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HANDBOOK FOR JOURNALISTS: REPORTING ON ENVIRONMENT AND CLIMATE CHANGE IN ALBANIA

Tirana, 2023

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Content

ABBREVIATIONS

AEE	Energy Efficiency Agency (Agjencia e Eficences se Energjise)
AKBN	National Natural Resources Agency (Agjencia Kombëtare e Burimeve Natyrore)
AKM	National Environment Agency (Agjencia Kombetare e Mjedisit)
AKP	National Forests Agency (Agjencia Kombetare e Pyjeve)
AKUM	National Agency of Water, Sewage and Solid Waste Management (Agjencia Kombëtare Ujësjellës Kanalizime dhe Mbetjeve të Ngurta)
AKZM	National Agency for the Protected Areas (Agjencia Kombetare e Zonave te Mbrojtura)
AMBU	National Agency for the Management of Water Basins (Agjencia e Menaxhimit të Baseneve Ujore)
BE	European Union (Bashkimi Evropian)
DIK	Directorate of Inspection and Control (Drejtoria e Inspektim Kontrollit)
EMAS	Eco-Management and Auditing Scheme (Skema e Menaxhimit Eko dhe Auditimit)
ICIJ	International Consortium of Investigative Journalists
IGJEO	Geosciences Institute (Instituti i Gjeoshkencave)
IKMT	National Inspectorate for the Protection of the Territory (Inspektoriati Kombëtar i Mbrojtjes së Territorit)
ISHP	Public Health Institute (Instituti i Shëndetit Publik)
ISO	International Organization for Standardization (Organizata Nderkombetare per Standardizimin)
HK	National Herbarium (Herbari Kombëtar)
KBT	Tirana's Botanical Garden (Kopshti Botanik i Tiranës)
MBZHR	Ministry of Agriculture and Rural Development (Ministria e Bujqësisë dhe Zhvillimit Rural)
MEA	Multilateral Environmental Agreement (Marrëveshjeve Shumëpalëshe Mjedisore)
MIE	Ministry of Infrastructure and Energy (Ministria e Infrastruktures dhe Energjise)
MTM	Ministry of Tourism and Environment (Ministria e Turizmit dhe Mjedisit)
MSHMS	Ministry of Health and Social Welfare (Ministria e Shendetesise dhe Mireqenies Sociale)
MShN	"Sabiha Kasimati" Natural Science Museum (Muzeu i Shkencave të Natyrës 'Sabiha Kasimati')
NJVV	Local Government Units (Njesite e Veteqeverisjes Vendore)
OZHQ	Sustainable Development Goals (Objektivat e Zhvillimit të Qendrueshem)
QKFF	Flora and Fauna Research Centre (Qendra Kërkimore e Faunës dhe Florë)
RRSHTN	Pollutant Release and Transfer Register (Regjistri i Shkarkimit dhe te Transferimit te Ndotesve)

ShGjSh	Albania Geological Service (Shërbimi Gjeologjik Shqiptar)
UNEP	United Nations Environment Programme (Programi i Kombeve te Bashkuara per Mjedisin)
VKM	Decisions of the Council of Ministers (Vendime te Keshillit te Ministrave)
VNM	Environmental Impact Assessment (Vlerësimi i ndikimit ne mjedis)
VSM	Strategic Environmental Assessment (Vlerësimi strategjik mjedisor)
WCED	World Commission on Environment and Development (Komisioni Botëror i Kombeve te Bashkuara për Mjedisin dhe Zhvillimin)

INTRODUCTION

REPORTING ON THE ENVIRONMENT

Climate change is widely considered humanity's greatest threat. If scientific predictions become reality, our world is on course to change beyond recognition in the coming decades, likely unleashing instability, war and famine.

Journalists are, undeniably, playing an important role in raising the alarm on this and other environmental issues. Without the tenacious and fearless work of reporters, many key green threads, such as the mismanagement and overuse of the natural resources, would remain obscured.

However, important environmental topics remain underreported and, when they do receive attention, they can be framed better in order to deliver a clearer message to the public.

Urban development, unsustainable consumption, the exploitation of natural resources, legacy pollution, uncontrolled movement of the population, and inefficient practices in the management and discharge of waste are all key issues facing Albania which require the attention of reporters.

And over the past years, the environmental sector's legal framework has also been in flux. For example, the government has been aligning itself with EU law, structures for the protection of the environment at central and local levels have been created and strengthened, and a number of agreements and international programs on the protection of the environment have been signed.

However, the financial support from the state budget for environmental protection remains limited and suffers from inefficiency with low long-term benefits in terms of the improvement of the environmental conditions.

All these issues require the keen attention of journalists to raise awareness-levels of environmental issues among the wider public, media and the business community.

This manual aims to provide journalists with a better understanding of climate change and looming environmental challenges, both in terms of the legal framework and funding, and Albania's track towards harmonisation with EU standards.

It also provides to Albanian journalists the latest practical, cutting-edge tools to investigate and report on this field, suggesting helpful open sources of information.

CHAPTER 1

MAIN ENVIRONMENTAL CONCEPTS

In this chapter we will explain the most common terms in the environmental sector, to help improve the accuracy of environmental news reporting.

THE GREEN AGENDA FOR THE WESTERN BALKANS is a new strategy for the Western Balkans, which aims to move the region from a traditional economic model to sustainable economic growth patterns as envisaged in the European Green Deal. The Western Balkans region has promised to reach carbon neutrality by 2050, which means having a balance between emitting carbon and absorbing carbon from the atmosphere. This is within the EU-wide ambition to become carbon neutral and, as well, its aim for the region to converge with the main elements of the European Green Deal, by approving the Green Agenda for the Western Balkans (GAWB) in the Sofia Summit 2020, and later, through the approval of the Action Plan in Brdo in October 2021. Albania has been an enthusiastic supporter of these initiatives and has been an active participant in these processes.

NATURAL RESOURCES are the biotic - derived from living things - and abiotic - such as sunlight or air - elements that are in use, or could be used, by the humans for fulfilling human needs.

The natural resources include all underground resources, such as minerals or fossil fuels; and those above ground, such as water, land, forest, pastures, solar power or wind, and the various natural ecosystems. The sustainable management of natural resources aims to use these resources in a way that their stock is preserved for future generations.

During 2023, a process to evaluate all these resources at local levels in Albania was initiated. The initiative considered all the resources as Natural Capital. The registration, management and the development of the natural capital of the country, such as property with all its assets, (minerals, oil, forests, pastures, water, energy, etc), at local and national level, either private or publicly owned, aims to calculate the development potential in each region of the country.

RENEWABLE RESOURCES are the natural resources that renew in a natural way or can be renewed totally or partially in other ways. All other resources are classified as non-renewable. Renewable resources are hydropower, sun, wind, geothermal, waves, biomass or flow tides. Albania is considered a resource rich country in renewables due to the abundant water resources (seven basins of rivers, three large lakes and as well, the coastline along the Adriatic and Ionian Sea); Albania also has a high number of sunny days thanks to its Mediterranean climate and is considered rich in biodiversity in both flora and fauna. (Some 30% of the European flora can be found in the territory). It also has highly diverse natural ecosystems, which start from the sea level and rise to 2,700 metres above sea level.

SOURCES OF POLLUTION DISCHARGES

> ***Point sources*** are anthropogenic sources of discharges which can be practically identified easily. This term includes sewage treatment plants, energy plants, industrial installations and buildings or properties with limited spatial extension.

A pipe discharging sewage, an illegal dumping site for solid waste or a factory smokestack are point sources. These can be easily identified and thus, can be monitored, either occasionally, or continually as seen fit.

> ***Dispersed-source pollution*** is a number of relatively small points of pollution on land, in water or air, which has a combined effect in the environment that is a matter of concern. The pollution of water with nitrates, phosphates and pesticides used in agriculture, as rain washes these out of the land and transfers them on underground water basins or on rivers, is a typical case of dispersed-source pollution. The air pollution by cars, ships or planes is also considered *dispersed-source* because, although they can be identified as source pollutants, they pollute while on the move.

ENVIRONMENTAL STATEMENT is an official document issued by the Ministry of the Environment following the assessment of the request for approval of a project, plan or programme. The Statement can either approve or not the request and is accompanied by conditions that should be fulfilled by the proposer and by the responsible state bodies.

DAMAGE TO THE ENVIRONMENT is the change to the physical and chemical

characteristic of the structure of the ecosystems, the decrease of the biological productivity and the variety of the ecosystems, the rupture of the ecological equilibrium and the damage to the quality of life caused by the pollution of water, air or land due to human activities or natural catastrophes. The overuse of the natural and mineral resources is also considered damage.

Its use should be elucidated with more detailed specifications on the nature and the degree of the damage. In many cases in environmental news reporting, it is used linked with specific activities, such as a construction boom in urban areas which causes a deterioration in several components of the environment quality, such as air quality or a decrease in green areas.

ENVIRONMENTAL DAMAGE THAT IS OF A HISTORICAL NATURE is pollution with dangerous materials and waste on industrial areas, or in their vicinity, caused by the activity of the formerly state-owned enterprises, which can be still operating, closed, abandoned or sold. Some of these continue to threaten the environment or health of the inhabitants living near them.

There are several areas in Albania where there are still deposits from mines or industrial waste created before 1990. In several studies carried out by the United Nations Environmental Programme (UNEP) about two decades ago, these places have been marked as environmental hotspots where there are still risks, such as land pollution and or water pollution due to the run-off from rains of pollutants. Such places include dumping sites of waste minerals in Guri i Kuq (Pogradec), Rubik and Bulqiza. There are cases when dangerous chemicals are found above the normal levels in land that has been occupied by industrial areas that are now almost completely destroyed. For example, the site of the Superphosphate Combine in Laç, in the Durrës industrial area, or in the Metallurgical Complex of Elbasan.

CIRCULAR ECONOMY is a model of production and consumption that includes the division, leasing, reuse, repair, renovation and recycling of materials and products for as long as it is possible. In this case, the life cycle of products is greatly extended.

In practice, this means reducing the quantity of waste to a minimum. When a product reaches the end of life, its materials are kept within the economic cycle whenever possible through recycling. These materials can be used again and again, thus creating further value.

This model of development is different from the traditional, linear one, which is based on the principle of take-produce-consume and then throw away. The traditional model is based on the use of large quantities of primary materials and energy that can be easily found and are cheap. The energy crisis has shown that this traditional model is not sustainable for the global economic development and, as well, for the development of specific countries. The increase in the price of

primary materials and energy and the growing importance of waste as an environmental issue requires switching to a circular economy which aims at saving primary materials, decreasing the use of energy and thus, protecting the environment.

There are many initiatives of this nature at many levels. Many international companies have adapted their production cycle based on the accumulation of recycled materials. At the local level, many productive activities have created close relations with the consumer in order to support production, consumption and recycling over short distances.

