveys or focus groups has led to important updates and changes to our practices and policies.

Fednav recognizes the importance of investing in its employees' personal and professional growth as one sign that we value them and the work they do. We ensure that all who work for Fednav receive the training they need to succeed in their roles, including training on our Code



### Fednav Community Employee Committee (FCEC)

With financial support from the company, the employee led Fednav Community Employee Committee (FCEC) has a mission to provide charitable assistance to individuals or groups in need. These beneficiaries are generally in geographic areas where Fednav has offices and where employees serve as volunteers, advisors, or sit on governing bodies. Since 2008, the FCEC has donated more than \$3.6 million to charities.

of *Business Conduct and Ethics* and policies so that everyone understands our company's commitments and our individual responsibilities. For the seafarers working on our ships, there is extensive safety training to protect individuals and respond to emergencies on board ships as well as specialized preparation for different roles and types of equipment.

Fednav considers the training required when adopting new practices and recognizes that these initiatives will only succeed if those tasked to do them have the required skills. As fast-paced innovation continues to offer digital solutions or technological advancements for different areas of our business, the need for additional upskilling will continue to be an important consideration. Beyond investing in the professional abilities of employees, Fednav also invests in the organizations they care about. The Fednav Community Employee Committee champions charities around the world that are supported by our employees.

Fednav is equally committed to investing in the development of the next generation of workers interested in careers in the maritime sector. Each year, Fednav's Summer Internship Program hosts a number of students from different academic backgrounds to work with our teams. Our interns learn about the industry and gain critical on-the-job training and experience Fednav's unique business culture. Our Shipping Trainee Program is also intended to attract young talent and to prepare them for a fulfilling career. Those selected for this two-year program, offered through the Danish Shipping Academy, will graduate with broad industry knowledge, hands-on training through the Marine Department, and prepare for a career in the maritime industry.

Each year since 2011, Fednav has been recognized as one of Montreal's Best Employers, an honour that increases the visibility of our programs and helps us attract top talent as they enter the workforce.



## All Aboard Alliance

Founded by the Global Maritime Forum in 2022, the All Aboard Alliance is a coalition of organizations promoting diversity, equity, and inclusion principles within the maritime industry. The Alliance raises awareness about the benefits of a more diverse, equitable, and inclusive industry, so that it is better equipped to face future challenges such as labour shortages and solving key issues in our industry.

As a member of the Coalition, Fednav has implemented the five Alliance principles: appointing a sponsor for diversity, equity and inclusion, educating people about the importance of DEI, promoting and maintaining a culture of belonging, collecting data and measuring progress, and communicating our commitment. Fednav's President and CEO, Paul Pathy, is the sponsor of this initiative within our organization showing strong support from the executive level. Fednav also participated in the design of the Alliance and continues to contribute to the working groups.



## Diversity, Equity, and Inclusion

Over many years, research has demonstrated that diverse teams that bring together a range of voices and perspectives perform better, are more innovative, and find creative solutions to problems. Fednav has always sought to create a culture of belonging and believes that diversity, equity, and inclusion (DEI) within our company leads to better business outcomes. Over the last year, we have joined the All Aboard Alliance, an industry coalition dedicated to promoting DEI within the maritime industry, performing an internal assessment of policies and practices to ensure DEI principles are reflected across our company.

Given the global nature of the shipping industry, our employees and seafarers come from all parts of the world. Gender balance has been an objective for some time and Fednav's 220 onshore employees include 61% men and 39% women. Another 1,400 seafarers serve as crew on our ships, hired and overseen by our ship management partners Anglo-Eastern, Zeaborn, and Canship, many of whom come from India, Ukraine, and the Philippines.

We strive to reflect the diversity of our stakeholders. Our partners and collaborators increasingly expect us and the maritime industry to take important steps to improve on DEI. While shipping has traditionally been a male-dominated industry, it has made great strides to bridge the gender gap in recent years. However, we still have a long way to go in some areas of our business, such as seafaring. Emerging from the pandemic, the growing demand for maritime trade comes at a high-water mark for employment, underlining the importance of retaining existing employees and broadening the talent search to those that may not have a connection to or considered a career in the maritime industry.

