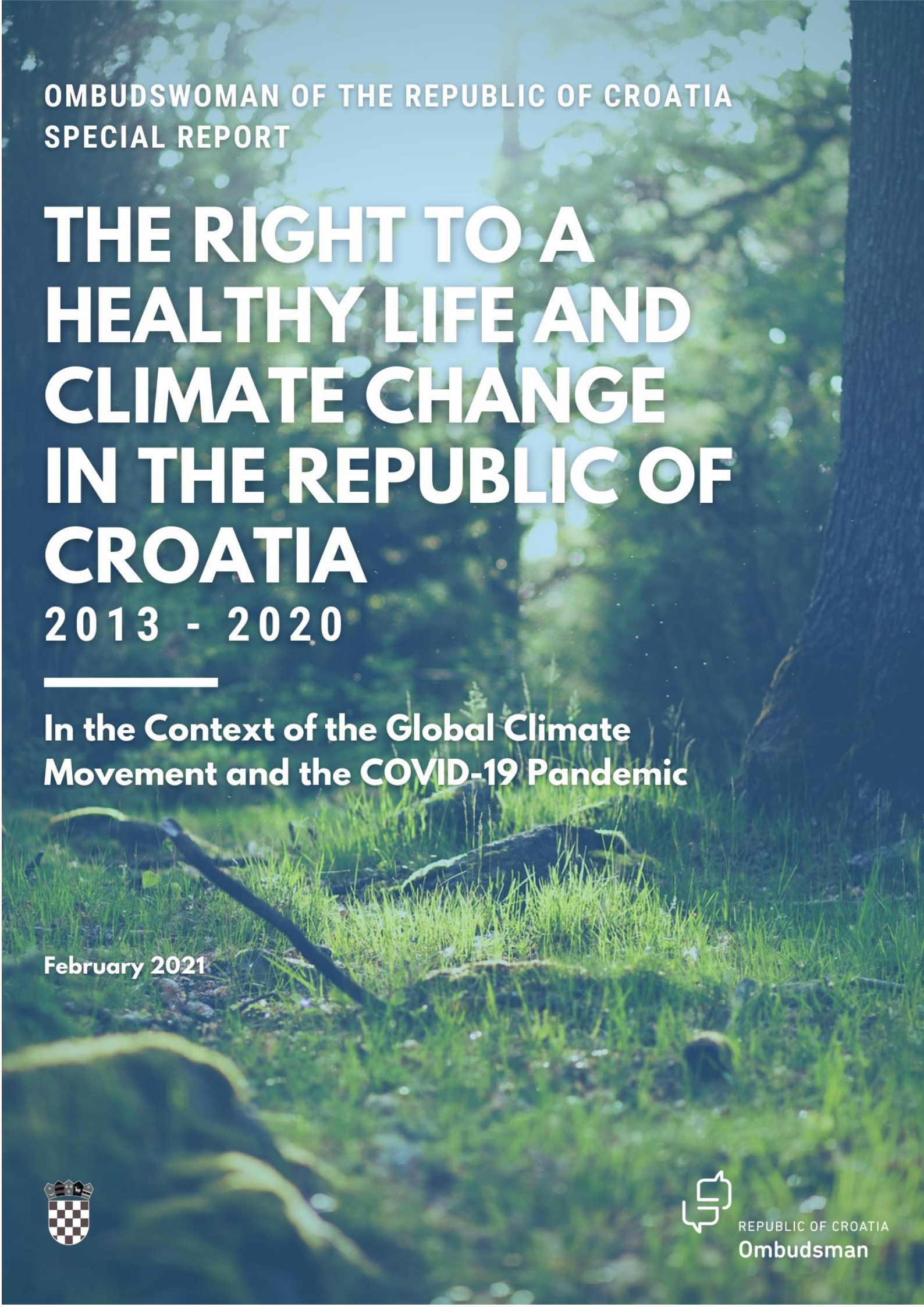

OMBUDSWOMAN OF THE REPUBLIC OF CROATIA
SPECIAL REPORT

THE RIGHT TO A HEALTHY LIFE AND CLIMATE CHANGE IN THE REPUBLIC OF CROATIA
2013 - 2020

In the Context of the Global Climate Movement and the COVID-19 Pandemic

February 2021

REPUBLIC OF CROATIA
Ombudsman

CONTENTS:

1. INTRODUCTION

In line with Article 16 paragraph 2 of the Ombudsman Act vesting the Ombudsperson with the mandate to submit special reports on specific issues falling within her/his scope of work, especially in cases of more serious or extensive violations of the citizens' constitutional or statutory rights, the Ombudswoman of the Republic of Croatia hereby submits her *Special Report on the Right to a Healthy Life and Climate Change in the Republic of Croatia in the Period 2013-2020 in the Context of the Global Climate Movement and the COVID-19 Pandemic*. This is the third special report submitted in the mandate of Ombudswoman Lora Vidović, following the December 2014 *Report on the Human Rights in the Context of Floods in the Vukovar-Srijem County* and the February 2015 National Preventive Mechanism's *Report on the State of Human Rights of the Persons with Psychiatric Illnesses Accommodated in Psychiatric Institutions in 2014*.

Demonstrating the mutual interdependence and interconnections of human rights, especially the right to a healthy life and the right to health, with environmental protection and climate change, the present report provides an analysis and an evaluation of the level of protection of the right to a healthy life in the Republic of Croatia in the period 2013-2020. It was drafted in the context of the global climate movement as well as the COVID-19 pandemic – an event related to the destruction of natural habitats, the prevention of which depends on the efficient protection of the right to a healthy environment. Its primary objective is to contribute to the efficient exercise and the protection of the right to a healthy life as well as to the advancement of the human rights protection system in the Republic of Croatia in general.

Same as our regular annual reports, this document is based on our work on the complaints submitted to us by the citizens, civic initiatives and civil society organizations pertaining to issues such as environmental protection, nature conservation, protection of public health, waste management, natural disasters such as floods and fires, climate change as well as protection from noise and light pollution, non-ionizing radiation, etc. Additionally, it draws on the data collected in the procedures undertaken on the Office's own initiative, such as those in the events of the catastrophic floods in the Vukovar-Srijem County in 2014, elevated levels of arsenic, iron and ammonia in the water intended for human consumption in the area of Eastern Slavonia in 2017, the fire that affected the city of Split the same year, the fire that occurred at the Prudinec landfill in the Zagreb's neighborhood of Jakuševec in 2019 and many others, as well as the data gathered from the public administration bodies, bodies of regional and local self-government units and those vested with public authorities. Whenever possible, official data were corroborated with field-visits to the sites affected by the floods, to landfills (Lončarica Velika, Karepovac, Prudinec/Jakuševec), waste management centers (Kaštijun and Marišćina) and other localities across fourteen different counties.

Our work on this report benefited from the Office's participation in legislative procedures and in regular and thematic sessions of the parliamentary committees, such as those related to the drafting of the new Waste Management Plan and to the case of air pollution in the city of Slavonski Brod, as

well as from our participation in the activities organized by the civil sector and the scientific community and our own event-organizing activities, such as the 2017 round table in the Croatian Parliament on the topic of human rights, firefighting and the civil protection services.

The right to a healthy life as laid out in Article 70 of the Constitution of the Republic of Croatia, i.e. the right to a healthy environment, is still not adequately recognized in the international human rights instruments. However, in the recent years the UN and the EU have intensified efforts to meet this goal. The role of environmental human rights defenders is gaining more recognition, the European Court of Human Rights and the UN's human rights treaty bodies are staring to receive the first lawsuits and complaints related to climate change and are reaching their first decisions, such as that adopted by the UN's Human Rights Committee in a case involving climate refugees. National human rights institutions are stepping up their actions on these issues as well. Examples of the latter can be found in the handbook published in 2020 by the European Network of National Human Rights Institutions (ENNHRI) titled *Human Rights in Practice: Climate Change and Human Rights*, featuring, as one of the examples of good practice, the work of the Office of the Ombudswoman related to the protection of the right to a healthy life, with a special emphasis on the handling of the floods in the Vukovar-Srijem County and the Split fire.

Sustainable development and environmental and nature protection are broad and extremely complex and intersectional areas, encompassing various sectors such as the industry, energy, agriculture, transport and others. Thus, they require systematic and coordinated cooperation of all competent authorities at all levels. From our perspective, these are the areas with a significant impact on the exercise of human rights in the Republic of Croatia. With that in mind, in this report, as well as in our work, we primarily analyze their influence on the areas of life of the utmost importance for the citizens as reflected in their complaints submitted to us.

The present report is, thus, significant for several reasons. First and foremost, it needs to be stressed that the level of the environmental consciousness of the institutions (i.e. their awareness of the importance of environmental and nature protection, protection of human health and of climate-related issues) is, unfortunately, still very low, which results in the low level of the protection of the right to a healthy life. The adoption of the key documents in the area of environmental protection and sustainable development is lagging behind. The cautionary principle is not being implemented to a sufficient degree and ecologically unsound projects based on fossil fuels are still being planned and carried out. Waste management centers are still being built, emitting high quantities of hydrogen sulphide and floating particles and triggering citizens' complaints citing health problems. In 2013 we reported on some of these issues for the first time, when we included a separate chapter on the environment in our regular annual report. In the ensuing seven years, we issued 72 recommendations to the competent authorities related to human rights and the environment, 28 of which we repeated several years in a row. According to our estimates, only six were implemented in full and eight partially.

Topics on the right to a healthy life and climate change should feature more prominently in the curricula on all educational levels, imparting a clear message to the young people, some of whom might grow up to become the future decision-makers, that nature conservation and the protection

of the environment, life and health are, indeed, national priorities. At the same time, the EU's Resilience and Recovery Mechanism is set to provide Croatia with significant financial means for the implementation of the green and digital transitions. Thus, we are submitting this report with the hope that its recommendations will be implemented and contribute to ecologically sound policy-making and institutional action in the Republic of Croatia.