ENVIRONMENTAL PERMIT is the official document issued by the Ministry of the Environment following the evaluation of the request and its accompanying documents and, as well, after consulting with the interested parties. The environmental permit is necessary to carry out any activity that has an impact on the environment. It includes conditions that must be implemented in order to avoid damaging the environment above the permitted norms.

Economic operators of various activities must report, based on their environmental permit, their discharges and the implementation of the conditions of their permit to the National Environmental Agency by the 31 March of the following year.

Polluting discharge data for any economic activity should be open for the public on the website of the National Environmental Agency. Journalists and any interested individual can consult tthe level of pollution in a certain area from the data reported from the activities approved under the environmental permit.

DANGEROUS SUBSTANCES are those substances that, due to their characteristics, including for the production, transportation, preservation, the usage and discharge in the environment pose a heightened risk of damage to human health, the environment and of flora, fauna, biocenoses or biotopes.

Specific protocols envisaged in legal documents approved through government decisions or specific orders should be followed during the processing and usage of these substances. The most common among these substances is chemicals, such as pesticides, pharmaceutical materials, paint and various diluents. Its usage is accompanied by continuous monitoring and analysis of its active components.

Their storage, transportation and sale must be done in specific packaging which varies with the type of the substance and the level of risk it poses. The labelling in Albanian language and the usage of specific warning signs on the risks is a legal obligation that must be carried by the specific standards that have been established for the producer or the trader. These standards depend on the level of the danger, how it is used, the expiry date and the way in which the waste is administered after usage.

THE EUROPEAN GREEN DEAL is a package of political initiatives which aims to put the European Union on the path towards Green Transition, with the final aim of achieving climate neutrality by the year 2050. This supports the transformation of the EU into an ethical and affluent society with a modern and competitive economy.

This agreement underlines the need for an inclusive and cross-sectoral approach in which all the respective political fields contribute to the final purpose, related to the climate. The package includes initiatives that cover climate, the environment, energy, transportation, industry, agriculture and sustainable financing, all interlinked with each other. The European Green Deal was launched by the European Commission in December 2019.

WASTE is any substance, material or object which the holder discards or intends to, or is required to discard. Waste is considered as such for as long as the materials extracted from it, or energy produced by it, is not included in the production process.

In common usage, this term is substituted with the word *garbage or rubbish*, especially when speaking about waste generated by family or urban sources. Between these two terms there is a distinction because the waste which is considered a material that is no longer in use but still has economic value if recycled and placed in a new production cycle. On the other hand, garbage has no economic value and it is sent to the terminal treatment plant such as landfills to be deposited or incinerators to be burned. In practice, waste is often turned into garbage simply because it is mixed with other waste and becomes dirty and impossible to recycle. This is often the case with paper and cardboard.

INTEGRATED WASTE MANAGEMENT is a comprehensive waste prevention, recycling, composting, and disposal programme, as well as the supervision of these operations and the management of waste disposal areas. Integrated Waste Management includes a number of measures for the separation of waste at source and the recycling of waste streams in order to reduce as much as possible the quantity of the waste that ends up in the terminal treatment plants. It is carried out through local plans for integrated waste management and, as well, through regional plans for its transfer and processing.

HAZARDOUS WASTE is a type of a dangerous material that can have properties such

as ignitability, reactivity, corrosivity, toxicity etc. Such materials can be cancerogenic, infectious or radioactive, to a level that can damage the natural state of water, land or air and can have adverse consequences for human health or for the ecosystem.

Specialised centres deal with the treatment of hazardous waste through chemical processing or burning it under controlled settings. The quantity of hazardous waste is measured by each specialised center, while the hazardous waste collected and processed are reported by the National Environmental Agency in its yearly report on the state of the environment, which is published on the agency's website.

Treatment of hazardous waste is expensive and its management is planned at regional or national level. For example, the treatment of health sector waste or used engine oils or batteries. For specific types of waste, their final processing is carried out only in specialised plants abroad. Some of the hazardous waste that cannot be treated due to lack of the necessary technology or due to the relatively small quantity, must be deposited in a safe way. Such deposits must be monitored continuously .

ENVIRONMENTAL PROTECTION is the activity that aims to prevent and limit pollution and environmental degradation or to rehabilitate, preserve and improve the environment. The environment is damaged by two basic activities: pollution as result of discharge or the release of material, radiation or live organisms that has an adverse impact on the environment; and the degradation or the destruction of the environment due to activities that exploit or transform the environment in a way that damages the functionality and the natural qualities of the environment.

ENVIRONMENT is the community of the interactions of the biotic or abiotic ingredients that encourage, feed and support life on land. This includes the natural environment, air, land, water bodies or biological ecosystems. It is a crucial precondition for the wellbeing and health of humans and for the development of natural values, of cultural heritage, of science and religious values of the society.

In general use, it can be used to refer to the natural environment, related to forest, a patch of pasture or a panorama where there are not intrusive or transformative activities from the humans. It can also be used with reference to the urban environment to refer to the urban spaces with high population density and high scale of transformation.

ENVIRONMENTAL MONITORING is the collection, evaluation and aggregation of environmental data through observation, continuous or periodical, to a number of environmental

indicators, qualitative or quantitative, that shows the environmental components and their change as a result of natural or human factors.

Environment monitoring is a functional duty of the central agencies that deal with environmental management. The National Environmental Agency, a structure dependent on the Ministry of the Environment, is the highest body responsible for environmental monitoring. It drafts the monitoring plans, carries out the monitoring and then publishes the data in its yearly report on the state of the environment. Other agencies monitor natural resources, such as bodies of water, land, air, and biodiversity. They monitor the indicators and report the collected data. At the local level, municipalities have the duty to monitor environmental indicators that have been decentralised, such as the collection and the transportation of waste, green areas etc.

CROSS-BORDER ENVIRONMENTAL IMPACT is any impact that happens in one country from an activity that is exercised partly or fully in another country. This includes activities that produce consequences in the global environment such as climate change, pollution of international water bodies, change in the biosphere and on a global scale in general.

Albania shares with its neighbouring countries several lakes, such as Prespa, Ohrid and Shkodra, and several rivers, such as Drin, Buna and Vjosa. Any intervention in these water bodies that might have regional or cross border impact must be accompanied by communication and information processes with the neighbouring countries. These processes have been regulated through International Environmental Conventions (such as the Convention on Long-range Transboundary Air Pollution, Aarhus Convention etc.) The planning of activities that have a cross border impact should include the participation of the public in the affected countries.

CLIMATE CHANGE refers to the long-term variation of temperature and weather patterns. These changes can be caused naturally. However, since 1850, human activity has been the main factor causing the change, mainly through the burning of fossil fuels, such as coal, oil or gas, which produces gases that capture heat.

Unlike cyclical climate changes that have happened through the geological ages of the planet, man-made climate change is developing much faster. The increase of the average temperature by 1C in the past happened over a 100,000-year period, which allowed life on land to adapt. The current climate change that we are witnessing has resulted in an increase of 1.2C in less than 150 years.

The main greenhouse gases whose concentrations are increasing are carbon dioxide and methane. These gases come from the use of fossil fuels (oil, natural gas or coal) as the main energy sources for transportation, agriculture and other industries. Changes in land usage, such

as concreting or cutting of forests, raises the quantity of the greenhouse gases in the atmosphere. Energy, industry, transportation, buildings, agriculture and land use are the main sectors that cause greenhouse gases. The increase in animal husbandry for the production of meat and other livestock products has increased the amount of methane in the atmosphere.

The consequences of climate change can be seen in temperature increases and the disruption of rain patterns (long periods of dry weather followed by heavy rains and high intensity storms). These changes have consequences on the natural systems, on economic activity and human health by bringing more fires, floods, diseases, crop failure or population movements.

The seven entities with the highest emissions, (China, the United States of America, India, the European Union, Indonesia, Russia and Brazil) are together responsible for about half of the total global emissions of the greenhouse gases, according to 2020 data.

Thousands of scientists and representatives of governments have agreed that limiting global temperature warming to no more than 1.5°C would help to avoid the worst of climate change and to keep the climate within the limits of what is livable. However, without change in the current policies, a 2.8°C growth in the global temperature is foreseen for the end of this century. The global agreements which should guide the world towards these objectives on climate change are the Sustainable Development Goals, the UN Framework Convention on Climate Change and the Paris Agreement. These focus on three measures: decreasing emissions, adapting to climate change and financing a climate friendly development.

The transition from fossil fuels to renewable sources of energy such as sun or wind will contribute to reducing emissions that cause climate change. A growing number of countries, including Albania, are pledging for zero net emissions by 2050, while promising to halve emissions by 2023 with the final objective of keeping global warming below 1.5°C.

ENVIRONMENT POLLUTION is the direct or indirect introduction of the vibrations, energy, heat, radiation, noise or biological factors in air, land or water, which can change the qualities of the environment and damage the quality of life.

The categories of pollution can be determined by the type of activity that causes them. According to the type of pollution we have:

- *Physical pollution:* dust, radiation, noise, heat, etc.
- *Chemical pollution:* pollution by chemicals, pesticides or gaseous emissions into the atmosphere, etc.
- *Biological pollution:* bacterial pollution by faecal bacteria in the water, *E. coli*, introduced species such as blue crab in the lagoons along the Albanian sea coast, genetically modified organisms, etc.

Classified according to the activity that causes the pollution, we also have: industrial pollution, pollution due to transportation and pollution from agricultural activity. We must bear in mind that one activity might cause several types of pollution such as physical pollution (e.g. emitting dust in the air and noise in the environment) and chemical pollution, such as the emission of gases.

We should also be aware that pollution is always a by-product of human activity. If following natural erosion or a volcanic eruption, there are sediments in water or the level of gases in the air increases, this process is not classified as a pollution.

ENVIRONMENT EMISSION LIMITS are the highest permitted level of pollutant materials in discharges over a certain time period. The emission limits must be respected in discharge points when it flows from the installation undiluted.

The principles of environmental protection and care

> ***The principle of "care"*** is the decisions and actions undertaken for the purpose of diminishing the risk to the environment, to prevent or diminish in the right time any future damage to the environment.

> ***The principle of "prevention"*** is the selection and the approval of the best solution, which, in the preliminary phase of the decision making, aims to avoid damaging consequences of a certain activity on the environment.

> ***The principle of "rehabilitation"*** is the necessity to repair environmental damage caused by individuals or companies by rehabilitating the damaged environment.

> ***The principle of "the polluter pays"*** means that the polluter should bear the cost to improve the polluted environment and to return it to an acceptable state. This is reflected in the production cost and to the consumption of the merchandise or services that cause the pollution.

These are the principles sanctioned in the Law on the Protection of the Environment. As an example, the Extended Responsibility for the Producers means that producers have an obligation to collect and recycle the packaging that they use for their merchandise and that consequently causes waste.

THE ENVIRONMENTAL ADMINISTRATION SYSTEM includes the institutional framework, policies, action plans and technical and administrative measures undertaken for the protection of the environment, certified by the international bodies such as ISO and EMAS.