**SOCIAL** 2022

**PEOPLE AND SOCIAL RESPONSIBILITY PERFORMANCE**

Total number of office employees	220
Gender ratio	Male: 61% Female: 39%
Gender ratio (all managerial position)	Male: 71% Female: 29%
Turnover/Retention rate	7%
Total number of shipboard employees	1,389



*At the heart of Fednav's work is a deep-rooted belief in the power of Diversity, Equity, and Inclusion (DEI) to transform our workplace and our industry for the better. We are firm in our commitment to infuse DEI principles into every facet of our operations, including the reimagining of our benefits and human resources policies to create an environment where everyone feels seen, heard, and valued, and where they can contribute to their full potential. As we complete this process, we are planning how to continue to support and develop DEI in our day-to-day operations.*

**Lucie-Marie Gauthier**  
Vice President, Global Talent

## Our Partnerships

In an increasingly interconnected industry, Fednav prides itself on meaningful partnerships and collaborations with a range of associations, non-profits, and organizations working to advance the maritime industry. These engagements include environmental committees, organizations focusing on protecting the Arctic, initiatives in the Great Lakes and St. Lawrence seaway, and economic development and marine advisory groups.

Members of Fednav's team serve on the Board of Directors for international industry organizations, including BIMCO, the Maritime Anti-Corruption Network, Green Marine, and national and regional organizations, including the Marine Transportation Advisory Council (MTAC), Société de développement économique du Saint-Laurent (SODES) the Ontario Marine Council, and the Shipping Federation of Canada. We represent our organization and share our expertise as participants, committee members, and ambassadors with many other organizations.

FEDNAV IS PROUD TO BE ENGAGED IN THE FOLLOWING INITIATIVES THAT FOCUS ON PROMOTING COLLABORATION AMONG STAKEHOLDERS IN THE INDUSTRY, INCLUDING GOVERNMENTS, THE PRIVATE SECTOR, CIVIL SOCIETY, AND ACADEMIA, TO DRIVE SUSTAINABLE DEVELOPMENT IN THE MARITIME SECTOR

**All Aboard Alliance**  
 Focused on promoting diversity, equity, and inclusiveness in the maritime industry.

**Baltic and International Maritime Council (BIMCO)**  
 CEO Paul Pathy is Board Member  
 The world's largest international shipping association, it provides expert knowledge and practical advice to safeguard and add value to their members' businesses.

**Getting to Zero Coalition**  
 Developing and promoting zero-emission technologies and practices in the shipping sector to achieve zero-emission shipping by mid-century.

**Global Maritime Forum**  
 Driving transformative action and fostering collaboration in the maritime industry (launched Getting to Zero Coalition, Neptune Declaration, and All Aboard Alliance), with a focus on sustainability.

**Green Marine**  
 Founding Member  
 A voluntary environmental certification program that helps its participants to improve their environmental performance.

**Maersk Moeller McKinney Center for Zero Carbon Shipping**  
 Focused on reducing the carbon footprint of the shipping industry through new technologies and methods to reduce GHG emissions.

**Maritime Anti-Corruption Network**  
 MACN is a global business network working towards eradicating corruption in the maritime industry, enabling fair trade to the benefit of society at large.

**Neptune Declaration**  
 A commitment prioritizing the health, safety, and wellbeing of seafarers for their critical role in maintaining global trade.



*Our partners trust us. They know that we follow through with our commitments. Our approach to this report is no exception: we aim to deliver on what we promise. We do not merely talk about our intentions, but we act upon them and report on our achievements once they have been executed to the highest standard.*