2. INTERNATIONAL MECHANISMS

United Nations

The right to a healthy, clean, safe and sustainable environment has not been enshrined as a human right in any of the existing international human rights instruments so far. However, the adoption of such an instrument has been proposed by the UN's Special Rapporteur on human rights and the environment, the Committee on the Rights of the Child as well as the UN Environment Program (UNEP) and its draft is expected to be submitted to the UN's Human Rights Council in early 2021. In September 2020 a number of civil society organizations from more than a hundred countries signed a petition calling on the Council to recognize this right without delay.

An important instrument for the exercise of the right to a healthy environment is the UN Economic Commission for Europe's (UNECE) *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the Aarhus Convention)*, which guarantees various procedural rights through three pillars: the right to access to information, public participation in decision making and access to justice in environmental matters. The document came into force in 2001 and Croatia joined it in 2007. Apart from the convention, the exercise of the right to a healthy life relies on the mechanisms at the national level as well. 156 out of the 193 UN member states, including the Republic of Croatia, have enshrined the right to a healthy, clean, safe and sustainable environment i.e. the right to a healthy life, either in their Constitutions and/or their legislature.

Climate change is one the factors impacting the exercise of the right to a healthy environment. With that fact in mind, the global climate negotiations began in the 1990s and resulted with the adoption of the *United Nations Framework Convention on Climate Change* with the aim of stabilizing the greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate. The document came into force in 1994 and Croatia became its party two years later. Each year its state parties meet for the Conference of the Parties (COP). The third Conference, held in 1997, resulted in the adoption of the *Kyoto Protocol*. The instrument, adopted by Croatia in 2007, established an obligation for developed countries to reduce their emissions of six greenhouse gases by 5% on average by the year 2012. However, one of the biggest polluters, the United States, chose not to enter the agreement, which resulted in the

continuation of the global climate negotiations with the aim of reaching a global climate compact. This goal was achieved in 2015 at the COP21 with the signing of the *Paris Agreement*, whereby 195 countries agreed to reduce the levels of the greenhouse gases and to limit global warming to well below 2, preferably to 1.5 degrees Celsius compared to the preindustrial levels. Following its signing and then the departure from the Agreement, the United States rejoined it in January 2021. Its renewed commitment marked an important step in the global efforts to reduce the greenhouse gas emissions.

The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the World Meteorological Organization (WMO) and UNEP. It produces targeted reports on climate change, its implications and potential risks and suggests mitigation and adaptation strategies. According to IPCC's 2018 special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, limiting the global rise in temperature to below 2°C could reduce the risks for people, the ecosystems and the sustainable development but to achieve this, immediate and long-term reductions in greenhouse gas emissions are required. In the same vein, in his thematic report on safe climate *(A/74/161, 2019)* the UN's Special Rapporteur on human rights and the environment stresses its importance for the exercise of the right to a healthy environment as well as for human life and well-being in general, inviting the states to establish national decarbonization plans in line with the *Paris Agreement* and following a human rights-based approach.

Despite the aforementioned international efforts, 2020 has revealed the deficiencies in the implementation of the existing climate policies. In its 2020 *Greenhouse Gas Bulletin* the WMO notes a record increase in the CO_2 emissions in the period between 2015 and 2019, stressing that temporary cuts in the emissions related to the COVID-19 mitigation measures are not expected to have long term positive climate impacts. Similarly, the UNEP's 2020 *Emissions Gap Report* predicts a global rise in temperatures of more than 3°C during this century, while its *Production Gap Report* published the same year uncovers a 120% discrepancy between the levels of the planned fossil fuel production vs. that necessary for the achievement of the Paris Agreement goals by 2030.

It has also become an increasingly common practice for the UN's human rights treaty bodies (HRTBs), such as the Committee on Economic, Social and Cultural Rights (CESCR), Committee on the Elimination of Discrimination of Women (CEDAW) and the Committee on the Rights of the Child (CRC), to issue recommendations related to climate change, fossil fuel extraction, specific needs of various vulnerable groups, etc. Additionally, in 2020 in its decision it the case of Teiota vs. New Zealand the Human Rights Committee (HRC) established the obligation of the states to refrain from deportations of individuals whose lives have been endangered as a consequence of climate change, which was its first decision of this kind. The decision of the HRC is pending in the case of the residents of the Torres Straights Islands against Australia for failing to introduce sufficient measures for climate change mitigation, as well as the decision of the CRC in the case of a group of children against five states citing the same complaint. The number of recommendations related to climate change and environmental protection within the UPR procedure has increased as well: within its third cycle (2017-2021) 145 were issued on the first and 372 on the second topic.

On the occasion of the UN's 75th anniversary the organization's Secretary-General António Guterres issued his *Call to Action for Human Rights*, calling on the states to undertake urgent measures for the prevention of environmental degradation, fulfill their obligations under the *Paris Agreement* and adopt environmental legislation; on the private sector to reduce the harmful effects of its activities on the environment and on the UN to include young people in decision-making processes affecting their future, to advocate for the inclusion of the climate change-related content into school curricula, to include a wider scope of stakeholders in the drafting of the climate and environmental policies as well as to support the member states in adopting the legislation aimed at ensuring safe, clean, healthy and sustainable environment and in ensuring access to justice and better protection of environmental human rights defenders.

The current COVID-19 pandemic has made obvious the interconnections between human rights, the environment and climate change. Reflecting that fact, in their publication titled *Human Rights, the Environment and COVID-19: Key Messages* UNEP and the United Nations High Commissioner for Human Rights list the obligations of states and other stakeholders, stressing that they must: protect the right to a healthy environment, re-examine their relationship with nature, protect those living in poverty or experiencing discrimination, strengthen the rule of law in environmental matters, protect environmental human rights defenders, guarantee access to environmental information and participation in environmental decision-making processes, minimize harmful impacts of medical waste and, finally, utilize the current situation as a starting point to build better societies and economies.

European Union and the Council of Europe

To date, no regional human rights instruments have been adopted in Europe with a specific focus on the protection of the right to a healthy environment. However, the corpus of the EU's environmental law has been developing since the 1970s and currently includes several hundred directives, regulations and decisions. Additionally, Article 37 of the *Charter of Fundamental Rights* stipulates that a high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development.

European Union has established the European Environment Agency (EEA) to support the development, implementation and evaluation of its environmental policy as well as its awareness-raising activities on the topic. The agency collects and analyzes reliable and independent data on the state of the environment and its future developments and is open for participation to both EU member and non-member states. According to its 2020 report *Healthy Environment, Healthy Lives: How the Environment Influences Health and Well-Being in Europe* air pollution, contributing to 400 000 premature deaths annually, noise pollution with 12 000 cases of premature deaths and negative impact of climate change, especially heath waves, represent the main environmental threats to human health. The report identifies the differences between the eastern and western regions of Europe, with the less affluent communities more intensely exposed to the consequences of pollution

and climate change and more vulnerable to their effects due to the populations' pre-existing health issues and points to the possible connections between air pollution, poverty and higher COVID-19 mortality rates.

Within the Council of Europe, legal standards invoked for the protection of the right to a healthy environment include the *European Convention on Human Rights*, the *European Social Charter* and the *Bern Convention on the Conservation of European Wildlife and Natural Habitats*. According to the 2020 data, the European Court of Human Rights has so far ruled on some 300 environment-related cases, dealing with issues such as pollution, natural disasters and access to environmental information and applying the provisions on the right to life, freedom of speech and the protection of family life. In September 2020 it received its first climate change-related application, brought by six young people from Portugal and aged between 8 and 21 against 33 Council of Europe member states citing violation of the right to life caused by the states' failure to take sufficient measures to mitigate the consequences of climate change. The action was prompted by the 2017 Portugal forest fires that left more than 120 people dead and whose intensity can be contributed to the effects of the global warming and the current levels of the greenhouse gas emissions.

Taking all of the aforementioned into account, the decision by the European Parliament in late 2019 to declare a climate and environmental crisis in Europe and globally represents an important move. Consequently, with a view of limiting global warming to below 1.5°C, the Parliament called for the harmonization of all relevant EU legislative and budget proposals. To achieve this, in 2019 the European Commission proposed its comprehensive plan - the *European Green Deal* (EGD), whose aim is to make Europe a climate neutral continent by 2050 with the help of its *Just Transition Mechanism*. EGD represents one of the cornerstones of the EU's post-COVID recovery plan and envisages the adoption and revision of strategies and legislation in nine areas during the course of 2020 and 2021: Biodiversity, From Farm to Fork, Sustainable agriculture, Clean energy, Sustainable industry, Building and renovating, Sustainable mobility, Eliminating pollution and Climate action. With the aim of rendering the EGD's goal of achieving climate neutrality by 2050 legally binding, the EC submitted its draft proposal for an EU Climate Law, on which the Council adopted its general approach in December 2020. Furthermore, the same year the EC proposed its 2030 Climate Target Plan with the aim of reducing greenhouse gas emissions to at least 55% below the 1990 levels by 2030, adopted a legislative proposal amending the *Aarhus Regulation* to allow for better public scrutiny of EU acts affecting the environment (the current system envisages challenging individual decisions only) and issued a Communication to facilitate access to justice in environmental matters for individuals and NGOs in EU Member States. The latter is extremely important, taking into account the fact that the NGOs in Croatia have been warning for years about the difficulties in the access to justice in environmental matters due to high costs and lengthy procedures.

In February 2021 the EU Parliament adopted the *Regulation on the objectives, financing and rules for accessing the Recovery and Resilience Facility* (RRF). The instrument envisages €672.5 billion in grants and loans, €9.6 billion of which earmarked for Croatia, to finance public investment and reform in order to curb the effects of the pandemic, support green transition and digital transformation and build more resilient and inclusive societies.