> ***ISO 14001*** is a standard of the International Standard Organisation (ISO), which specifies the criteria for the environmental management system. It describes the framework which a company or organisation should have for an efficacious system of environmental management. It has been conceived for any kind of organisation, irrespective of the type of activity or the sector in which it operates. It guarantees to the managing staff of the company and as well the employees along with the interested parties that the environmental impact of the company is being measured and improved. The criteria that should be fulfilled for this environmental standard is related to auditing, communication, labelling and analysing of the life cycle and the measures undertaken to address the environmental challenges, such as climate change. This family of standards contain ISO 14020, the Eco Standard, and ISO 14040, the standard for the life cycle assessment.

> ***Eco-Management and Audit Scheme (EMAS)*** is a tool created by the European Commission through a dedicated regulation that aims to help organisations improve their environmental performance, to save energy and to optimise the usage of the resources. This is a management instrument to evaluate, report and improve the environmental performance of organisations and it is obligatory for EU member countries.

Best available technique/technology represents the most advanced phase of environmental protection, in which an activity is carried out at a very high level of environmental protection while being feasible in terms of economic efficiency. Usually, this term is used in cases of technologies and practices that aim to mitigate as much as possible any negative impact on the environment. For example, when technologies for processing of natural resources or waste are used for the purpose of diminishing the quantity of the releases in the environment and for monitoring these releases. It is also used in cases when damaging insects in agriculture are kept under control through the use of technologies and practices that cause less pollution and consume fewer natural resources. Or in cases when agriculture operates in practices that minimise the consumption of water, energy or other inputs.

POLLUTANT'S TRANSFER is the movement of materials that cause pollution outside the country for the purpose of its use, reuse, storage, processing, energy recuperation, recycling or depositing.

Based on the Protocol of Pollutant Release and Transfer (PRTR), the industrial operators should submit their own yearly report to the National Environmental Agency on their release and

transfer of pollutants according to the conditions attached in their environmental permit. This obligation is valid for any activity that causes waste, including greenhouses for agriculture, animal husbandry plants, mining and quarries, incinerators, etc.

ENVIRONMENTAL INDICATOR is a variable that provides in a concentrated and simplistic way data on an environmental phenomenon, making it understandable through the assigning of a numeric value and through measurement. This includes environmental phenomena that relate to the quality of the environment and its components, releases into the environment, pollution and damage to the environment, biodiversity and the scale of its damage or protection and, as well, the measures undertaken for the protection of the environment. Environmental indicators are specific for any component of the environment and serve to monitor the quality of that component and to help the evaluation of the environmental health. Some examples are: the nitrates and phosphates content of the water (if they are high this suggests pollution originally from agriculture), the number of birds wintering or breeding in a lagoon (if there is a wide variety and high number that indicates a higher degree of biodiversity, lack of disturbance from humans and a high-quality natural resource from which they feed).

Environmental indicators are parameters that are monitored by institutions according to their monitoring plans, published on the website of the National Environmental Agency. The main environmental indicators are determined in international documents (conventions or environmental protocols) and, as well as, in European legislation. For the purpose of research or monitoring of the specific environmental areas, institutions can assign further specific indicators that help to understand and to better monitor the environmental situation in that specific area.

RELEASES INTO THE ENVIRONMENT is the release in the open, in a direct or indirect way, of various substances, either of solid, liquid or gaseous nature and, as well, of energy, vibrations and from noise, either from one or more point sources or from dispersed sources.

The level of releases into the environment is determined in the legal framework including and the specific environmental laws, such as the Law on the Protection of the Air, the Law on Noise, the Law on Chemical Components etc. Although the process of European integration in Albania has helped to align these standards with those of the European Union, EU members and those candidate countries can determine their own discharge standards, which can be different from those of the EU. That is especially true when standards foresee lower thresholds than those approved by the European Union. Release limits are part of environmental policies and, as such, they are revised continually. For example, the objective to cut the emissions of greenhouse gases has been one of the most dynamic processes of the last years with an assigned mid-term

objective for 2030 and final objective for 2050.

ACTIVITIES WITH ENVIRONMENTAL IMPACT are those economic activities that use the environment or components of the environment or that release substances or energy, thus altering its quality. Although any human activity has an impact on the environment, the general meaning of the impact in this context includes only those activities that cause negative changes through pollution and/or destruction of the environment. "The Environmental Impact" is any change in the physical environment, including consequences for health, the economy, the society or changes in aesthetics.

Aiming to minimise and control the negative impacts of these activities, the law on the Environmental Impact Assessment lists two types of environmental permits that are required before the start of an investment. The Type A permits are required for large scale industrial enterprises that can have considerable impact on the environment while Type B permits include those whose impact is limited. Application for environmental permits is done online at the National Environmental Agency website, according to the type of the activity and the size of the plant that is planned.

ENVIRONMENTAL ASSESSMENT is the periodical re-evaluation of environmental administration and protection, carried by individuals or companies for plants or activities equipped with a valid environmental permit.

ENVIRONMENTAL IMPACT ASSESSMENT (VNM in Albanian acronym) is the process carried to identity, foresee, interpret, measure, communicate and prevent the impact that a project has on the environment, based on the assessment of several variants of the project, with the purpose of selecting the best option that helps prevent or mitigate the negative impact, before the project is approved and implemented.

The Environmental Impact Assessment should be conducted by environmental specialists from the fields related to the expected negative impact of a certain project. The content and the structure of the study is determined in the Law on Environmental Impact Assessment. The opinion of the specialists must have power to block the project, if the foreseen impact is too high and irreversible. In other cases, the opinion may include conditions for the project, or conditioned with the request to find and/or implement the best technical solutions such as the solutions that limit the impact on the environment. The assessment can also result in a positive finding, granting the go-ahead to a project that has limited and/or a reversible impact. Such studies

should be open to the public and must go through a public consultation process with interested parties. The consultation process must be followed by a transcript of the main suggestions and a report on the accepted suggestions. The Environmental Impact Assessments should be published on the National Environmental Agency website.

THE STRATEGIC IMPACT ASSESSMENT (Shortened to VSM in Albanian) is the process of evaluation of the possible impact on the environment of a policy, a plan or a programme. This type of study is of great importance for the development of a certain region. It takes into account the cumulative effect of pollution and damage to the environment by the development of the area. It places limits on the development of the area (for urban, industrial or service purposes) which have to respect the environmental standards and to preserve the equilibrium between the development activities and the environment.

The Strategic Impact Assessment must be open to the public and should undergo a public hearing and debates with interested parties, accompanied with a report on the suggestions given and changes conceded.

The Strategic Impact Assessment must be published and accessible through the website of the National Environmental Agency and, as well, through other agencies responsible for the study.

SUSTAINABLE DEVELOPMENT is development that fulfils the actual and future needs without limiting or damaging the opportunities for successive generations to fulfil their own needs. Sustainable Development is based across three fields, which are interconnected:

> **Social Sustainability:** The growth of society must correspond with the rates of recovery of natural resources and should be based on joint-responsibility in the distribution of wealth. This means that population growth must be within the capacity of the environment to sustain itself and within the means needed for the eradication of poverty.

> **Economic Sustainability:** Economic growth must respect the environment, that is, not to exceed the ability of natural resources to regenerate. It must also be dedicated to social equality in the allocation of resources.

> **Environmental Sustainability:** This refers to the protection of natural resources so that they are available for future generations. Environmental sustainability requires that society should aim to sustain itself.

In 1987, the World Commission on Environment and Development (WCED) presented the Brundtland Report, so named after the president of the commission, Dr Gro Harlem Brundtland,

who drafted it. According to the report, sustainable development aims to " ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs".

The concept of the Sustainable Development became the focus of several international conferences organised since then, such as:

- Rio de Janeiro, 1992: The UN Conference on Environment and Development, which resulted in the Rio Declaration.
- New York, 1997: Earth Summit +5.
- Johannesburg, 2002: The World Summit for Sustainable Development, also known as Rio +10.
- Rio de Janeiro, 2012: The UN Conference for Sustainable Development, also known as Rio +20.
- New York, 2015: The UN Conference for Sustainable Development, whose final document was: Transforming our world: the 2030 Agenda for Sustainable Development.

CHAPTER 2

INSTITUTIONS RESPONSIBLE FOR ENVIRONMENTAL PROTECTION

Below in this chapter are listed the main public authorities at the central and local level that play a role in the design, implementation and monitoring of environmental policies and practices.

2.1 Central level institutions

The main authority for the protection of the environment is **the Ministry of Tourism and Environment** (MTM) (www.turizmi.gov.al), along with its affiliated structures, the environmental bodies in state institutions, at central or local level, and any central or local body that is created to help them.

Its functions include regulating the environment for sustainable use of the natural resources, for the promotion of renewable resources, for the protection of nature and biodiversity, for the sustainable use of forests and pastures and for monitoring water quality.

Some of the agencies under the authority of this Ministry are:

> **The National Agency for the Protected Areas** (AKZM) www.akzm.gov.al is the central government body responsible for the management and control of protected areas. The AKZM has a general directorate at central level, while at the local level it is organised based on regional divisions.

> **The National Environmental Agency** (AKM) www.akm.gov.al must ensure the environmental performance; it should conduct studies and monitoring of the environmental conditions; must evaluate the environmental impact and licence the economic activities that have an impact on the environment. It also has the duty to monitor the legal requirements and environmental conditions. The Directorate of Inspection and Control (DIK) (https://akm.gov.al/inspektim-kontrolli/), part of the organisational structure of the AKM, is responsible for the monitoring and the inspection of environmental protection of the territory. DIK is organised in four sections, including the section for environmental inspection and the section for the inspection of the natural resources. Summaries and data on the number of the inspections, fines and complaints against fines for different time periods are published on its website.

> **The National Agency on Forestry** (AKP) www.akpyje.gov.al is responsible for forestry at the national level. Its work must ensure protection and development and the sustainable and multifaceted use of national forestry resources. This agency guarantees the performance and the efficiency of the sector, secures standards and methodologies for the activities and operations of the sector, creates an adequate system for the collection of

the information and for guaranteeing the performance and the standards related to the national forestry resources.

The Ministry of Infrastructure and Energy (MIE) (www.infrastruktura.gov.al), along with agencies dependent on it, has a number of responsibilities generally connected with renewable energy, energy efficiency, the climate and the management of environmental resources.

Related agencies under the authority of this Ministry are:

National Agency of Natural Resources (AKBN) (www.akbn.gov.al) develops and oversees the rational exploitation of the natural resources, based on the policies of the government, and monitors the post-exploitation phase for the mining sector, for the fossil fuel sector and for the energy sector.

The National Efficiency Agency (AEE) (www.eficenca.gov.al) implements measures and policies that aim to promote the efficient use of energy. It carries out energy auditing and the promotion of renewable energy resources.

The National Agency of Water, Sewage and Solid Waste (AKUM) (www.akum.gov.al) coordinates and monitors the water supply and collection of removes grey water for treatment, and as well as for the infrastructure of solid waste management at national and local level that deals with terminal management of the solid waste for the whole population of the country. It collaborates with local government units and with subjects that operate and manage the water and waste infrastructure.