**Nicole Trépanier**  
 Director, External Relations and Communications



# Corporate Governance (G)

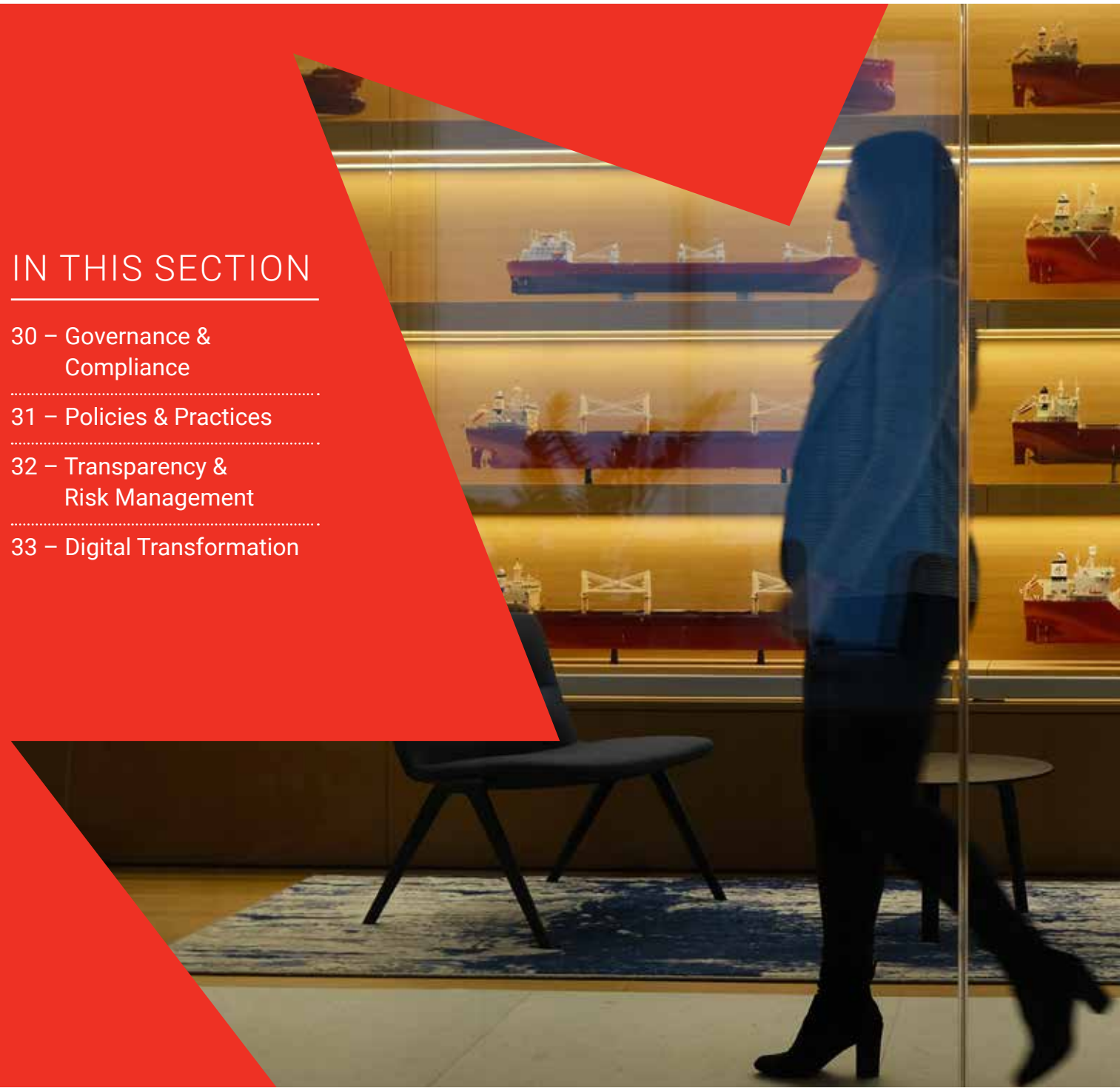
We believe that alignment and decisions at the executive level, guided by the Board, are crucial to establishing a strong culture. Through our commitment to act in the best interests of our customers, partners, and employees, our policy decisions focus on doing what is right, recognizing that this will provide the greatest value in the long term. Our policies and practices focus on transparency and sound governance. Members of our leadership team collaborate with international organizations and hold seats on global governing bodies establishing best practices and policies for the industry as a whole.

## SDGs



## IN THIS SECTION

- 30 – Governance & Compliance
- 31 – Policies & Practices
- 32 – Transparency & Risk Management
- 33 – Digital Transformation