Global Climate Movement and Environmental Human Rights Defenders

Instead of going to school, in August 2018 15-year-old Greta Thunberg started protesting in front of the Swedish Parliament building demanding a limitation in greenhouse gas emissions to below 2%, as set out in the Paris Agreement. In September 2019 young people from around the world began organizing simultaneous protests that came to be known as "Fridays for Future" and marked the inception of the global climate movement. According to the young protesters, they are left with no other choice but to protest for their own future as well as for the rights of the populations of the island and coastal communities that are vanishing due to climate change, farmers, indigenous peoples and all others already negatively affected by food shortages, floods, droughts, loss of land and homes, depopulation, hunger and poverty. Several months later, as a way of demonstrating its support for the climate movement and with the goal of assuming the global leadership role in the efforts for the safer climate, the European Parliament declared a climate and environmental crisis. At the same time, 11 000 scientists from 153 countries called for urgent climate action. Their support was welcomed by the young climate protesters taking into account the fact that as far back as 50 years ago the scientific community devised the strategies to limit the global warming, such as the use of renewable energy sources, transformations in the agricultural and the transport sectors and cutting down on the use of the greenhouse effect-causing fossil fuels.

Apart from the scientific community, the global climate movement has garnered the support of environmental and civil rights organizations and numerous individuals. From that perspective, the adoption of the 2019 Human Rights Council Resolution *Recognizing the contribution of environmental human rights defenders to the enjoyment of human rights, environmental protection and sustainable development (A/HRC/RES/40/11, 2019)* represents an important move. It exposes the killings and other serious violations faced by environmental human rights defenders, among whom are volunteers, trade unionists, lawyers and journalists working on environmental issues individually or collectively and calls on the states to ensure their protection and the effective legal remedies in cases of their human rights violations as well as to ensure the right to a safe, clean, healthy and sustainable environment.

Young people in Croatia have been organizing "Fridays for Future" as well. The first rallies were held on 15 March 2019 in the cities of Zagreb, Split, Pula, Varaždin, Križevci and Beli Manastir with the support from Croatian environmental civil society organizations. These were followed by protests in Rijeka and Šibenik. Additionally, the young protesters submitted a list of eight demands to the Croatian Parliament and the Government, including a request for the inclusion of the content on climate change into the school curricula – the fact that reflects their desire for learning and knowledge. To express our support for their demands, we are listing them below in their entirety:

1. To the Government of the Republic of Croatia, to face the scientifically backed facts on the destabilization of the climate, to inform the citizens of the existential danger that climate change poses to them as well as the entire life on the planet and to adapt its policies accordingly.
2. To the Parliament of the Republic of Croatia, to adopt urgent measures to reduce the total national greenhouse gas emissions by at least 60% compared to 2005 in the next ten years and by 1 January 2030 at the latest with the aim of achieving the fastest and the most efficient possible decarbonization of all sectors and transitioning from the fossil fuel-based to a low-carbon, circular and regenerative economy; and to advocate for more ambitious reductions in greenhouse gas emissions at the EU level.
3. To the Government of the Republic of Croatia, to establish a multidisciplinary "Climate Committee" consisting of scientists from the relevant fields nominated by the wider academic community, with the purpose of drafting, in an independent and transparent manner, proactive climate policies and regulations focused on long-term environmental sustainability and social justice and not on short-term financial gains and benefits.
4. To the Government of the Republic of Croatia, to suspend without delay all ongoing fossil fuel-based projects (including the LNG terminal on the island of Krk, thermal power plants running on fossil fuels, exploitation of fossil fuel mines, the construction of fossil fuel infrastructure, etc.) and to reroute financial resources from investing into fossil fuels into the development of environmentally sound renewable energy sources.
5. To the Government of the Republic of Croatia, to submit, as soon as possible, a draft regulation introducing a ban on the production, sales and use of plastic packaging, plastic bags and other non-essential types of single-use plastics.
6. To the Government of the Republic of Croatia, to draft, as soon as possible, a law banning the sales of vehicles running on fossil fuels and to adopt a national plan with the aim of gradual phasing out of their use in the wider city center perimeters within the shortest time limit possible; to simultaneously expand public transportation networks powered by electricity and financially available to everyone and to promote the use of bicycles and other environmentally friendly forms of transport.
7. To the Government of the Republic of Croatia, to modernize the waste management facilities in line with the highest EU standards.
8. To the Ministry of Education, to introduce into the primary and secondary school curricula the topics on anthropogenic climate change..

Following these demands, in January 2020 a group of Croatian scientists submitted their call for systematic climate action to the Parliament and the Government. The Ombudswoman supported the call with a view of promoting the achievement of the highest possible standards in the protection of the environment, nature, human rights and health. In line with the demands of the youth climate movement and the scientific community and following the move by the European Parliament, the Croatian Parliament should declare the state of environmental and climate emergency in order to additionally ensure that all of its current and future decisions lead to decarbonization, sustainable development and the achievement of climate neutrality by 2050.

3. THE RIGHT TO A HEALTHY LIFE IN THE REPUBLIC OF CROATIA

Article 3 of the Constitution of the Republic of Croatia lists conservation of nature and the environment as one of the highest constitutional values in the Republic of Croatia and one of the bases for the interpretation of the Constitution. According to Article 52, the sea, seashore, islands, waters, air space, mineral resources, and other natural assets, as well as land, forests, flora and fauna and other components of the natural environment enjoy special protection of the state. Furthermore, Article 70 guarantees the right of everyone to a healthy life and establishes the obligation of the state to ensure the conditions for a healthy environment and of everyone else to, within the scope of their powers and activities, accord particular attention to the protection of human health, nature and the environment. Unfortunately, the aforementioned constitutional principles have not been transposed to a sufficient degree into the laws, subsidiary legislation and strategic documents. Despite the fact that the existing legislature aimed at environmental and nature protection is numerous, it fails to cite the constitutional right to a healthy life, which is an oversight, taking into account the fact that a healthy environment is a precondition for the exercise of the right to a healthy life. All of this has resulted in a lack of environmental awareness and knowledge both of the expert as well as the general public.

Environmental Protection Act (EPA), most recently amended in 2018, lists air, water, sea, soil, landscape, flora and fauna and the Earth's lithosphere as environmental components. It defines sixteen environmental protection goals, first of which is the protection of human life and health, and eleven principles, the first being sustainable development. Sustainable development implies the recognition of the importance of environmental protection in the planning and execution of all activities related to economic and social development. Among the other principles important for the exercise of the right to a healthy life is the precautionary principle, which prescribes the sparing use of the environment and of its components, managing them with the view of reuse, pollution and damage prevention and avoiding generation of waste to the greatest possible extent. The same principle is implemented in the EU and integrated into its legislation on food and human, animal and plant health with the aim of achieving a higher degree of environmental protection via preventive decision-making in situations that present possible risks for health or for the environment.

Article 50 of the EPA foresees the adoption of four cornerstone sustainable development and environmental protection strategic documents: *Sustainable Development Strategy*, *Environmental Protection Plan*, *Environmental Protection Programs* (to be adopted by the legislative bodies of the counties, the City of Zagreb and large cities within six months after the adoption of the *Environmental Protection Plan*), and the *Report on the State of the Environment*. The first of the listed documents was adopted, but expired in 2019, the second was never adopted, despite the fact that as early as 2002 a document was drafted under the title *National Plan of Action for the Environment*.

The last *Report on the State of the Environment* was most recently published in 2019 for the 2013-2016 period.

In 2020 these delays were justified by the Ministry of the Economy and Sustainable Development (MESD) as being a consequence of the harmonization of the strategic and planning documents required for the implementation of the *European Green Deal*. Furthermore, although the adoption of the *Strategy for the 2030 Low-Carbon Development of the Republic of Croatia with a View to 2050* was envisaged by the 2014 amendments to the Air Protection Act, this was not achieved. Instead, this obligation was repeated in the 2019 Act on Climate Change and the Protection of the Ozone Layer and the Draft Strategy, important for both the achievement of the long-term low-carbon economic and social development as well as for the adaptation to and the mitigation of the consequences of climate change, was only submitted for public consultations in mid-2020.

Based on the Energy Act, in early 2020 the 2030 *Energy Strategy for the Republic of Croatia with a View to 2050* was adopted. The document represents a step towards the achievement of low-carbon energy use, via, among other actions, a reduction in the greenhouse gas emissions, an increase in the share of renewable energy sources and increased energy efficiency. February 2021 marks the adoption of the *2030 National Development Strategy* – a comprehensive strategic planning document envisaging four interconnected developmental goals, including the green and digital transitions.

The right to a healthy life encompasses several interconnected areas: protection of the environment and of its components (air, water and soil), nature protection (protection of the plants and animals, of the ecosystem and of biodiversity), public health, protection from noise, non-ionizing radiation and light pollution as well as waste management. With the exception of non-ionizing radiation, all of these areas are regulated by the EPA and most of them also by special regulations, such as the Air Protection Act and the Water Protection Act. However, along with the normative regulation, it is important to also implement the protection mechanisms as well to monitor their implementation.

Environmental inspection monitors the state of the environment, of the air and soil, waste management and light pollution, the water inspection oversees the state of the waters, whereas the monitoring of the state of nature falls under the mandate of the nature protection inspection. Sanitary inspection deals with the protection of the water intended for human consumption, as well as with the protection from noise and non-ionizing radiation. All of the aforementioned institutions are part of the State Inspectorate Service (SIS). Efficient monitoring activities, i.e. inspection services adequately equipped for determining irregularities and imposing measures for their correction, are the key factor in environmental and nature protection. However, as we mention in the chapter on soil protection, within their monitoring activities the inspections fail to utilize the measure of sampling of environmental components, especially of the soil, often enough. Its implementation should be stepped up in order to gather the information on the actual level of the pollution of the monitored localities. Additionally, experience has shown that the environmental impact assessment studies as well as the reports on the state of the environment and of its components contain incomplete data on the localities they pertain to. Thus, in our 2017 and 2018 annual reports we recommended that the Ministry of the Economy and Sustainable Development step up its supervision over the work of the

persons authorized for the professional tasks of environmental protection, i.e. the persons in charge with the drafting of the said studies and reports, especially taking into account the Ministry's data according to which in 2018 this type of supervision was not carried out at all and in 2019 it was done on two occasions in which minor errors in reporting on floating particles were found and corrections ordered.