Other ministries have specific responsibilities for the protection of the environment. For example, the Ministry of Agriculture and Rural Development (MBZHR) has the responsibility for managing chemicals used in agriculture while the Ministry of Health and Social Welfare (MSHMS) has responsibility for the management of waste from the healthcare sector.

There are several agencies that had an important role in the collection of the information regarding the environment, through means of monitoring and study programmes. Such agencies are:

Institute for Public Health (ISHP) (www.ishp.gov.al) is a branch of the Ministry of Health and Social Welfare which monitors a number of indicators related to environmental health, such as water quality, waste treatment, air pollution, workplace environment, etc.

Agency for the Management of Water Basins (AMBU) (www.ambu.gov.al) is a structure dependent on the Prime Minister's office. Its duty is to draft plans for the management of water basins. It also drafts and implements policies, strategies, plans, programmes and projects that aim to serve the purpose of the integrated management of the water resources, the protection of their quantity and quality and their further

consolidation; it implements the clauses of the international and cross-border conventions and agreements for water resources; it acts as the Technical Secretariat of the National Council of Water; and it proposes to the National Council of Waters the granting of concessions of water resources, granting of permits and authorisations on the usage of water and discharge of grey water in cases when the activity involves more than one water basin. It also maintains an inventory of the water resources across the country.

The Geosciences Institute (IGJEO) (www.geo.edu.al) is a research institute which is part of the Polytechnical University of Tirana. It monitors natural disasters such as earthquakes, storms, avalanches, floods, droughts, fires, tectonics activity of the earth, etc.

The Albanian Geological Service (ShGjSh) (www.gsa.gov.al) is a public advisory, technical and scientific body that conducts environmental studies of a geological and hydrological character related to the natural resources of minerals, hydrocarbons and of underground water bodies.

The National Centre for Research on Fauna and Flora (QKFF) (https://fshn.edu.al/Departments/qendra-kerkimore-e-flores-dhe-faunes/) is a unit of the Faculty of Natural Sciences at the University of Tirana, which administers and enriches the scientific collections of flora and fauna in institutions such as The Natural Science Museum "Sabiha Kasimati", Tirana's Botanical Garden (KBT), the National Herbarium (HK), and monitors and documents the plant and animal diversity of Albania.

In cases of intervention on the territory and the conduct of illegal activities, **the National Inspectorate for the Protection of the Territory** (IKMT) (https://www.ikmt.gov.al/) is responsible for dealing with these violations.

2.2 Local level institutions

Institutions and bodies in local government also participate in the management of the environment. The organisation and the functioning of local government units (NjVV) in the Republic of Albania is regulated by Law No. 139/2015. This law assigns the functions, competences, rights and duties of these institutions. The local government units exercise these functions in independently, within the constitutional framework of the country and the European Charter of Local Self-Government along with other laws.

The **Law No 139/2015 "On Local Self-Government"** defines functions and competences of these units, including several related to the protection and the development of the environment in their jurisdiction, such as:

Article 23: "On the functions of municipalities in the field of infrastructure and public services" which states that in the field of infrastructure and public services, municipalities are also responsible for:

- Production, treatment, transportation and supply of potable water.
- Collection, transfer and treatment of used waters.
- Collection and transfer of rainwater and protection from flooding in inhabited areas.
- Construction, rehabilitation and maintenance of local roads and road signs, pavements and public squares.
- Lighting of public spaces.
- Local public transportation.
- Parks, flowered areas and public green areas in general.
- Collection, transfer and treatment of solid household waste.

Article 26: "On the functions of the municipalities in the field of environmental protection" states that municipalities shall be responsible for the exercise of the following functions:

- Implementation of local-level measures to protect the quality of air, soil, and water from pollution.
- Implementation of local-level measures for the protection from acoustic pollution.
- Organisation of local-level education and promotional activities related to environment protection.

Article 27 states the functions of the local government units on the field of agriculture, rural development, forestry and public pastures, nature and biodiversity, listing among other functions:

- Management and protection of agricultural land and other types of resources, such as unproductive land in the manner prescribed by law.
- Management of public forest and pasture resources, according to the legislation.
- Protection of nature and biodiversity, according to the legislation in force.

Local self-government units must have dedicated structures for environmental management and administration, but only large municipalities, such as Tirana and Shkodra have specific directorates or sections for the environment. Most municipalities fulfil their obligation for the environment through their Directories for Public Services.

The Municipal Police has the duty to monitor and pursue all administrative violations and damage to the environment at the local level, in coordination with other institutions present at this level.

CHAPTER 3

LEGAL AND REGULATORY FRAMEWORK ON THE ENVIRONMENT

After the 1990s, and especially, after the year 2010, Albania has made progress in drafting and approving new and modern legislation on the environment. The change has been dynamic, bringing continuous improvement. This process was led by the goal of achieving *acquis* with the European Union in the field of the environment and has been accelerated since the 2014 EU decision to grant Albania the status of a candidate country.

However, some bylaws that should have been in place are still not developed and the general implementation of the legislation is not where it should be. Sometimes the legislation is too developed compared with the administrative, institutional and financial capacities available.

3.1 International agreements on the environment

After the 1990s, the fast ratification of the Multiparty Environmental Agreements (MEA) bears witness to the importance that the Government of Albania attributes to the policy of active participation in international collaboration in the field of the environment. The country aspires to EU membership and this is the main incentive for the adoption of environmental laws while MEAs can be considered another strong incentive in this direction. However, having an efficacious response towards these agreements and international engagements requires further enhancing of the institutional capacities and financial resources.

Albania has endeavoured to fulfil its obligations in international reporting. However, the lack of data on monitoring of species and habitats, air quality and the release of greenhouse gases has influenced the timely reporting in these fields.

There is a general lack of information provided to the public by the environmental authorities about the status of Albania's participation in global, regional or bipartite agreements and regarding the results of their implementation.

The information on the status of Albania in these international agreements on the environment can be found in the respective websites of the secretariats of each agreement. For each agreement in which Albania is a signatory party, a public official in the respective ministry for the environment is assigned as point of contact. This official has the duty to communicate and report to the respective secretariat.

For the most important agreements, such as the United Nations Framework Convention on Climate Change, the periodic reporting of the country is published on its website. For example, some of

the reports delivered by the Government of Albania under the auspices of this Convention can be found here:

- The Fourth National Report (November 2022) https://www.undp.org/albania/publications/fourth-national-communication-albania-climate-change
- The Report on Voluntary Target Contribution (October 2021) https://unfccc.int/sites/default/files/2022-08/Albania%20Revised%20NDC.pdf

Here we are listing the international environmental agreements in which Albania is signatory party:

Emri i konventës	Koha e ratifikimit
Konventa Ramsar për ligatinat (1971)	29/02/1996
Konventa për biodiversitetin	pjesërisht nga 1994; pjesë të protokollit nga 2005
Konventa e Bernës për Ruajtjen e Jetës së Egër dhe Habitateve Natyrore në Evropë. (1976)	13/01/1999
Konventa e UNESCO për mbrojtjen e Kulturës Botërore dhe Trashëgimisë Kulturore. (2003)	10/07/1989
Konventa kuadër e OKB për ndryshimet klimatike (UNFCCC)	01/12/1994
Konventa e Aarhus (1998), në vendimmarrje dhe e drejta për t'ju drejtuar gjykatës për çështjet mjedisore	27/06/2001
Konventa e Bonn (1979); për ruajtjen e specieve migratore dhe kafshët e egra	01/09/2001
Konventa e Barcelonës (1976); për mbrojtjen e Detit të Mesdheut nga ndotja	09/07/2004
Protokolli i Kyoto-s	01/04/2005
Konventa e UNESCO për ruajtjen e Trashëgimisë Kulturore Jomateriale (2003)	04/04/2006
Konventa Espoo: për VNM-në në kontekstin ndërkufitar së bashku me amendimet e protokollit (1991)	12/05/2006
Konventa për mbrojtjen e pasurive të trashëgimisë kulturore nënujore (2001)	19/03/2009

3.2 National strategies on environmental issues

Some of the strategic documents related to environmental management are these:

> **National Strategy on Climate Change and Action Plans (2020-2030)** is the main strategic document that deals with climate change in Albania. The strategy has been approved by the Government of Albania in 2019 and has been drafted in support of EU legislation on the environment and climate. It aims to enhance coordination among sectors, connected with measures for adaptation, protection of the environment and sustainable development. The main focus of SKNN is measures to mitigate against and adaptate for climate change.
>
> https://turizmi.gov.al/wp-content/uploads/2021/10/2.-Strategjia-e-Ndryshimeve-Klimatike-dhe-Planet-e-Veprimit_Qershor-2019_-1.pdf

The Document on Policies and the Action Plan for the Integrated Management of the Waste (2020-2035) is the main document for planning in the field of municipal waste management and for the management of non-municipal and dangerous waste in Albania. It is the result of the planning and infrastructural developments of the waste sector since 2011 at local and central government level and the inclusion on a large scale of the private sector and multiple investments made at the level of collection, transfer and treatment of waste. It is based on the vision or perception of the concept of "zero waste", where waste should be collected and treated as primary materials and the management should be made in compliance with the concept of the circular economies, supporting responsible use and the preservation of primary materials.

https://turizmi.gov.al/wp-content/uploads/2020/07/Dokumenti-i-Politikave-Strategjike_AL.pdf

The Document of the Strategic Policies for the Protection of Biodiversity (2015-2025) aims to be the pathway in which the country aims to fulfil the objectives of the Convention on the Protection of Biodiversity, in the context of the national obligations.

https://turizmi.gov.al/wp-content/uploads/2018/05/Dokumenti-i-Politikave-Strategjike-per-Mbrojtjen-e-Biodiversitetit.pdf

The Document on Policies for the Forestry Sector in Albania (2018) offers an analysis of the current status of the forests in Albania and lays out the main policy directions for the development of this sector with the purpose of the protection, management and responsible use of the forests and pastures.

https://turizmi.gov.al/wp-content/uploads/2019/09/DPP-17.12.2018.pdf

National Strategy for the Integrated Management of Water Sources 2017-2027 is the framework document for the management of water and the development of other plans and strategic documents in the field of planning for the territory, the protection of the environment, the biological diversity and the landscape, agriculture, forestry, fisheries, transportation, tourism and public health.

https://www.erru.al/doc/Strategjia_Kombetare_e_Menaxhimit_te_Burimeve_Ujore.pdf

The Strategy for the Development of Sustainable Tourism (2019-2023) aims to promote the tourism potentials of the country and the creation of a management model for destinations which are categorised as natural and rural areas that offer opportunities for the development of rural tourism, mountain tourism, ecotourism and outdoor activities.

https://turizmi.gov.al/wp-content/uploads/2019/06/Strategjia-Komb%C3%ABtare-e-Turizmit-2019-2023.pdf

The National Strategy for the Mitigation of Risks from Natural Disasters and the Action Plan (2023-2030) aims to mitigate, prevent and prepare for natural disasters in Albania. It aims to enhance the country's capacities to manage, deal with and

mitigate the risks from the natural disasters, in accordance with the Sendai framework and the directives of the European Union. It considers the effect of climate change on the efforts to reduce the risk from natural disasters, with a special focus on girls, women and vulnerable groups.

https://akmc.gov.al/miratimi-i-strategjise-kombetare-per-zvogelimin-e-riskut-nga-fatkeqesite-dhe-planin-e-veprimit/

Cross-sectoral Strategy on Decentralisation and Local Governance (2023-2030) is a strategic document, which is in full compliance with the standards and the recommendations of the European Union on further advancement of the agenda of decentralisation. It lays out sustainable development goals. This strategy aims to improve autonomy from a financial point of view and the achievement of sustainable local economic development. The General Local Plans are approved in all municipalities and contain plans and proposals for the development of the territory, for infrastructural services, for capital investment plans, for economic development areas and for spatial typologies.

https://qbz.gov.al/eli/vendim/2023/04/20/252

3.3 The specific legal framework on the environment

The environmental legal framework includes the main law on environmental protection, several specific laws and by-laws, which are constantly changing. The process of aligning the legislation with that of the EU has brought changes and continuous improvements. An overview of the current framework can be found in the following table, while to follow the possible changes in the following years, refer periodically to the websites of the Ministry of Tourism and Environment (https://turizmi.gov.al/strategjia-e -environment/), as well as the pages of agencies that cover specific areas of the environment.