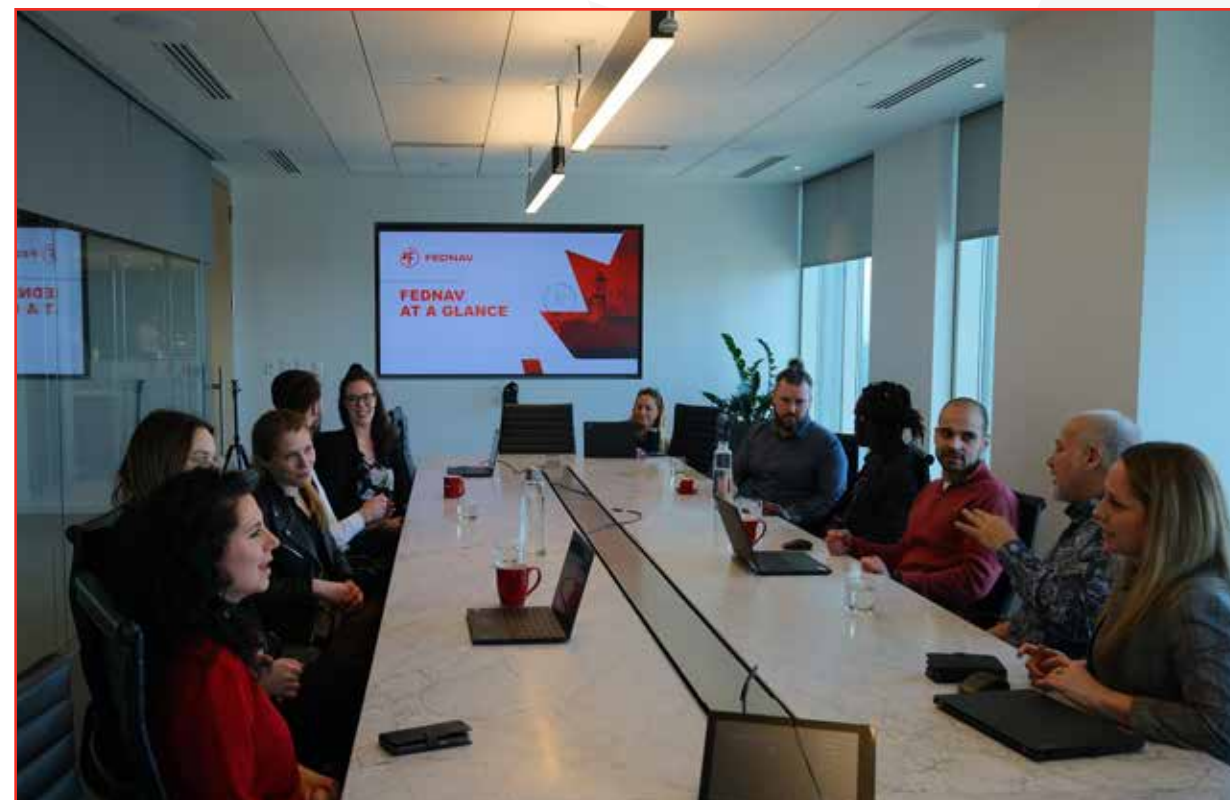
## Governance and Compliance

Fednav's Executive Team is supported by a Board of Directors that sets the direction for our corporate philosophy and our focus on ESG principles, serving as a steering board. Following a materiality assessment in 2019 that set the foundations of our ESG principles, the Fednav Executive Team established an ESG Steering Committee. This Committee guides Fednav's future-facing approach to purposefully incorporating ESG principles into the company's activities and supporting the Board in their oversight and monitoring of our ESG framework.

Our *Code of Business Conduct and Ethics* is built upon our core value of *Honesty and Integrity: doing what's right* and reflects our commitment to ethical business practices and a culture of inclusion, integrity, and respect. While our employees, officers, and directors apply this value every day, the Code offers a framework to ensure Fednav operates at the highest legal and ethical standards.

In cases where the best course of action may not be clear, the Code defines the company's expectations across several areas, including the following ESG-related categories:

- ▶ Compliance with Laws
- ▶ Discrimination and Harassment
- ▶ Real and Apparent Conflicts of Interest
- ▶ Recording and Reporting Information
- ▶ Bribery, Anti-Corruption, and Money Laundering
- ▶ Gifts and Hospitality





## Policies and Practices

In addition to our Code, Fednav has robust policies and practices in place that further support our culture of transparency and commitment to preventing corruption, guaranteeing safe environments, and ensuring regulatory compliance.

Working in jurisdictions and with authorities in countries around the world, the shipping industry is susceptible to misconduct, which ultimately threatens reputations and betrays trust. Fednav takes a zero-tolerance position towards corruption and bribery. In addition to preventing unethical behaviour through our codes and policies, we are engaged in international agreements and collaborate with bodies working to combat corruption.

Inside the company, our policy framework is designed to create working environments free from harassment and intimidation. Our employees receive training

related to our *Policy for the Prevention and Resolution of Harassment and Violence in the Workplace* as well as our *Code of Business Conduct and Ethics*, ensuring all understand our culture and the protections they have. Further, Fednav offers a third-party whistleblower system, allowing employees a confidential alternative if they are uncomfortable reporting concerns through other channels. The system goes to great lengths to guarantee anonymity for those who may report wrongdoing related to corruption, bribery, harassment, discrimination, and health and safety violations.