We continue to receive a growing number of complaints from the citizens, civic initiatives and environmental NGOs seeking our support and assistance in protecting the environment, nature and human health. The complaints reflect a growing distrust in the institutions, that either fail to respond, take a long time to do so or provide incomplete information, in violation of the citizens' rights guaranteed by the *Aarhus Convention*, i.e. the 2007 Act on the Transposition into the Croatian Legal System of the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters. In their complaints environmental NGOs emphasize the difficulties they experience in accessing justice caused by the high costs and the long duration of the court proceedings. In the last several years they are also faced with a lack of regular funding, which threatens their survival and work. Citizens, civic initiatives and environmental NGOs in Croatia must be recognized as environmental human rights defenders and should receive the protection envisaged by the UN's *Human Rights Defenders Resolution*.

Despite the fact that the EPA lists the protection of human life and health as its first goal, the Republic of Croatia lacks a systemic mechanism for the prevention and the protection of human health from the harmful environmental impacts, such as those caused by heavy industries, landfills and waste management centers and is focused solely on reactive measures following specific incidents. Thus, we emphasize the importance of the further development of health ecology – a branch of the public health system under the mandate of the public health institutes, focused on the monitoring of the harmful environmental impacts on human health. It is also important to introduce mandatory health impact assessments (HIA) prior to the planning and construction of large industrial and other infrastructural objects, which we have been recommending in our annual reports since 2014.

Components of the Environment: Air

"Why am I writing to you again? Because this morning the air was really strange, thick, as if it was full of dust; it irritated my nose terribly. When I came home, I had this enormous urge to blow my nose; I was blowing out traces of blood. We have an 11-month old baby living with us. I am terribly worried. I can't believe this is nobody's problem and that no one is taking this seriously. For God's sake, our lives are at stake. I'd like to move away, but unfortunately, nobody wants to buy property here."

According to the World Health Organization's data, air pollution is connected with the risk of premature death from heart and brain stroke, pulmonary diseases and cancer as well as with reduced lung capacity, respiratory infections and asthma. The European Environmental Agency's

Air Quality in Europe-2020 report cites air pollution as the leading environmental cause of 400 000 premature deaths in the EU and lists Croatia as one of the six Member States where excessive values of fine particulate matter (PM2.5) were recorded. Additionally, it needs to be stressed that chemicals such as arsenic, cadmium, nickel and polycyclic aromatic hydrocarbons are genotoxic and carcinogenic and no levels of the said substances can be considered safe.

The EPA lists air as one of the components of the environment. The first law on its protection was adopted in 2004 and the matter is currently regulated by the 2019 Air Protection Act (APA). With the aim of tracking air quality and limiting the levels of harmful gases and particles, it establishes the system for air quality monitoring, prescribes public accessibility of the air quality data and regulates data exchange and reporting to the European Commission. Air quality is monitored via the air monitoring stations within the National Network for Continuous Air Quality Monitoring (the National Network) coordinated by the State Hydrometeorological Institute (SHMI), monitoring stations run by the local and regional self-government units as well as those run by the polluters.

The 2020 *Regulation on the Levels of Air Pollutants* determines the levels of pollutants that can have an impact on health, the vegetation and/or the quality of life, which makes it an important instrument in the processes of conducting health impact assessments. However, its regulation of the matter is complex. For example, in order to establish negative health effects of the PM10 (floating particulate matter), their maximum prescribed limit of 50 µg/m3 needs to be exceeded more than 35 times within 24 consecutive hours within one calendar year. In order to establish negative effects of hydrogen sulphide on life quality, the limit of 5 µg/m3 needs to be exceeded more than seven times within 24 consecutive hours within one calendar year or, alternatively, more than 24 breaches of the 7 µg/m^3 limit need to be recorded within one hour within the same calendar year.

In 2013 the Office of the Ombudswoman received a complaint submitted by an environmental NGO from the town of Kaštela citing air pollution and substandard air quality monitoring by the local air monitoring stations run by the polluters. Our subsequent investigation procedure showed that the official air quality data were not validated in accordance with the APA. The 2016 *Regulation on the Locations for the Monitoring of the Levels of Certain Air Pollutants and the Locations of the Measuring Stations in the National Network for Continuous Air Quality Monitoring* allowed for the use of the air monitoring stations run by the polluters until the establishment of six new air monitoring stations within the National Network and by the end of 2019 at the latest. However, so far, none of the new monitoring stations have been installed. According to the MESD's data, this is set to take place in the course of 2021. Until then, the level of air pollution in the Split agglomeration will be determined using the data from two air monitoring stations run by the polluters and only one public, located on the island of Vis. According to a document titled *The Estimate of the Air Quality in the Split-Dalmatia County* published in 2019 by the Ekonerg Institute, two more public monitoring stations need to be installed within the National Network to fulfill the minimal requirements for air quality monitoring in the Split-Dalmatia County.

Due to its limited scope, the MESD's *Report on Air Quality Monitoring in the Republic of Croatia in 2019* only provides indicative data on the levels of floating particles in the regions of Lika, Gorski Kotar, Primorje and Dalmatia. According to its data, air pollution caused by floating particles was

the worst in the cities of Zagreb, Osijek, Sisak, Kutina and Slavonski Brod. Additionally, it indicates that the maximum daily limits were exceeded every year in the 2013 – 2019 period. In the city of Slavonski Brod, the breaches of the maximum levels of the floating particles and hydrogen sulphide have been recorded since 2010. However, the monitoring of their impact on health only began in 2016, when, mostly thanks to the efforts of the local "Civic Initiative for the Clean Air", Croatian Institute for Public Health commenced with its *Study on the Impact of Environmental Factors on Human Health*. The study was set to be finished in 2020 and to contain an analysis of the concentrations of metals in the blood, hair and urine and the incidence of pulmonary infections among the inhabitants of Slavonski Brod as well as, following the recommendation from our 2017 annual report, of the levels of gases and floating particles. The end of the gasification of the Oil Refinery Bosanski Brod was planned for 2020 as well. However, according to the data available to us, the beginning of the operation of the gas pipeline was postponed due to the COVID-19 pandemic.

The situation is similar in the town of Marčelji, whose inhabitants have been submitting complaints to the Ombudswoman since 2018, citing elevated emissions of floating particles and hydrogen sulphide from the waste management center Marišćina and complaining about headaches, nausea, breathing problems and the smell of acid affecting their mucous membranes. In 2018 they recorded 122 and in 2019 as many as 310 breaches of the maximum allowed levels of hydrogen sulphide. The breaches have been corroborated by the data contained in the *Report on Air Quality Monitoring in the Republic of Croatia in 2019*. According to the citizens, breaches were recorded in 2020 as well, along with technical difficulties in the operation of the Viškovo-Marišćina air monitoring station. From the data we collected in our investigation procedures it was not clear how the measures for the protection of the health of the citizens inhabiting the areas in the vicinity of the waste management centers were defined or enforced. Thus, since 2018 we have been recommending that the MESD ensure the implementation of the necessary preventive and protective measures for the efficient protection of all environmental components as well as of the citizens' health at this particular location. The recommendation has not been implemented. However, according to the data we received in 2021 from the Primorje-Gorski Kotar County, a certain level of progress has taken place after all: The Teaching Public Health Institute of the Primorje-Gorski Kotar County has begun the conducting of the *Environmental Study on the Impact of the WMC Marišćina on the Health of the Citizens of Marčelji and the Surrounding Areas*.

Air pollution was recorded in 2017 as well, during the fire that broke out in the city of Split and spread to the Karepovac landfill in its vicinity. Following the event, the Teaching Public Health Institute of the Split-Dalmatia County (TPHI SDC) produced the *Report on Air Quality Based on the Data Collected from the Air Monitoring Stations Karepovac, Split, Kaštela and Solin in the Period of the Active Fire*. The report shows that exceeding values of PM10 were recorded by three air monitoring stations in the course of two days, with a five-fold increase recorded by the Karepovac station within the course of a single day. A four-fold elevation in the levels of hydrogen sulphide was recorded by all four stations over the course of three days. According to TPHI SDC, the monitoring only served to provide an overview of the air quality during and after the fire. There was no mention of the effects on human health nor of the measures for its protection. Although the day

after the fire TPHI SDC stated on its web page that the emissions did not exceed the allowed limits and that there was no reason for concern since the smoke and the foul smell presented no immediate danger for human health, apart from air tract irritation and a stinging sensation in the eyes, nevertheless, it advised that the citizens shut their doors and windows, use air conditioning, especially in the parts of the house used by chronic heart and lung patients and small children, and cover their mouths and noses with a mask or with cotton fabric and use sunglasses in case they needed to leave the house.

Similarly, in the 2019 case of the fire affecting the Prudinec landfill in the city of Zagreb's neighborhood of Jakuševec, the "Andrija Štampar" Teaching Public Health Institute (AŠ TPHI) notified the public only the following day. It stated that elevated hourly values of PM10s were recorded but that the levels of harmful gases did not exceed the limits. At the same time, it advised the citizens to close the windows, avoid intense physical activity as well as to stay away from the fire site. An almost identical notice was issued by the Ministry of Health as well. However, our investigation procedure showed that the fire broke out on a waste disposal surface on which several tons of various types of waste were stored, including bulky waste, plastic, rubber, metal, wood and mixed municipal waste. As the authorized laboratory, the "Andrija Štampar" Teaching Public Health Institute analyzed the said waste and found dangerous substances, without specifying the details. Additionally, the data in the *Report on Air Quality Monitoring in the Republic of Croatia in 2019* showed that elevated levels of floating particles and hydrogen sulphide were recorded by the Jakuševec air monitoring station.