The framework law on the protection of the environment is:

- Law No. 10431, 9.06.2011 On the Protection of the Environment, as amended

On forestry and pastures:

- Law No. 57 30.4.2020 On Forestry
- Law No. 5/2016 For the Moratorium on the Use of Forestry in the Republic of Albania
- Law No. 9693 19.3.2007, On Pastures, Amended by the Law No. 49/2016 For Some Changes and Additions to the Law No. 9693, 19.3.2007, On Pastures, as amended
- Guidance of the Minister of the Environment No. 1, 26.01.2017 On Maintaining of the Cadaster of the National Forestry and Pasture Fund.

On protected areas and biodiversity:

- Law No. 7, 30.01.2014 On the Proclamation of the Moratorium on Recreational Hunting in the Republic of Albania.
- Law No. 81, 04.05.2017 On Protected Areas
- Council of Ministers Decision No. 57, 6.2.2019 On Criteria and Modes of Territorial Planning in a Protected Area
- Council of Ministers Decision No. 369, 29.5.2019 On Rules for the Declaration of the Dedicated Protected Areas
- Council of Ministers Decision No. 303, 10.5.2019 For the Approval of the Revised List of Albania Monuments of Nature
- Council of Ministers Decision No. 593, 9.10.2018 On Composition, Duties and Responsibilities of the Committee for the Management of the Environmentally Protected Areas

On environmental permits and industrial pollution

- Law No. 10448 (2011) On Environmental Permits
- Law No. 10448 amended by Law No. 60 (2014) On Amendments on the Law on Environmental Permits
- VKM No. 372 (2016) On Cross Border Environmental Permit of Type A
- Council of Minister Decision No. 96, For Amendments on Council of Minister Decision No. 372 On Cross-border Environmental Permits of Type A
- Council of Ministers Decision No. 419 (2014) On the Approval of the Requests for Environmental Permits
- Council of Ministers Decision No. 97 (2018) For Amendments on Council of Minister Decision No. 419, On the Approval of the Requests for Environmental Permits

On environmental impact assessment

- Law No. 10440 (2011) On Environmental Impact Assessment.
- Council of Ministers Decision No. 247 (2014) On Designation of the Rules and Procedures

on Public Information and Participation on Environmental Decision-making Processes

Council of Ministers Decision No. 598 (2015) On the Designation of the Rules and Procedures on the Cross-border Environmental Impact Assessment

Council of Ministers Decision No. 912 (2015) On the Approval of the National Methodology for the Process of the Environmental Impact Assessment

On Strategic Environmental Assessment

Law No. 91/2013 On Strategic Environmental Assessment.

Council of Ministers Decision No. 219 (2015) On Public Consultations on the Process of the Environmental Strategic Assessment

Council of Ministers Decision No. 507 (2015) On the List of Plans and Programmes that Must Undergo the Process of the Strategic Environmental Assessment

Council of Ministers Decision No. 620 – 2015 On the Cross-Border Procedure for Strategic Environmental Assessment

Instruction No. 6 (2016) On the Approval of the National Methodology of the Strategic Environmental Assessment

On waste management

Law No. 10463, 22.09.2011 On Integrated Waste Management

Council of Ministers Decision No. 319, 31.05.2018 On the Approval of Measures for Costs of the Integrated Waste Management

Council of Ministers Decision No. 575, 24.06.2015 On the Approval of the Requests for Inert Waste Management

Council of Ministers Decision No. 608, 17.09.2014 On the Designation of the Necessary Measures for Collection and Treatment of Bio Waste and for Criteria and the Agenda for their Diminution

Council of Ministers Decision No. 652, d14.09.2016 on Rules and Criteria for the Management of the Waste of Used Tyres

Council of Ministers Decision No. 371, 11.06.2014 On Designation of the Rules for the Consignment of the Hazardous Waste and for the Approval of the Document of the Consignment of the Hazardous Waste

Council of Ministers Decision No. 418, 25.06.2014 On Source Differentiated Collection of the Waste

Council of Ministers Decision No. 452, 11.07.2012 On Waste Landfills

Council of Ministers Decision No. 765, 07.11.2012 On the Approval of the Rules on Differentiated Collection and Treatment of the Used Oils

Council of Ministers Decision No. 798, 29.09.2010 On the Approval of the Regulation "On Administration of the Healthcare Services Waste"

Council of Ministers Decision No. 957, 19.12.2012 On Waste Generated by Electrical and Electronic Equipment

Council of Ministers Decision No. 319, 31.5.2018 On the Approval of the Measures for Costs of the Integrated Waste Management

Council of Ministers Decision No. 99, 18.02.2005 On the Approval of Albania Waste Catalogue

- Council of Ministers Decision No. 705, 10.10.2012 On End-of-Life Auto vehicles
- Council of Ministers Decision No. 866, 04.12.2012 On Batteries, Accumulators and their Waste
- Guidance 1738, 12.03.2015 on Criteria for the Study and the Planning of the Rehabilitation of Urban Solid Waste depositing areas and for the Construction of the Landfills or Plants for the Treatment of the Solid Urban Waste

On air quality

- Council of Ministers Decision No. 162, 19.02.2020 On the Detailed Rules for the Planning, Approval, Revision and Implementation of the Programmes for Mitigating Releases in the Air
- Law No. 162-2014, 04.12.2014 For the Protection of the Quality of the Air in the Environment
- Council of Ministers Decision No. 412, 19.6.2019 On the Approval of the National Plan on the Management of the Quality of the Air
- Council of Ministers Decision No. 435, 2002 On the Approval of the Norms on the Releases in the Air

On use of chemicals

- Law No. 27/2016 On Management of the Chemicals
- Council of Ministers Decision No. 860, 20.12.2006, On the Approval of the National Action Plan for the Removal from use and the Elimination of the organic sustainable pollutants
- Council of Ministers Decision No. 447, 19.9.1994 On Forbidding of the Use of Asbestos as Thermal-insulator on Any Type of Construction
- Council of Ministers Decision No. 488, 29.6.2016 For the Classification, Labelling and Packaging of the Chemicals
- Council of Ministers Decision No. 9, 9.1.2019 On Detailed Rules and Methods for the Conduct of the Evaluation of the Safety of a Chemical and on Specific Requests, Content and for Form of the Document Containing Safety Data
- Council of Ministers Decision No. 319, 15.5.2019 On Limiting of the Production, Commercialization and Use of Some Chemicals and Certain Dangerous Related Products
- Council of Ministers Decision No. 665, 21.9.2016 On Export and Import of the Hazardous Chemicals

On Noises

- Law No. 9774, 12.7.2007 On the Evaluation and the Administration of the Noise in the Environment
- Council of Ministers Decision No. 4492, 7.11.2007 On Monitoring and Control of the Level of the Noise in Urban and Touristic Centers

On substances that cause depletion of the ozone

Council of Ministers Decision No. 10, 9.1.2019 On the Approval of the Rules on Production, Import, Export, Trade and Use of the Substances that Cause Depletion of the Ozone and on Import, Export, Trade and Use of the Equipment that Contain Such Substances

Council of Ministers Decision No. 453, 23.6.2005 On the Approval of the List of Equipment that Use Substances that Cause Depletion of the Ozone, which are Forbidden to be Produced or Imported and, on the Rules, and Procedures for the Substitution of the Substances that Cause Depletion of the Ozone in the Existing Equipment

On the climate change

Law No. 155, 17.12.2020: On Climate Change

CHAPTER 4

MAIN ENVIRONMENTAL CHALLENGES

Albania has experienced visible economic growth and poverty reduction. Access to education, healthcare and services for citizens have improved and the level of awareness and participation of civil society in decision making has increased thanks to the growth in digital communication and the use of the internet. However, despite positive developments in the economy, there are some serious difficulties and challenges regarding the environment. This fast economic development has created added pressures to the exploitation of natural resources by diminishing their stock due to their exploitation and pollution.

Several environmental challenges remain to be resolved and some have become even more acute. Greenhouse gases emissions continue to rise. Urban and coastal areas have become more densely populated, due to intensive construction and to the continuous growth of demand for transportation with personal vehicles. Over the past several years, climate change has brought extreme weather events such as drought, floods, multiple heatwaves, sometimes outside of summer months, which have aggravated the environmental issues in the country.

Pollution of the water bodies and the sea is a matter of concern, especially near the towns or industrial plants, due to the lack of treatment of sewage waters and uncontrolled discharge of solid waste. Plastic pollution along the rivers and the coastline has become an acute problem.

Soil erosion and pollution are a high concern because this natural resource is very limited in quantity. Erosion is widespread not only due to the mountainous terrain of the country but also from the unsustainable use of the forests and pastures. There is little awareness of soil pollution. Abandoned industrial plants, mines and the corresponding waste depositing areas are sources of pollution dispersed across the country. Many of the environmental issues are intertwined with each-other, which cause simultaneous deterioration of several environmental indicators.

The Environmental Performance Index (EPI) (www.epi.yale.edu) shows that Albania was ranked 62 out of 180 countries evaluated in 2022 by Yale University (United States). It received 47.1 points out of 100. This index ranks countries based on a number of indicators of the performance of the public policies on the environment and health. While there is progress in the development of environmental policies, the challenge remains for the implementation and sustainable development.