Fednav complies with all applicable regulatory requirements and tax regulations in the jurisdictions where we operate. Where possible, we adopt best practices that go beyond what is legally required.

GOVERNANCE	2022
<b>POLICY AND PRACTICES PERFORMANCE</b>	
Number of calls at ports in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	5
Total amount of monetary losses because of legal proceedings associated with bribery or corruption	0

### Maritime Anti-Corruption Network Member

Based in Copenhagen, the Maritime Anti-Corruption Network (MACN) works to create a maritime industry free of corruption. Established in 2011 by a small group of maritime companies, MACN has grown to include more than 160 companies globally, becoming one of the pre-eminent examples of collective action to tackle corruption.

Fednav's Vice President, Fleet Management, Martin Krafft, is a member of MACN's Board of Directors.

## ▶ Transparency and Risk Management

As we emerge from the tumultuous times of the pandemic and, more recently, market volatility, the world has a newfound understanding of risks – those we may predict and those we cannot foresee. As we face the future, climate change in particular offers new and unpredictable risks that may have important implications for our industry and the coastal communities we serve around the world.

Our approach to enterprise risk management is to assess risks facing our company, measure the effectiveness of the mitigation controls in place, and report these findings to the Board. We have a risk management framework which is reviewed and updated annually according to the changes facing our industry. We take action to eliminate or mitigate

those risks and protect our business. As we increasingly work to decarbonize and minimize our environmental footprint, we understand how these decisions will affect our operations. True to our values, our decisions take into consideration many different factors that create sustainability in the longer term.

More generally, measuring the risk of global forces such as market volatility, geopolitical dynamics, and technological innovation allows us to make better business decisions. We continue to add measurements to these analyses that inform our decisions. Further, preparing for the unexpected through continuity and recovery planning allows the company to plot a course for continued success as we face the future.



*We operate in an industry facing several challenges with a rapidly changing market environment. Therefore, it is crucial to have a strong risk management framework so our business remains strong and resilient to face any situation.*

**Katia Marquier**  
Chief Financial Officer



## Digital Transformation

Disruptive technologies are changing industries around the world. The shipping industry itself is experiencing a technological revolution – the so-called 4<sup>th</sup> Propulsion Revolution according to the International Chamber of Shipping. In recent years, Fednav has moved quickly to implement technological solutions, including the use of digitization and automation to improve operations and processes, and leveraged technology to enhance cyber protection.

The latest technologies are changing our ships' management and operation, informing solutions to some of the industry's most pressing issues, notably decarbonization.

Ending the use of fossil fuels altogether is an objective shared across the industry. Until that goal is achieved, optimizing fuel consumption is a critical component in limiting environmental impact. While our ships come online and begin relaying data in real-time, there are opportunities to make data-informed decisions that lead to better and more efficient fleet management, including route mapping based on weather conditions and optimizing fuel consumption. This digital transition also creates challenges in terms of implementing new systems on older assets and training employees and seafarers on how to use these new systems to their fullest potential.

In the near future, emerging technologies will continue to offer new opportunities to innovate and improve how we operate, from the disruptive products being produced by start-ups to the use of artificial intelligence. Other recent advancements, such as Starlink's low latency and high-speed bandwidth connection for ships at sea, will keep vessels connected and allow seafarers to keep in touch with their families during their voyages.

As all facets of our business become increasingly digitized, cybersecurity and data protection are a central priority for Fednav. We believe that the way we use technology goes beyond our duty to protect information – careful and responsible handling of private and personal information is also an expression of our culture and attitude towards our team and our stakeholders. Borrowing from global best practices, we have a greater focus on and investment in cybersecurity to protect our information systems from infiltration, disruption, and theft.

As our ships themselves come online, Fednav is acutely aware of the risks and is investing in the proper safeguards to protect our employees, partners, and customers against cyberattacks. At the same time, we are harnessing the benefits of the latest technologies in our effort to continually improve our performance.



*Most of the computerized systems on ships are from the 1990s and have no information management systems. The new ships are different. Within five to ten years, these ships will be similar to mobile floating data centers around the world. We're preparing for this exciting, transformational journey to harvest its full potential.*

**Laurent Reit**  
Vice President, Technology and Digital Transformation

# Performance

Fednav is committed to publishing its environmental, social, and governance (ESG) performance in an open and transparent manner.