To conclude, not only did the citizens receive belated and incomplete information on air quality and the possible health consequences of the fire, but in its reports on air quality during and immediately following the fire the AŠ TPHI failed to mention its own findings on the burnt waste and the dangerous substances emitted in the air. Furthermore, the analysis did not include the levels of all pollutants, such as the content of benzo(a)pyrene in the floating particles, the total amount of gaseous mercury as well as the amounts of lead, cadmium, arsenic, nickel, mercury, thallium and benzo(a)pyrene in the total residue. Additionally, the environmental protection inspection did not measure the levels of dioxins and furanic compounds because, according to the State Inspectorate, it lacked the appropriate methodology to do so.

Components of the Environment: Water

As one of the components of the environment, water is protected by the EPA, the Water Act (WA) as well as by the Act on the Water for Human Consumption (AWHC). The 2019 WA regulates the legal status of the waters, the water estate and the water management facilities, the management of the water quantity and quality and water protection as well as the protection of the water environment and potable water sources via the zones of sanitary protection. The previous WA tasked the Croatian Waters company with the monitoring of the surface waters, groundwater and coastal waters, whereas under the 2019 WA it is to be performed by the Water Institute. However, the draft regulation on the establishment of this institution was only submitted for public

consultations at the end of 2020. Following processing and in line with the prescribed parameters, ground and surface waters are most commonly used for human consumption. According to the 2021 EEA data, in 75% of the cases the chemical status of groundwater can only be rated as "good" and when it comes to the surface waters, in 44% of the cases it can be rated as either "good" or "very good". The quality of the water is jeopardized by chemical pollution from the air as well as from the nutrients used in agriculture.

The Act on the Water for Human Consumption regulates the parameters of health safety of the water for human consumption, the duties of the water suppliers as well as the course of action and reporting in cases of the deviations from the prescribed parameters. Monitoring of the water for human consumption is performed by the county institutes for public health, coordinated by the Croatian Public Health Institute and funded by the counties. Water suppliers must secure the health safety of the water for human consumption and in cases of deviations from the prescribed parameters, notify the citizens, the expert committee and the sanitary inspection, examine the causes, undertake urgent measures for their removal and supply the water by other means within 24 hours.

One of the significant incidents regarding the water for human consumption took place in 2016 in the Osijek-Baranja County, where the recorded levels of arsenic in the water exceeded 10 µg/l, which is the limit prescribed by the 2017 *Ordinance on the Compliance Parameters and the Methods for the Analysis of the Water for Human Consumption*. The investigation procedure undertaken on our own initiative showed that the Ministry of Health approved those aberrations on account of the fact that they did not exceed the amount of 50 µg/l. A year later, in the villages of Komletinci, Privlaka and Korođ located in the Vukovar-Srijem County, the sanitary inspection determined that the levels of arsenic exceeded 50 µg/l and found elevated levels of iron and ammonia in the water for human consumption. The water supplier had been distributing unhealthy water to the consumers without notifying them or making drinking water available in an alternative manner in due time. These actions by the supplier led to a prolonged exposure of the local population to potentially harmful health impact of arsenic, which constitutes a violation of the right to a healthy life. In 2017 the Croatian Institute for Public Health undertook an assessment of the potential health impacts of arsenic in the water for human consumption in the Vukovar-Srijem County and recorded levels of arsenic as high as 197µg/l in twelve of the county's settlements. The exact number of the exposed residents could not be determined, and the analysis of the incidence of deaths caused by cardiovascular diseases, malignant neoplasms and lung and bladder cancers showed no increase in morbidity or mortality rates; however, due to the residents' long-term exposure to the concentrations of arsenic higher than allowed, the risks for developing some of these diseases were established.

In 2017 and the following years, in the city of Split and the surrounding areas the parameter of turbidity in the water for human consumption was exceeded. According to the official data, it was caused by abundant precipitation in the karst areas. Based on the statement by the sanitary inspection, the turbidity itself did not represent a health risk and the only real threat was the danger of bacterial contamination; however, the population was still advised to boil the water prior to its

consummation. Here, too, the delivery of potable water was delayed, and was organized only after three to five days by means of water trucks.

In addition to the events mentioned above, we have also been receiving citizens' complaints citing pollution of the water environment. One of them related to the pollution of the Krka River caused by industrial waste that reached the Krka National Park. We issued a recommendation to the State Inspectorate to ban the operations of the polluter, who was known, in line with Article 232 of the Environmental Protection Act and to issue a fine. The inspectorate refused, with the explanation that the process of the issuing of the environmental permit for the polluter was underway. Our investigation procedure showed that within the period of the last 10 years the same polluter had already caused 11 incidents of pollution which required intervention and that it poses permanent risk for the waters of the Orašnica and Krka rivers. However, instead of its operations being banned, in 2020 the company was issued an environmental permit.

With a view of amending the detected issues, in our annual reports we have been recommending that the MESD and the Croatian Waters undertake an analysis of the effectiveness of the measures for the protection of the water sources and of the superficial water catchment areas in the sanitary protection zones established by the WA. Furthermore, we recommended that the Ministry of Health analyze the effectiveness of the measures for the protection of water wells and of water supply facilities from accidental or intentional pollution, in line with the Act on the Water for Human Consumption; however, our recommendations were not implemented.

Under Article 52 of the Constitution of the Republic of Croatia, the Adriatic Sea enjoys special protection of the state. According to the 2018 data, 4 986 km^2 of its area are encompassed by the Natura 2020 environmental network. The fisheries, mariculture, maritime traffic, excessive construction on the coast, input of pollutants from land resources as well as nutrients from anthropogenic sources have the largest impacts on its purity. According to the EC's *Report on the Implementation of the Marine Strategy Framework Directive in 2020*, the EU has failed to provide good conditions for various marine habitats and species and the 2021 EEA data indicate that as much as 75%-96% of the European seas are suffering pollution, mostly chemical, but also that caused by waste and noise.

In 2018 we began receiving complaints by environmental NGOs related to the degradation of the marine environment. In one of the cases, in the course of our investigation procedure, the MESD confirmed that, although an environmental protection study was conducted prior to the construction work in question, it still caused degradation of the sea bed, or more precisely, the damage to a habitat of the protected pen shells. This was due to the fact that the person authorized for the environmental protection tasks, i.e. the study's author, failed to include the shell habitat into the document; consequently, no measures for its protection were imposed and it sustained damage.

In order to protect the Adriatic Sea and keep it clean, it is important to deal with the issue of marine litter, especially plastics. According to the 2020 data by the MESD, the competent institutions in Croatia monitor the quantity and the composition of the waste ingested by the marine organisms, of solid waste washed out to the coast, collected at the sea surface and the sea bed as well as the

quantity, distribution and composition of the microplastics found on the beaches and the sea surface. In 2020, as part of the comprehensive waste management system, the *Marine Litter Management Plan* was drafted. However, comprehensive data and the estimate of the current situation are still missing. We recommended that the MESD start with the immediate harmonization of the national legislation with the *Directive on the Reduction of the Impact of Certain Plastic Products on the Environment*, adopted in 2019 and included into the new draft Waste Management Act that was the submitted for public consultations in 2020.

Components of the Environment: Soil

Despite the fact that the 2015 EEA *Report on the State of the Environment* lists the loss of the soil's functions and land degradation as the biggest and growing problems in the EU, the Union has still not adopted a comprehensive land and soil protection policy nor a normative framework. With that in mind, the adoption of the new EU *Soil Strategy* as part of the *European Green Deal*'s *2030 Biodiversity Strategy* scheduled for 2021 will be an important step forward at both the EU as well as the national levels.

The EPA lists soil as one of the components of the environment and prescribes the highest possible level of its protection against harmful environmental impacts. Soil protection includes the preservation of the health and functions of the soil, the prevention of soil damage, the monitoring of the status of the soil and of the changes in its quality as well as the remediation and restoration of the damaged soil and locations. Human activity directly or indirectly causing damage to the soil or the loss of soil function, especially the industry, the disposal of industrial and municipal waste and agriculture, is the leading and the most harmful source of soil pollution. Due to the circular nature of the natural processes, the quality of air, water and soil are interdependent. Thus, when planning projects with possible effects on the environment, measures to protect the soil should be imposed, along with those for the protection of the other two environmental components. However, the data available to us indicates that this is most often not the case and soil protection is largely ignored.

The findings of the *Report on the State of the Environment in the Republic of Croatia in the Period 2013-2016* published in 2019 by the Croatian Agency for Environment and Nature (CAEN) in line with the then current EPA also point to the fact that in Croatia the data on soil is not collected in a systematic manner, which makes estimates and the monitoring of the condition of the soil difficult. According to the report, all of the known adverse impacts that can affect the soil are present in Croatia, as well as the degradation processes, such as soil erosion, organic matter disappearance, pollution, salinisation, soil compaction, biodiversity loss, land repurposing, flooding and landslides.

In contrast to the protection of air and water, so far Croatia has not adopted a law specifically aimed at the protection of the soil. This is achieved indirectly, via the laws and strategies dealing with other environmental components and via the regulation of various types of environmental pressures (i.e. industrial operations and waste), which the aforementioned report rates as insufficient. Pollutants and their sources as well as their limit values are regulated by the *Ordinance on the Agricultural*

Land Protection, which only applies to agricultural and not the land used for other purposes, such as forests, parks, playgrounds, settlements and industrial zones.

In our work based on complaints, we, too, have noted deficiencies in regulation and practice. For instance, acting on a complaint citing air, water and soil pollution at the Lončarica Velika landfill, we determined that the decision on the environmental acceptability of the project, adopted in 2001, did not prescribe monitoring and analysis of the soil, with the argument of the waste disposal surface being waterproof. Our requests as well as the requests of the citizens living in the area that the soil be analyzed regardless were ignored. The operation of the Marišćina waste disposal center does not include any soil protection measures, either. Following repeated requests from the local population, the Primorje-Gorski Kotar County informed us that soil analysis would, indeed, be conducted as part of the *Environmental Study on the Impacts of WDC Marišćina on the Health of the Population of Marčelji and the Surrounding Areas*, set to be finished in October 2021. It is our hope that this study will be used as an example of best practice in other environmental pollution cases, especially those involving soil pollution.