The European Commission Reports continue to be critical regarding Chapter 27: environment and climate change. In the 2022 report, it is emphasised that *"Albania shows some level of preparation in this area. Limited progress was made in further aligning the policies and legislation with the EU acquis, in areas such as water management, chemicals and environmental crime. Albania made progress in the area of civil protection and is ready to join the Union Civil Protection Mechanism. Albania needs nevertheless to continue working on further improving its civil protection system. Significant efforts are needed on implementation*

and enforcement, especially on waste management, water and air quality and climate change."[1]

In the following section we list a number of environmental issues which have attracted media attention over the period 2020-2023, as result of the concerns expressed by civil society and the wider public.

1. Damaging of the water flows due to the development of small hydropower plants

Some 730 permits have been granted for the development of small hydropower plants in Albania since 2010. This has caused serious damage, often irreversible, in streams and rivers across the country. The lack of environmental studies, the use of water in its entirety along long segments of the stream and damage during the construction works have caused a reaction from local communities and civil society groups through protests, lawsuits and other reactive measures. The media has reported more extensively cases of Rrapun River (Librazhd), Valbona River (Tropoja), Zall Gjocaj, (Bulqiza) etc.

2. Re-evaluation (removing of sections from the seaside protected areas)

During a re-evaluation process in 2019, the National Agency for the Protected Areas proposed changes to the borders of the protected areas. Based on this study, the government approved through a decision the new outline, which meant a reduction of 11% of the areas under protection along the coasts while overall the protected area was increased. Most affected by the removal of the protected status were zones near the wetlands. Although the general area included in the protected areas on a national scale was increased by some 20.9%, the removal of several plots from the coastline has paved the way for urban development of these zones. The move caused concerns due to the importance of these areas to the national biodiversity, mainly in the stock of migratory and wintering birds. Civil society groups sued the government claiming the process was inadequate and the areas should not have been removed from the protected zones.

3. The construction of the Vlora Airport

The Government of Albania has approved the project for the construction of Vlora Airport within the Narta Protected Area. Civil society groups have criticised the process, claiming that the Environmental Impact Assessment prepared for the project was incorrect with many out-of-date conclusions. It has sued the government and raised claims also near the secretariats of the international conventions dealing with wetlands and the protection of the wild fauna.

[1] https://neighbourhood-enlargement.ec.europa.eu/albania-report-2022_en

CHAPTER 5

SOURCES OF ENVIRONMENTAL INFORMATION

This chapter summarises the main sources of environmental data on Albania provided by local public institutions.

The most comprehensive report on environmental issues is provided by the National Environment Agency, which has the institutional responsibility to publish annually the report on the State of the Environment, which contains detailed information on all monitored environmental indicators, according to the approved Monitoring Plan.

This document can be downloaded on the Agency's website: https://akm.gov.al/raporte-dhe-publikime/

Below we provide a list of information sources, based on specific fields of the environment.

5.1 Water sources

The category of water resources are: surface and underground bodies of water. The surface water bodies are a large category that includes large fresh water bodies such as natural or artificial lakes (of the hydropower plants, those for touristic, recreational, and sportive purposes), and rivers, streams, wetlands, ponds for agriculture, fish farming etc. This also includes water bodies used for swimming along the coastline, mostly for recreational use or sports during the summer season.

Sources of the information:

- **The Agency for the Management of the Water Basins (**www.ambu.gov.al**)**

This agency maintains the registry of the cadaster of water bodies of the country. The information is divided based on the river basins. This information can be accessed on this website http://kadastraujore.gov.al/

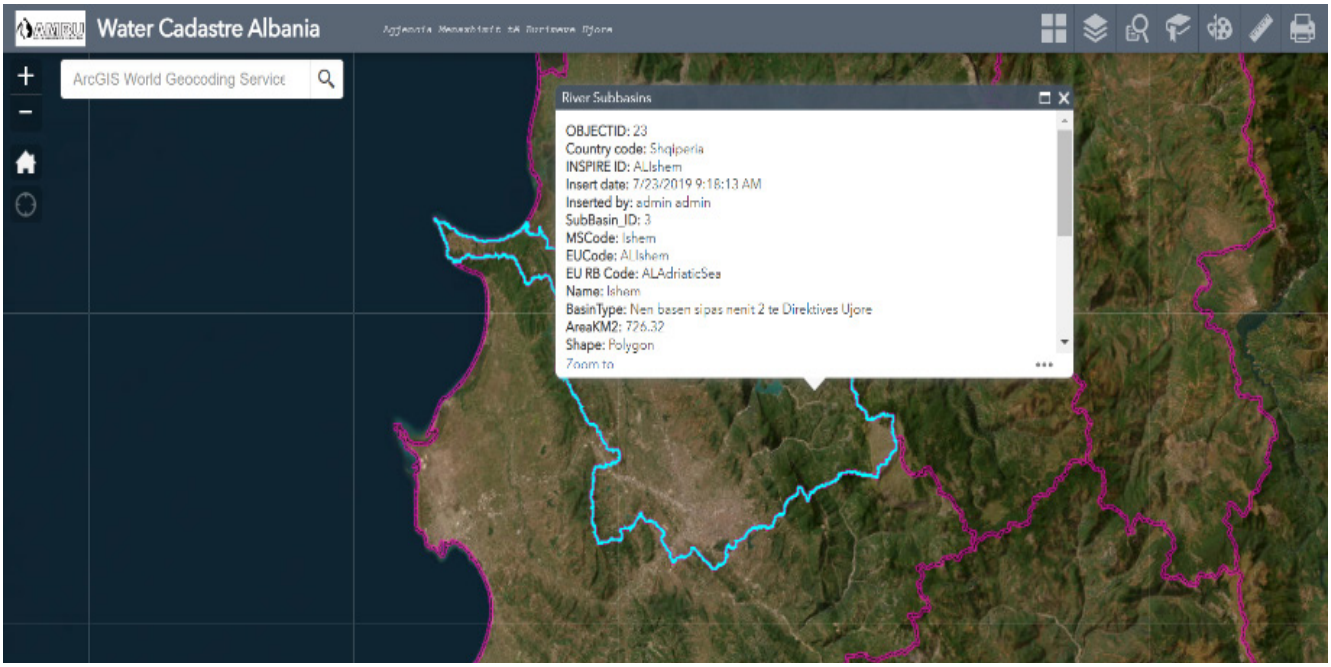


Figure 1: Map from water cadaster showing the Ishmi River basin (Source: AMBU)

AMBU has prepared Water Basins Management Plans for almost all river basins. These plans can be downloaded on the website of this agency, on the section of the publications:

http://www.ambu.gov.al/plani-i-menaxhimit-te-basenit-ujor-seman/

Zona	
Sipërfaqja (km^2)	5,649
Burimet ujore	
Numri i lumenjve kryesorë	1
Numri i degëve	3
Gjatësia e lumit (km)	281
Prurjet mesatare vjetore (m^3/s)	83.2
Cilësia e ujërave sipërfaqësore	Mesatar
Numri i liqeneve të mëdhenj	-
Numri i rezervuarëve bujqësorë	211
Numri i akuiferëve kryesore të përdorur (Banka Botërore, 2012)	2
Përdorimi i ujit	
Rezervuarët bujqësorë	Përdorim i lartë
Numri i hidrocentraleve të mëdha	1 + 1 në ndërtim
Numri i hidrocentraleve të vegjël me koncesion	47 të një totali prej 96 HEC-esh [9]
Përdorimi i ujit të pijshëm	I larte
Përdorimi sipas industrive	Përdorim i lartë
Potencial për hotspot-et e ndotjes	Mesatar
Numri i Zonave të Mbrojtura	11
Rëndësia e mbulesës pyjore	Rëndësi mesatare
Përdorime të tjera	Peshkim
Rrezik nga thatësira	Mesatar
Rrezik nga përmbytjet	I lartë
Demografia	

Figure 2: Illustrative table about the usage of the water on the River Seman Basin (source: AMBU, Management Plan of the River Seman Basin, 2019)

Albania Geological Survey (www.gsa.gov.al)

Based on several studies on water sources, the Albanian Geological Survey created the Hydrogeological Map for 61 municipalities of the country. The map for each municipality (Scale 1:50000) can be downloaded on this website: http://www.gsa.gov.al/Sherbimet/hartat.html

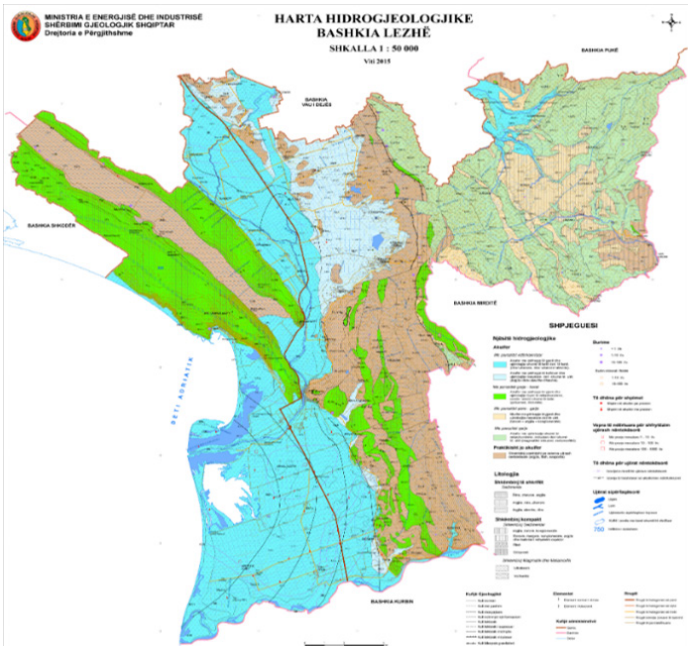


Figure 3: Model of the Hydrogeological Map for Lezha Municipality, 2015. (Source: www.gsa.gov.al)

National Environmental Agency: (www.akm.gov.al**)** publishes data from surface water monitoring in accordance with the national monitoring plan. This data is presented based on the river basins, lakes and for the coastline.

The agency has monitoring stations in most municipalities and the information on the results of the measurement and the evaluation of the nature capital related to the quality of the water can be found on this website: https://akm.gov.al/monitorime/.