This ESG report focuses on our owned ship activities exclusively. Our company will now focus solely on maritime shipping following the sale of our terminal operations and logistics divisions. This report establishes a clean slate and a framework we will use for years to come as we begin to report our progress.

ENVIRONMENT	Units	2022	2021	2020	SASB Codes
<b>DECARBONIZING &amp; EMISSIONS</b>					
CO <sub>2</sub> Emissions*	Metric tons (t) CO <sub>2</sub> -e	736,692	779,736	806,177	TR-MT-110a.1
Total energy consumed (Gigajoules)	Gigajoules (GJ)	10,659,000	11,321,000	10,765,000	TR-MT-110a.3
Percentage of heavy fuel oil	Percentage (%)	33.3%	45.16%	45.65%	TR-MT-110a.3
Percentage of renewable fuels	Percentage (%)	1%	0%	0%	TR-MT-110a.3
Average energy efficiency design index for new ships (EEDIs) <i>*Calculated only for the vessel with EEDI values</i>	Grams of CO <sub>2</sub> per ton-nautical mile	5.1	5.03	5.01	TR-MT-110a.4
Air emissions: NOx (excluding N2O), SOx, and Particulate Matter (PM10) (Metric tons)	Metric tons (t)	<b>NOx:</b> 17,536 <b>SOx:</b> 1,384 <b>PM10:</b> 1,536	<b>NOx:</b> 16,098.9 <b>SOx:</b> 1,509.74 <b>PM10:</b> 1,759	<b>NOx:</b> 17,365.4 <b>SOx:</b> 1,500.5 <b>PM10:</b> 1,662.1	TR-MT-120a.1
<b>BIODIVERSITY</b>					
Percentage of fleet implementing ballast water exchange	Percentage (%)	Arctic Fleet: 0% Intl. Fleet: 10%	Arctic Fleet: 0% Intl. Fleet: 21%	Arctic Fleet: 33% Intl. Fleet: 40%	TR-MT-160a.2
Percentage of fleet implementing ballast water treatment systems**	Percentage (%)	Arctic Fleet: 100% Intl. Fleet: 90%	Arctic Fleet: 100% Intl. Fleet: 79%	Arctic Fleet: 67% Intl. Fleet: 60%	TR-MT-160a.2
Shipping duration in marine protected areas or areas of protected conservation status	Days	10,036 (52 ships data)	N/A	N/A	TR-MT-160a.1
Volume of spills and releases to the environment	Number, Cubic meters (m <sup>3</sup> )	0	0	0	TR-MT-160a.3
Aggregate of spills and releases to the environment	Number, Cubic meters (m <sup>3</sup> )	0	0	0	TR-MT-160a.3

\* Scope 1

\*\* In addition to treating ballast water, all Fednav vessels perform midocean ballast exchange operations before sailing into environmentally sensitive areas.



# Performance

<b>SOCIAL</b>	<b>Units</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>SASB Codes</b>
<b>HUMAN CAPITAL</b>					
Total number of office employees	Number	220	212	237	–
Gender ratio (office employees)	Percentage (%)	Male: 61% Female: 39%	Male: 59% Female: 41%	Male: 60% Female: 40%	–
Gender ratio (all managerial position)	Percentage (%)	Male: 71% Female: 29%	Male: 69% Female: 31%	Male: 70% Female: 30%	–
Turnover/Retention rate	Percentage (%)	7%	10.92%	2.39%	–
Total number of shipboard employees	Number	1,389	1,465	1,430	–
<b>SAFETY</b>					
LTIs	Rate	0.53	0.67	0.25	TR-MT-320a.1
Number of marine casualties	Number	4	7	1	TR-MT-540a.1
Percentage of marine casualties classified as very serious	Percentage (%)	0%	0%	0%	TR-MT-540a.1
Number of Conditions of Class or Recommendations	Number	13	26	14	TR-MT-320a.2
Number of port state control (1) deficiencies and (2) detentions	Number	<sup>(1)</sup> 134 <sup>(2)</sup> 1*	<sup>(1)</sup> 178 <sup>(2)</sup> 0	<sup>(1)</sup> 112 <sup>(2)</sup> 0	TR-MT-540a.3
* There is one detention of a Fednav vessel in 2022, however this vessel has subsequently been sold.					
<b>GOVERNANCE</b>					
Number of calls at ports in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Number	5	4	2	TR-MT-510a.1
Total amount of monetary losses because of legal proceedings associated with bribery or corruption	Reporting Currency	0	0	0	TR-MT-510a.2



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