In the absence of the more comprehensive normative regulation of the matter, the current EPA envisages the measure of soil sampling with the aim of determining the levels of pollution present. The measure can be ordered by environmental protection inspectors. However, according to MESD's data, in 2017 it was not implemented at all and in 2018 only twice: during and after the remediation of the locality in the city of Slavonski Brod in which oil derivatives leaked from the pipes into the soil and water and harmful substances were detected and removed and the second time in the Zadar County, for the purpose of determining the impact of the deposited slag on the environment, which was not established. We have not received any data from the State Inspectorate on the implementation of this measure in 2019 and 2020 nor the reply to our explicit request that the soil be analyzed following the 2019 fire at the Prudinec landfill in Jakuševec.

Taking all that has been said so far into account, we consider it necessary that an institution be normatively defined that would carry out systematic soil monitoring, track its condition and quality and collect data, since neither the EPA nor any other current regulation provide for a detailed normative framework regulating that particular matter. With that in mind, from 2017 onwards we have been recommending that the MESD apply the model analogous to that used for the monitoring of water under the Water Act and performed by the Water Institute, to the model used to monitor the water for human consumption as regulated by the AWHC and performed by the Croatian Institute for Public Health or to the air monitoring system, i.e. the National Network for Continuous Air Quality Monitoring coordinated by the State Hydrometeorological Institute and regulated by the Air Protection Act. This recommendation has not been implemented.

Noise and Light Pollution, Non-Ionizing Radiation

According to the 2020 EEA data, the levels of environmental noise have been on the rise in urban areas, mostly due to the intensification of traffic, as well of the industrial and recreational activities. Approximately 20% of the EU's population are exposed to unacceptably high levels of noise, which

can impact their life quality and cause significant amounts of stress, sleep disturbance and cardiovascular issues. Long-term environmental noise exposure contributes 12 000 premature deaths and 48 000 new cases of cardiovascular diseases annually, affects wild fauna and flora and leads to a decrease in maritime biodiversity.

Protection from noise is regulated by the EPA as well as by the 2009 Noise Protection Act, the latter of which has so far been amended several times, most recently in 2018. In their complaints the citizens cite noise from various sources, such as music coming from coffee shops or the tools used in workshops located in inhabited areas, causing them sleep problems, stress and the inability to perform household and family chores. Our investigation procedures have shown that a comprehensive mechanism aimed at the prevention and the protection of health from this type of pollution does not exist. Additionally, we have recorded inconsistencies in the circumstances and the manner in which noise levels are being measured. According to the complaints, noise measuring activities carried out in line with Article 11 of the Noise Protection Act are often prearranged and fail to measure the noise from all of the noise-producing sources normally used at the location. For example, the measuring is carried out with only some of the tools turned on, so the registered levels of noise turn out lower than they actually normally are. Efficient noise protection requires precise measuring, undertaken in the usual conditions – i.e. at the source, location and at the time when and where the noise is the loudest. Thus, the Ministry of Health must step up its supervision of the persons authorized to perform the tasks related to noise protection and, if necessary, revoke their authorization, in line with Article 14 of the Noise Protection Act.

Protection from light pollution is regulated by the EPA and the 2019 Light Pollution Protection Act. We received the first complaints related to it in 2018, citing night lights directed at family homes and causing stress for the residents as well as headaches, nausea and sleep difficulties. However, the subordinate legislation based on the then current 2012 Light Pollution Protection Act had not been adopted, so the environmental protection inspection did not monitor the Act's implementation. Thus, in our 2018 Annual Report we recommended that the MESD ensure that inspections are carried out and measures imposed in order to protect the citizens from light pollution. In line with the 2019 Act in late 2020 the *Ordinance on the Lighting Zones, the Permitted Levels of Lighting and the Managing of the Lighting Systems* was adopted, whereas the adoption of the *Ordinance on the Measuring and the Monitoring of Environmental Lighting* is still pending.

Although the sources of non-ionizing radiation, such as the mobile telecommunications base stations, are located in the environment, this subject is not regulated by the EPA but the Non-Ionizing Radiation Protection Act adopted in 2010 and amended in 2018. The adoption of the related subordinate legislation as well as the administrative supervision fall under the mandate of the Ministry of Health, whereas the State Inspectorate's sanitary inspection is tasked with performing inspections. The harmfulness of this type of radiation has been debated both among the experts as well as within the wider community and the World Health Organization rated it as category 2B, indicating that there is not enough research to completely exclude its harmfulness, so the precautionary principle is to be applied in its use.

In their' complaints related to non-ionizing radiation the citizens cite health issues such as insomnia, exhaustion and memory loss, express concerns for their health and invoke the right to a healthy life. For example, one of them was submitted by a woman who, backed by 230 of her neighbors' signatures, requested the removal of a mobile base station installed on a private house in Zagreb without the knowledge or the consent of the citizens living in its vicinity. We also received complaints from the citizens and civic initiatives from the cities of Pula, Split, Vodice and Sinj and other places about mobile base stations installed in close proximity to homes, schools, kindergartens as well as those hidden in chimneys or placed at the window level, on the roofs, on dilapidated objects and on residential buildings without the citizens' knowledge or despite their opposition. The telecommunications companies and the owners of the objects on which the base stations are installed conclude contracts to regulate their mutual rights and obligations, including financial compensation. However, there is no legal obligation to consult the public prior to deciding on the stations' installment. In most of the cases, certificates of compliance with the permitted levels of electromagnetic fields, issued by Croatian Regulatory Authority for Network Industries (CRANI) and verified by the Ministry of Health, had been obtained.

In many cases, our investigation procedures showed that many of the base stations were put in operation without use permits and that although in several cases removal orders were issued, none of them were subsequently implemented. In Radošić, located in the city of Sinj, a base station was installed on an abandoned object, a few meters away from a neighbors' family home and, although the removal order was issued as far back as 2018, it has not been removed as yet. Importantly, under the law, prior to instigating the execution of the removal order by a third party, the building inspection can issue as many as six fines to a mobile operator, which they tend to repeatedly pay. In this case, by the moment of the writing of this report, five fines had already been issued. Thus, for the third year in a row following the issuing of the removal order this base station is still in operation. The last in the line of the cases we worked on is a cluster of base stations installed on an older apartment building located in the very busy section of the Ilica Street in Zagreb. After the March 2020 earthquake, the building was labeled as temporarily unusable and in the December earthquakes it sustained additional damage. Consequently, we issued a request to the building inspection to perform a safety check on the building and the base stations and make an estimate of their safety for both the building's residents as well as the passers-by. The inspection, however, failed to follow up on our request, only stating that all of the necessary permits had been obtained for the bases prior to their installation.

In addition to what has been said so far, it needs to be stressed that the protection from non-ionizing radiation is insufficient in that it does not encompass its non-heat related effects nor the impacts of cumulative radiation generated by several sources at one location. It is often the case that several different base stations, mostly by different telecommunications operators, are installed on the same object and the effects of each are monitored separately and added together instead of taking into account their cumulative radiation level. The number of complaints submitted by the citizens and civic initiatives from all over the country for non-ionizing radiation has been on the rise in 2020, citing concerns with the introduction of the 5G technology. At the same time, the CRANI

and the Ministry of Health are of the opinion that this technology does not pose any greater health risks than the one used currently.

Sustainable Waste Management and Waste Management Centers

"There's something wrong with these centers. Enclosed I'm sending the complaints of the residents of Mariščina and Kaštjun. The conditions here are unbearable. You wrote the Constitution, do its articles saying that everyone has the right to a healthy life have to be implemented? We don't have the right to a healthy life. This agony has been going on for eight years now. We need urgent help, perhaps you won't appreciate the tone of this letter, but, trust me, I am writing out of pure fear and desperation.".

According to the 2019 *EC Country Report for Croatia*, waste management is the most critical sector in the RC and thus the transition from waste disposal to recycling should be treated as a matter of priority. In 2018 only 25% of municipal waste was recycled, compared with the EU average of 47% and 66% of it was disposed of at landfills (as opposed to 22% at the EU level). In 2019 the situation was somewhat better: according to the MESD's *Report on Municipal Waste Management in 2019* drafted in late 2020, the recycling rate rose to 30% and landfilling was reduced to 59%. However, the production of municipal waste increased by 2% and no change was recorded in the rate of the biodegradable waste landifilling. There were 108 active municipal waste landfills, out of which 35 were in the process of the preparation for rehabilitation and for another 32 the rehabilitation was underway. 39 landfills were rehabilitated, out of which two were closed and 37 have continued operating in a sanitary manner. Following their rehabilitation, most of the landfills were supposed to be converted into reloading stations and recycling yards or to be shut down. However, the decision by the competent minister on the order and dynamics of the closure of the landfills issued in 2018 lists the landfills scheduled to be shut down by the end of 2018, but also those that would remain in operation until their capacities were fulfilled and those that would continue to receive non-harmful municipal and production waste until the beginning of the operation of waste management centers. Illegal waste dumps and "black spots" caused by the long-term inappropriate management of technological waste and not rehabilitated as yet represent a problem as well, as does the fact that the beginning of the operation of the waste management centers is lagging behind and a comprehensive waste management system has so far not been established.

The Sustainable Waste Management Act (SWMA) adopted in 2013 and most recently amended in 2019 establishes a priority order according to the waste hierarchy which favors waste prevention as the least harmful method for the environment. It is followed by re-use, recycling and energy recovery from waste (including incineration). Waste disposal (landfilling and incineration without energy recovery) is listed as the last and least desirable option due to the fact that it causes the highest level of pollution.