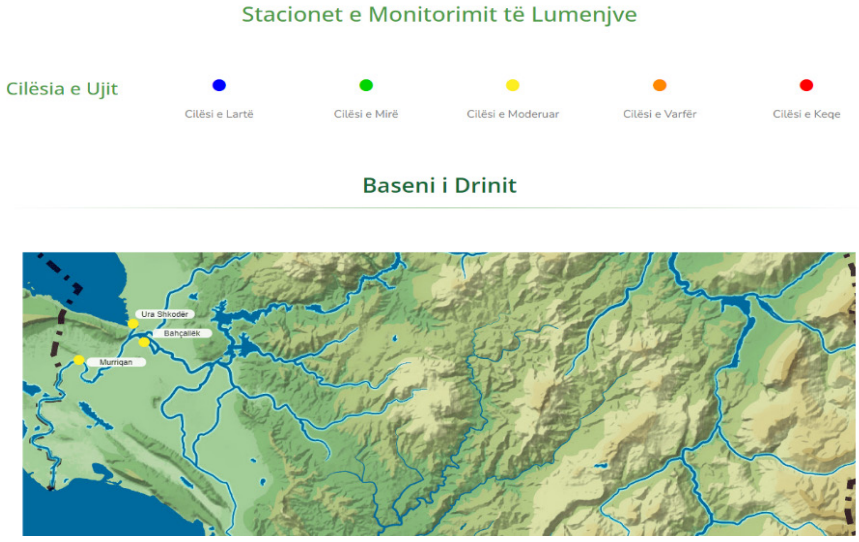
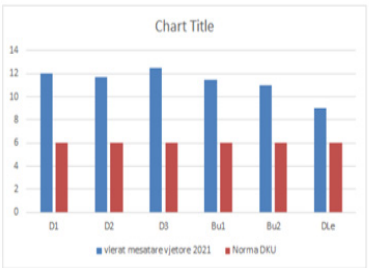


Figure 4: Data on the quality of the water on Drin River (Source AKM, 2022)

Meanwhile, quantitative data on the different levels of chemical and physical characteristics are published yearly on the Report on the State of the Environment, which can be found online in this website: https://akm.gov.al/raporte-dhe-publikime/

Nr.	Kodi i kampionit	Emërtimi i Lumit	Vendndodhja	Koordinatat gjeografike
1.	D1	Drini i Zi	Topojan- Ura Burrel -Peshkopi	N 41.580626 E 20.434238
2.	D2	Drini	Bahçallek - Ura Bahçallek	N 42.041771 E 19.490806
3.	D3	Drini i Bardhë	Luma - Kukës	N 42.040408 E 20.274955
4.	Bu1	Buna	Muriqan – afër fshatit, në kufi	N 42.009313 E 19.411012
5.	Bu2	Buna	Ura e vjetër Shkodër - Shirokë	N 42.045851 E 19.487121
6.	DLe	Drini Lezhë	Kune-Vain para derdhjes në det	N 41.753554 E 19.593363

Grafiku 1. Vlerat mesatare, O_2 i tretur, mg/l



Grafiku2. Vlera mesatare NBO_5, mg/l

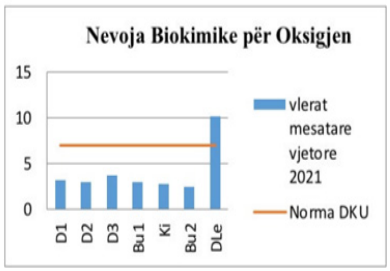


Figure 5: Data on the monitoring stations and the quality of the water along the Drin River (Source AKM, Report on the State of the Environment 2021)

The State Authority on Geospatial Information (www.asig.gov.al)

On the geoportal of this institution, you can find information on smaller water bodies, such as ponds, lagoons, wetlands, etc. For example, on the website of this agency: https://geoportal.asig.gov.al/map/?themeId=3805251&auto=true you can choose themes, such as hydrology, to extract GIS maps as it is shown in the figure below:

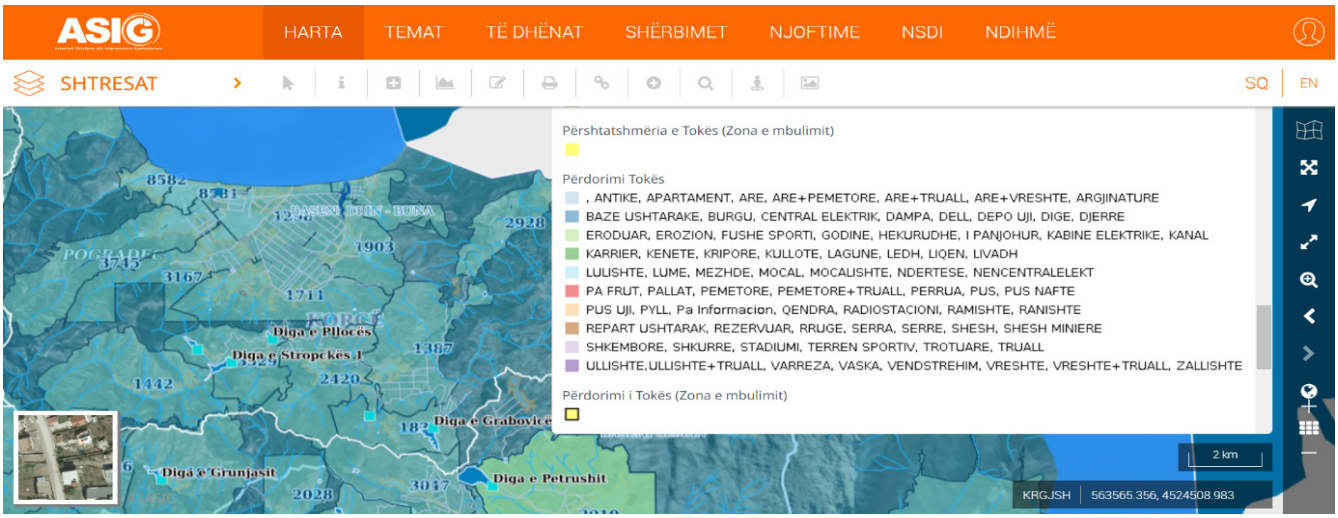


Figure 6: Data about hydrological network on local level (Source: ASIG, Geoportal)

Geosciences Institute (www.geo.edu.al/Sherbimet/Departamenti_i_Hidrologjise/)

The Department of Hydrology (DH) offers a number of hydrological and hydraulic services and publishes a bulletin on the risks of natural disasters. It measures the water level and flow and conducts statistical analysis. It prepares separate hydrological reports, hydraulic studies and creates a map of the danger of floods.

- **Underground waters** are an extremely important water source. Information is not available in its entirety and the stock of many such bodies is often unknown.

The sources of information:

- **National Environmental Agency:** (akm.gov.al) publishes data from the monitoring of underground water in accordance with the National Monitoring Plan. This data is classified based on river basins. The points of the monitoring, their hydrodynamic characteristics and their quality can be found on this website: https://akm.gov.al/raporte-dhe-publikime/

The National Environmental Agency has monitoring points in the territory of a municipality (drilling facilities); the information on the quality of the underground water bodies is published in the yearly State of the Environment Report.

• Baseni Erzen-Ishëm

Ujërat nëntokësore të këtij baseni në përgjithësi kanë veti fiziko-kimike të mira. Ato përdoren për furnizimin me ujë të pijshëm të popullsisë dhe bizneseve.

Monitorimi sasior 2020-2021

Në akuiferin poroz Kuartenar, sasia e përgjithshme e ujit që është shfrytëzuar është Q=1620-2500 l/sek. Koeficenti i shfrytëzimit varion K= 0.85-0.95. Sasia e rezervave që shfrytëzohen për ujë të pijshëm në akuiferin karstik (karbonatik) arrin në Q= 800-1000 l/sek. K= 0.45-0.6. Sasia e ujit që shfrytëzohet në akuiferin ujëmbajtës me porozitet çarje (formacionet ultrabazike) është Q= 65 l/sek. Ndërsa në akuiferin ujëmbajtës me porozitet poro- çarje(ranorë-konglomerat) sasia e përgjithshme që shfrytëzohet varion Q= 100-200 l/sek. Koeficenti i shfrytëzimit K=0.75-0.85.

Nr.	Vendndodhja	Koordinatat		Niveli max (m)	Niveli min (m)
		X	Y		
1	33 Laknas - Tiranë	4582048	4395181	-2.5	-11.4
2	2/97 Rinas	4591495	4391495	-4.2	-9.5
3	416 Bilaj (Fushë - Krujë)	4593912	4390064	-5.4	-12

Figure 7: Data on the qualitative and hydrodynamic monitoring on the maximum and minimum level of the Ishem-Erzen River Basin. (Source: AKM, RGJM 2021)

5.2 Forestry and pastures

For the evaluation of the forestry and pasture areas and for other areas, you can use GIS maps of the ASIG, for the cover of the land according to the Corine 2018 system.

https://geoportal.asig.gov.al/map/?themeId=3805251&auto=true

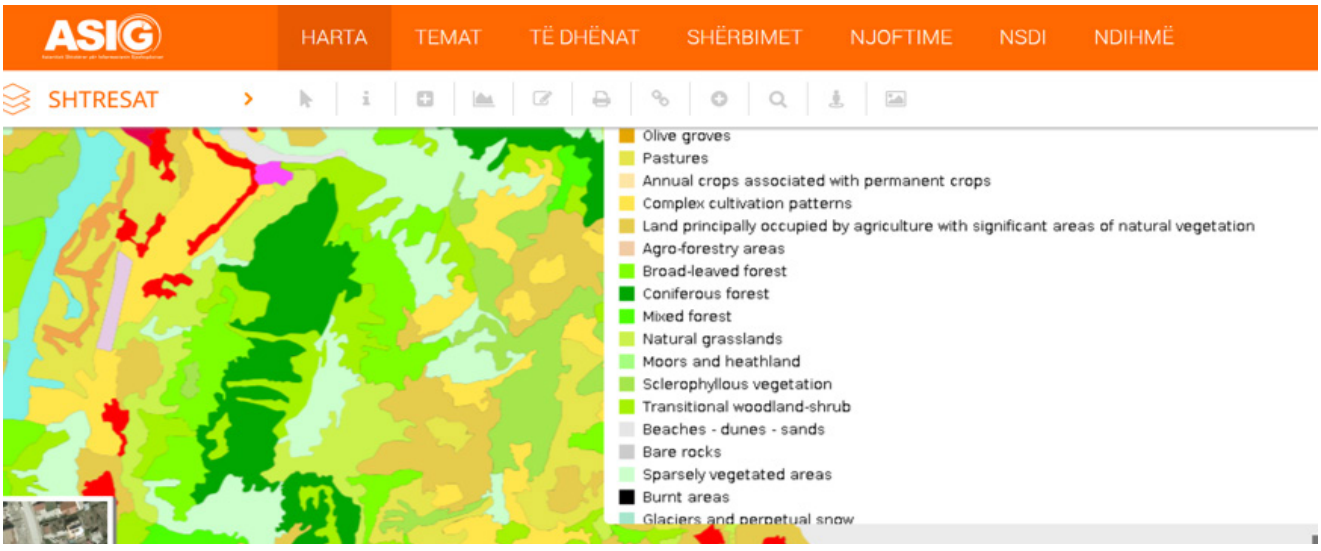


Figure 8: Data on the cover of the land at local level. (Source: ASIG, Geoportal)

5.3 Biodiversity

In this category are all the natural values, which are related to three main subcategories: the biological variety (or biodiversity): a) Biodiversity of the species, including flora and fauna; b) Genetical biodiversity that includes races and ecotypes; c) Biodiversity of the habitats and the ecosystems.