The 2016 *Draft Waste Management Plan in the Republic of Croatia for the Period 2016-2022* (hereinafter: *Draft Plan 2016-2022*) recognized the importance of sustainable waste management and included a waste prevention plan, envisaging concrete measures: from food waste prevention to exchange and reuse of used items via the "reuse corners" located in the recycling yards and the reuse centers, as well as the inclusion of the unemployed persons and the homeless in these activities.

The previous Waste Management Plan for the period 2007-2015 envisaged a priority order but did not include a waste prevention plan. It prioritized the establishment of waste management centers, in which mixed municipal waste was primarily to be processed using the mechanical-biological processing method (MBP) which requires the use of biodegradable waste, despite the fact that the SWMA prescribes the reduction of biodegradable waste landfilling.

However, the *Draft Plan 2016-2022* caused a heated debate in the Parliament and was not adopted. Instead, the adoption of the plan for the period 2017-2022 followed (*Waste Management Plan in the Republic of Croatia 2017-2022;* hereinafter: *The Plan 2017-2022*), which reintroduced the concept of waste management centers and prescribed the obligation of the drafting of feasibility studies for each of the planned WMCs. The studies must take into account all of the goals envisaged by *The Plan 2017-2022* and also list all of the measures that need to be undertaken in the wider area of each of the WMCs in order for the goals to be fulfilled and the planned capacity of the centers justified, while at the same time respecting the waste hierarchy priority order. Under *The Plan 2017-2022*, WMCs can consist of re-use centers, recycling yards, recycling yards for construction waste, sorting facilities, facilities for the biological processing of the separately collected biodegradable waste, facilities for the mechanical processing of the bulky waste that cannot be reused, facilities for the mechanical-biological processing of the mixed municipal waste, but can also include surfaces for depositing asbestos-containing construction waste and previously processed non-hazardous waste. 13 WMCs are scheduled to be built by the end of 2022, and the one in the city of Zagreb after that point. According to the 2020 MESD data, feasibility studies are being conducted for three WMCs (Zagreb, Orlovnjak and Šagulje) and have been finished for eight others (Marišćina, Kaštijun, Bikarac, Biljane Donje, Lećevica, Babina Gora, Lučino Razdolje and Piškornica), for which construction projects have also been approved.

After the adoption of the *Plan 2017-2022* two WMCs were opened: Marišćina in 2017 and Kaštijun in 2018. Neither of them has a re-use center, a recycling yard, a sorting facility nor a facility for the biological processing of the separately collected biodegradable waste, which are the methods to be used first according to the waste management priority order. They do, however, have facilities for the mechanical-biological processing (MBP) of the mixed municipal waste and surfaces for depositing previously processed non-hazardous waste (the so-called bioreactor technology), which should be the methods of last choice. The feasibility study for the WMC Lećevica in the Split-Dalmatia County does not foresee a re-use center, a sorting facility nor a facility for the biological processing of the separately collected biodegradable waste, either. Instead, this WMC is also set to be based on the MBP technology. Thus, in our 2017 annual report, we recommended that MESD draw up, in line with *The Plan 2017-2022* and the *Code of Conduct of Consultations with the Interested*

Public, all feasibility studies for all of the planned WMCs, including a revision of the envisaged locations, and improved assessments of the impact on the environment and health, which they refused, stating that these studies could not subject to public consultations.

Citizens' complaints submitted to the Ombudswoman reflect their dissatisfaction with the current waste management system and the inadequate protection of the different environmental components, as well as concerns about the effects of pollution on their health. As far back as 2015 we were contacted by the citizens living in the vicinity of the Lončarica Velika landfill in the city of Osijek. They complained about the inadequate monitoring of the implementation of the air and water protection measures, the fact that soil protection measures were non-existent as well as about the attempts to expand the landfill to additional areas close to their homes, which, ultimately, failed. In 2016 the MESD issued an environmental permit for this landfill, justifying it with the fact that the WMC Orlovnjak had not been built yet, so there were no alternatives to waste disposal at the current location. In 2018 it issued the Decision on the Amendments to the Environmental Permit's Terms and Conditions for Lončarica Velika on the basis of which a new waste disposal surface was created and the landfill's rehabilitation started, albeit with a continuation of waste disposal activities.

In 2016 we received a complaint submitted by the residents of the city of Split living in the vicinity of its landfill, Karepovac, and organized into a civic initiative "Karepovac – Another Face of Split". The complaint cited air pollution and issues in its monitoring, since in 2016 only two mobile air monitoring stations were in operation and did not measure all of the necessary parameters, while at the same time the citizens complained about health problems, such as bronchial obstruction. According to the 2019 *Estimate of the Air Quality in the Split-Dalmatia County* by the company Ekonerg, the monitoring using referenced methods at the Karepovac monitoring station which only began in 2017 did not detect excessive levels of floating particles and hydrogen sulphide but it did record elevated hourly levels of the latter. The rehabilitation of this landfill started in 2017 and in its 16-month-long first phase a foul smell was spreading caused by the processing and/or depositing of municipal waste with high organic matter content. In our 2017 annual report we recommended that the MESD conduct studies on the impact of the Karepovac and Lončarica Velika landfills on the citizens' health, including air, water and soil sampling; however, this recommendation was not implemented.

It is important to mention here the fire that broke out in 2019 at the Prudinec landfill in the city of Zagreb's neighborhood of Jakuševec, following which the analysis of the burnt waste was conducted and found two types that were deposited there in contravention of the *Ordinance on the Manner of and the Conditions for Waste Disposal and the Categorization and Operating Conditions for Landfills*: pyrolysis waste containing harmful substances and "municipal waste not otherwise specified". Consequently, the environmental inspection found violations of the SWMA.

The continuous complaints and protests of the citizens of Marčelji regarding the pollution caused by the WMC Marišćina, which we mention in more detail in the chapter on air, as well as the excessive levels of arsenic and mercury found by the Teaching Public Health Institute of the Primorje-Gorski Kotar County in the samples taken from two of Marišćina's employees in July 2020, led the County to conduct the *Environmental Study on the Impact of the WMC Marišćina on the*

Citizens of Marčelji and the Surrounding Areas and to request that the MESD shut Marišćina down and devise an alternative solution. Similarly, the citizens living in the vicinity of the Kaštijun WMC have been protesting for years, resulting in, according to the data available to us, the Municipality of Medulin collecting evidence with the aim of requesting its closure in case air and/or soil pollution are found or until the conditions for its correct operation are met.

In order to ensure the protection of the values enshrined in the Constitution and the implementation of the commitments under the EU law, it is important to determine to what extent both of the aforementioned WMCs contribute to separate waste collection and recycling, to conduct and publicly discuss the feasibility studies for all WMCs, which, under the *Aarhus Convention*, do constitute environmental information, to revise the locations planned for the building of the WMCs as well as to conduct impact assessments of the planned WMCs on all of the environmental components and the health of the local populations. In our 2019 annual report we recommended that the MBP technologies be abandoned and that the health impact assessments conducted as part of the WMCs feasibility studies be improved. However, the report has not been discussed by the Parliament yet and MBP is still being used and incorporated into the future plans.

Impacts of Climate Change in the Republic of Croatia: Floods and Fires

According to the Intergovernmental Panel on Climate Change (IPCC), climate change is every change in climate over time, either occurring naturally or resulting from human activity, whereas the *UN Framework Convention on Climate Change* defines it as any change in climate that can be attributed, directly or indirectly, to human influence.

Climate change leads to more frequent and/or intense extreme weather events, such as floods, fires, storms or droughts, whereas the altered weather conditions cause human casualties, hunger and lead people to leave their homes as climate refugees. In the EU as much as 20% of the greenhouse gas emissions derive from industrial activity, whereas over 90% of biodiversity and water availability loss comes from the extraction and processing of raw materials. The number of new communicable diseases is on the rise. 75% of them are zoonotic, such as, for example, COVID-19, which is why the current pandemic that has claimed millions of lives and has caused dramatic changes in our everyday routines can be considered to be linked to climate change.

The EEA data indicate that in the future Europe is more and more likely to be faced with floods and its geographically lower regions with storms and rising sea levels. According to the international climate models, the Mediterranean is a "hotspot" where climate change impacts are especially pronounced. A large part of the Croatian territory belongs to this very region. According to the State Hydrometeorological Institute's (SHMI) climate overview for the year 2020, all of the temperature monitoring stations in the country recorded warmer temperatures, so that almost its entire territory could be rated as "very warm", with smaller areas labeled as "warm" or "extremely

warm" (Puntijarka, Rijeka and the Kvarner islands, the area around Zavižan, Gospić, Zadar and Split, etc.).

In 2018 The Government of the Republic of Croatia submitted its *Seventh National Climate Change Report* and the *Third Biannual Report under the UN Framework Convention on Climate Change (UNFCCC)*, where it is stated that for an extensive period of time now the RC has been exposed to adverse effects of climate change and to significant economic losses, in which it takes the third place in the EU, alongside the Czech Republic and Hungary. In 2020 *the Act on Climate Change and the Protection of the Ozone Layer* came into force, as well as the *2040 Climate Change Adaptation Strategy of the Republic of Croatia with a View to 2070,* which defines the most vulnerable sectors: water sources, agriculture, forestry, fishery, biodiversity, the energy sector, tourism, health and two intersectional thematic areas – physical planning and risk management. However, as early as 2014 the country was witnessing catastrophic floods, which affected, to an even greater extent, the neighboring countries as well. Additionally, 2017 was marked by an especially intense fire season in Croatia and other parts of Europe caused by high temperatures, and in 2020 and 2021 we are experiencing a pandemic - another consequence of climate change.

In Croatia, climate change contributes to floods, such as that of the catastrophic proportions that hit the territory of the Vukovar-Srijem County in May 2014. It claimed two lives and caused other significant damage and was the result of the rain period with the highest measured amounts of rain (91 liters per m^2 within the course of four days) and the highest water wave in the 1000-year average (1 194 cm). The Sava river broke through the embankments near the villages of Rajevo Selo and Račinovci, flooded the Gunja Municipality and, to a larger or a lesser degree, flooded or endangered the settlements in the Drenovci Municipality (Rajevo Selo, Račinovci, Đurići, Drenovci and Posavski Podgajci) and in the Vrbanja Municipality (Strošinci, Soljani and Vrbanja). The flooding also affected four other counties, in which natural disaster was proclaimed (the Osijek-Baranja, Požega-Slavonia, Brod-Posavina and Sisak-Moslavina Counties) as well as the neighboring countries of Bosnia and Herzegovina and Serbia.

Following these events, on 20 May 2014 the Government of the Republic of Croatia passed a decision proclaiming the state of catastrophe for the affected regions. Based on our monitoring of the impacts of the floods on the affected population, in 2014 the Office of the Ombudswoman submitted to the Croatian Parliament the *Special Report on the Human Rights Implications of the Flood-Related Catastrophe in the Vukovar-Srijem County*. The report was based on the complaints submitted to the Office, field visits, interviews with numerous stakeholders and the affected citizens, as well as other available data, analysis of the regulations and of the news coverage. Although it referred to the areas hit by the floods, its recommendations were intended for all other future emergency situations with the potential to affect the level of the exercise of human rights in the areas of protection and rescue provision, social welfare, health care, humanitarian aid, rehabilitation and reconstruction, information provision and free legal aid. Unfortunately, the report was not accepted by the Parliament. Thus it is not surprising that most of its recommendations remain unimplemented and, as a result, the development of the crisis response system, intended to assist the population in other similar situations, is lagging behind.

According to the estimates by the National Protection and Rescue Directorate (NPRD), the 2017 fire season was one of the most challenging in the past few decades, as the number of fires, the flights of the fire-fighting airplanes, and the amounts of water spent for their extinguishing were as much as three times higher than in 2016. In its *Meteorological Analysis of the 2017 Fire Season*, the State Hydrometeorological Institute characterized the weather conditions in the 2017 summer months as extreme, due to the fact that they were marked by dry periods and four intense heat waves. The specific event that warrants mentioning here is the fire that broke out in the city of Split in July 2017 and spread to the area of Srinjina-Račnik and the settlements of Sitno Donje and Sitno Gornje, Žrnovnica and Perun. Fortunately, human casualties were avoided despite the fact that the citizens were exposed to sudden danger and participated in the extinguishing of the fire surrounding their own homes. Following the fire, the citizens established an ad hoc initiative under the name "Split is Burning" and organized a rally at the Split boardwalk with the goal of both expressing their gratitude to the firefighters and others involved in the firefighting activities but also to warn about the inadequate physical planning which ignores the peripheral parts of the city, as well as about the problematic waste management activities at the Karepovac landfill and their potential adverse health impacts that were continually being ignored. The rehabilitation of the Karepovac landfill began several months after the fire, in late 2017. Due to their extreme characteristics, both the Split fire as well as those that have more recently been affecting the Lika-Senj County can be linked to climate change.

Following the Split fire, we undertook an analysis of the national firefighting and civil protection systems, which revealed shortcomings in their harmonization, both on the normative as well as on the operative levels. Additionally, we found the criteria for the categorization of the event itself to have been unclear: although the conditions were met for the fire to be proclaimed a large-scale calamity in line with the Civil Protection System Act (CPSA), not only because it was caused by a sudden act of natural forces and endangered the health and lives of the citizens, but also because the fire-fighting units from all over the country as well as the armed forces and the police were put into action, still, only natural disaster was proclaimed in line with the Natural Disasters Act. The legal definitions of both are quite similar and thus in the opinion of the then operating NPRD they should automatically have been proclaimed simultaneously, which was not the case.

With the aim of analyzing the 2017 fire season, a series of events and discussions was subsequently organized, including the round table titled *Human Rights, Firefighting and Civil Protection – Lessons Learned in the 2017 Fire Season* organized by the Ombudswoman in the Croatian Parliament and bringing together the heads of the Ministry of Defense, NPRD, the Croatian Firefighting Association, firefighters' and other NGOs, the Croatian Red Cross and many others. The participants concluded that the normative frameworks regulating the firefighting and the civil protection activities warranted amending and stressed the importance of further financial investments, the stepping-up of preventive activities, the systematic education of the citizens, especially children, on protection and rescue activities and, especially, the co-operation between the institutions and the citizens with the aim of restoring the citizens' trust in the institutions.

Finally, it needs to be mentioned that the catastrophic 2014 floods were followed by the adoption of the new Civil Protection System Act in 2015, which provided the framework for action in

emergency situations that require the rescuing and protection of people, health, the environment, nature, cultural wealth and property. It was activated during the Split fire and, most importantly, during the current COVID-19 pandemic. In the latter case, along with the Act on the Protection of the Population from Communicable Diseases, it has been the most important piece of legislation guiding the action to contain the disease and has been amended twice during this period. It was also implemented during the 2020 earthquakes affecting the Sisak-Moslavina and certain parts of the Zagreb and the Krapina-Zagorje County, following which the Government pronounced the state of catastrophe for the second time in the country's history. Regardless of whether emergency situations are caused by natural phenomena, climate change induced by harmful human activity or by pandemics, they are becoming more and more common and require our preparedness. Moreover, we must work to prevent them in order to be able to efficiently protect the values enshrined in our Constitution and the right to a healthy life and to ensure the necessary conditions for a healthy environment.

4. CONCLUSION

The detected shortcomings in the environmental protection system, whose function is not only to protect nature and the environment but also human rights, indicate that the primary goal envisaged by the Environmental Protection Act – the protection of life and health – has not been achieved. The sustainable development principle has not been implemented to a sufficient extent due to the fact that environmental protection is treated as secondary to instead of equally important as social and economic development. The implementation of the precautionary principle requires a higher level of environmental and health protection; however, this is avoided and minimal and/or inadequate protection is provided. Thus, the institutions need to invest much more effort in order for the efficient protection of the right to a healthy life and the implementation of the constitutional values of nature and environmental protection to be achieved.

Pollution of the environment and of nature, climate change and the pandemic represent the greatest challenges for the humanity, decision makers and the human rights protection system itself. Following the lead of the European lawmaker, the Croatian Parliament should proclaim the state of the climate and environmental crisis and thus send a message to the youth, as well as to everyone else, that the state of nature and the environment in the Republic of Croatia can and must be improved. The current generation of young people demands and expects a healthier, greener and more equal world. It is our duty and commitment to make that happen.

5. RECOMMENDATIONS:

TO THE CROATIAN PARLIAMENT:

1. following the lead of the European Parliament, to proclaim the state of environmental and climate crisis and to thereby strengthen its commitment to the implementation of the constitutional values of environmental and nature protection, the right to a healthy life and sustainable development;

TO THE GOVERNMENT OF THE REPUBLIC OF CROATIA:

2. to include youth NGOs and representatives into the processes of planning and development of all public policies pertaining to environmental protection and sustainable development;
3. to suspend the planning and the realization of all projects based on the use of fossil fuels and all others that are not in line with the sustainable development principle;

TO THE MINISTRY OF THE ECONOMY AND SUSTAINABLE DEVELOPMENT:

4. to adequately support environmental human rights defenders (NGOs, civic initiatives and others), including the implementation of their rights stemming from the *Aarhus Convention*;
5. to perform continuous supervision of the work of the persons authorized for the professional tasks of environmental protection;
6. to improve the monitoring of air quality, especially of the emissions of the floating particles, by setting up all of the planned air monitoring stations within the National Network for Continuous Air Quality Monitoring;
7. in co-operation with the Ministry of Health and Croatian Waters, to conduct and publish an analysis of the effectiveness of the measures for the protection of drinking water sources, water wells and water supply facilities, in line with the Water Act and the Act on the Protection of Water for Human Consumption;
8. to draft a regulation establishing a body in charge of systematic soil monitoring and introducing the obligation for environmental impact assessments to include soil monitoring measures;
9. to adopt without delay the strategic documents and subordinate legislation envisaged by the Act on Environmental Protection, the Act on the Protection from Light Pollution and other legislation regulating the area of environmental protection;

10. to adopt a normative framework abandoning the use of the MBP technologies in the waste management centers and ensuring the implementation of the measures necessary for the effective protection of all environmental components at those locations;
11. to conduct feasibility studies for all of the planned WMCs and submit them for public consultations in line with the *Aarhus Convention* and to step up the assessments of the impact of the WMCs on all environmental components and on human health;

TO THE MINISTRY OF HEALTH:

12. to ensure further development of health ecology and, in cooperation with the Ministry of the Economy and Sustainable Development, to introduce mandatory Health Impact Assessments (HIA) prior to the planning and construction of large industrial and other infrastructural facilities and in other locations;
13. to perform continuous supervision of the work of the persons authorized for the professional tasks of noise protection;
14. to improve the normative framework for the protection of health from the long-term and cumulative effects of non-ionizing radiation;
15. in co-operation with the Ministry of the Economy and Sustainable Development, to ensure the conducting of a study on the impact of the landfills of Karepovac, Lončarica Velika and Prudinec on citizens' health, including air, water and soil sampling at these locations;

TO THE STATE INSPECTORATE:

16. to ensures continuous inspections and the issuing of sanctions in line with the Act on the Protection from Light Pollution;
17. in line with its mandates deriving from the Environmental Protection Act, to issue more measures related to the sampling of environmental components, especially of the soil;

TO THE MINISTRY OF CONSTRUCTION, PHYSICAL PLANNING AND STATE PROPERTY:

18. in co-operation with the regional and local self-government units and the interested public, to improve the normative framework regulating the installation of the mobile base stations and their removal following enforceable decisions by the competent bodies;

TO THE MINISTRY OF SCIENCE AND EDUCATION:

19. to develop the children's and young people's awareness of environmental issues by introducing the content on the right to a healthy life and climate change into the curricula.