Biodiversity of the species includes all types of species, either single-celled or multicellular organisms. Due to the data available by the monitoring of nature, the most frequent sub-categories are flora and fauna, providing data on flowering plants and vertebrates (birds and mammals). A more detailed description of this category contains information on species and their distribution in the territory of the local government unit according to the following groups:

Flora:

- Ferns,
- Gymnosperms and
- Angiosperms

Fauna:

- Nonvertebrates, such as earthworms, molluscs and snails, arthropods including spiders and insects; and
- Vertebrates, such as fish, amphibian, reptiles, birds and mammals

Fungus.

Species diversity is a direct indicator of the health of certain area. Data for this sub-category should contain a list of species, the populationsm, the number of each species and, as well, their distribution in the territory.

Many species, mainly from insects, amphibians, birds and mammals are evaluated at risk of extinction because their population is decreasing on a global scale or in a specific territory. For this reason, their status of "at risk of extinction" should be noted based on the categories of IUCN. Moreover, a species is endemic (can be found only in a certain territory), or sub-endemic (can be found in a single region).

Data on protected areas and species with special importance, such as large mammals, predatory birds, etc. and those of endemic presence are mostly collected through the monitoring conducted by specific institutions dealing with the monitoring of flora and fauna, such as Flora and Fauna Centre (University of Tirana), and the Administration of the Protected Areas.

Sources of information:

- **The National Agency for the Protected Areas (**www.akzm.gov.al**)** publishes on its website (https://akzm.gov.al/zonat-e-mbrojtura/) the whole network of protected areas in which there are preliminary data on the list of the main species and their numbers in these areas.

More detailed information specific for each national park can be obtained from the Management Plans developed by the Regional Administration for the Protected Areas. This administration monitors the species within the limits of the specific national park.

- **National Environmental Agency:** (www.akm.gov.al) publishes data from biodiversity monitoring in accordance with the national monitoring plan.

The quantitative information on specific species can be found in its website: https://akm.gov.al/raporte-dhe-publikime/

Nr.	Vendnumërimet	Individë	Specie
1	Divjakë-Karavasta	34241	53
2	Bunë-Velipojë	1646	22
3	Liqeni i Shkodrës	20098	20
4	Kune-Vain	9458	41
5	Patok	1981	23
6	Sektori Rinia-Lalëz	7278	26
7	Shëna-Vlash	128	6
8	Karpen	96	8
9	Fierzë	624	7
10	Seman	40	8
11	Liqeni i Thanës	9850	21
12	Liqenet e Belshit	207	10
13	Liqeni i Banjës	83	7
14	Vjosë-Nartë	11291	39

Figure 9: Data from the monitoring of birds for 2021 (Source: AKM, RGJM 2021)

The collection of data on biodiversity is more challenging for territories outside the protected areas, where monitoring is limited. Information for the whole territory of the municipality must be collected by local level specialists, recreational hunting associations, scholars from research institutions that have conducted evaluations (partial or full) for specific species or groups of species. These research institutions also have databases for specific species that cover the whole territory.

- **Flora and Fauna Centre**, of the Faculty of Natural Sciences of the University of Tirana (https://fshn.edu.al/departments/qendra-kerkimore-e-flores-dhe-faunes)

- **State Authority on Geospatial Information** (www.asig.gov.al)

On the geoportal of this institution, you can obtain information about the vegetative cover of the territory. In this website: https://geoportal.asig.gov.al/map/?themeId=3805251&auto=true you can choose themes, such as Ecological Areas and the Distribution of the Species to obtain a GIS map as it is shown in the bellow picture.

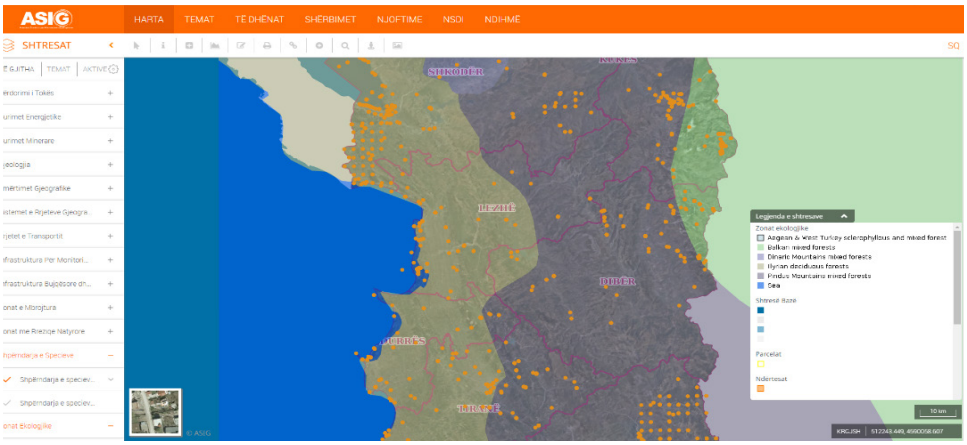


Figure 10: Data on the ecological areas and the distribution of the species (Source: ASIG, Geoportal)

5.4 Monuments of nature

In this category are listed all the "monuments of nature", including geo-monuments and plants that are within the territory of each municipality. Such as old trees, endemic plants, caves, canyons, unusual form rocks, and natural phenomena.

Sources of information:

Data on the monuments of nature can be found locally, through specialists in the field. It should contain information on the type and the location/distribution.

National databases of information on monuments of nature:

- **Albania Geological Survey** (www.gsa.gov.al)

Albania Geological Survey has created the map of the geo-monuments for each of the 61 municipalities. The maps on scale 1:50000 can be downloaded on this website: http://www.gsa.gov.al/Sherbimet/hartat.html

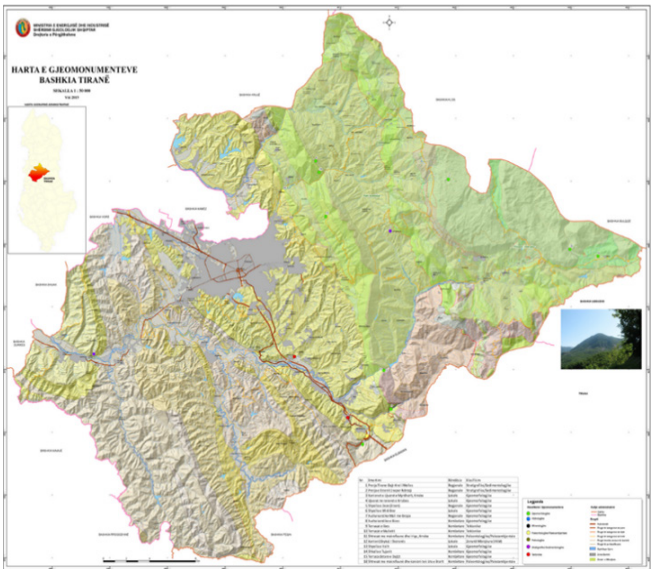


Figure 11: Model of the Map of Geo-monuments for the Municipality of Tirana, 2015 (Source: www.gsa.gov.al)

- **The National Agency for the Protected Areas** (www.akzm.gov.al) offers information on natural monuments across the country: (https://akzm.gov.al/monument-natyror)

5.5 Mineral resources

The quantity of these resources can be estimated from the geological surveys conducted by the Albanian Geological Survey, Tirana's Polytechnic University and from partial studies conducted on specific resources.

The source of the information:

- **Albania Geological Survey (**www.gsa.gov.al**)**

Based on several studies on the mineral resources of the country, the Albanian Geological Survey has created the Geological Map of Albania and the Map of Mineral Resources for any of the 61 municipalities of the country. These maps can be downloaded on scale 1:50000 in this website: http://www.gsa.gov.al/Sherbimet/hartat.html

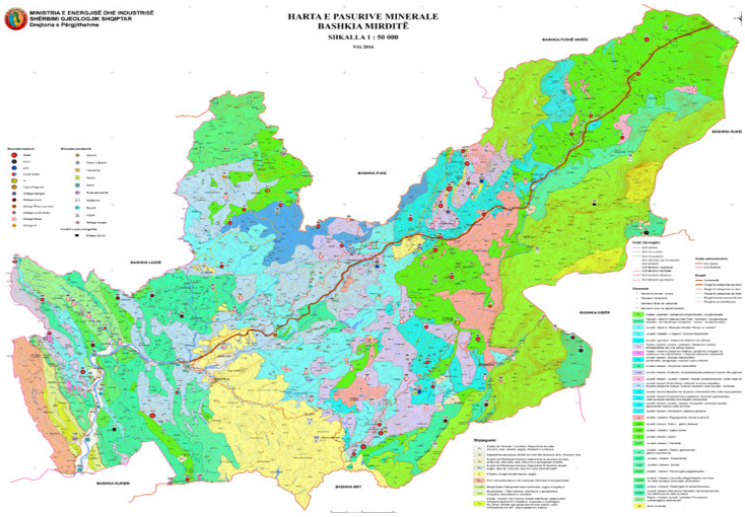


Figure 12: A model of the Map on Mineral Resources for Mirdita Municipality, 2016. (Source: www.gsa.gov.al)

The maps show diverse categories of resources, such as coal, metallic minerals (copper, iron, nickel, chromium, etc), nonferrous minerals (limestone, quartz, quartz sands, stone and marbles, bituminous sands, shale) etc.

5.6 Energy resources

a) Carbon-based energy resources

Studies related to carbon-based energy resources such as petroleum, natural gas, coal and peat can be found here:

Albania Geological Surveys (www.gsa.gov.al)

Ministry of Infrastructure and Energy (www.mie.gov.al)
National Agency of the Natural Resources (www.akbn.gov.al)

Data on the quantities of petroleum and natural gas on each well can be found on the website: (http://www.akbn.gov.al/category/drejtoria-hidrokarbure-shkencore/). Here you can obtain data on the wells situated in each municipality, as in the example of the following table:

PRODHIMI I NAFTËS DHE GAZIT NË SHOIPËRI PËR VITIN 2019

NR	*KOMPANIA / V.B.*	*Prodhim Nafte*		*Prodhim Gazi*	
		Në ton	Në % ndaj prodhimit total	*Gaz Natyror*	*Gaz Shoqërues*
1	**Albpetrol sh.a.**	75.415,00	7,52	0,00	2.060,50
2	**Bankers Petroleum Albania Ltd** (Patos-Marinez)	885.692,00	88,13	0,00	76.814,00
3	**Sherwood International** (Kuçove)	1.172,00	0,11	0,00	231,00
4	**Delvina Gas Group** (Delvine)	0,00	0,00	0,00	0,00
5	**Anio Oil** (Ballsh-Hekal)	24.439,00	2,43	0,00	539,00
6	**Terra Oil Swiss** (Transoil Group/Visokë)	17.778,00	1,77	0,00	422,00
7	**Fin-Pek** (Finiq-Krane, Pekisht-Murriz)	502,00	0,04	0,00	0,00
	Totali	**1.004.998,00**	**100,00**	**0,00**	**80.066,50**

Figure 13: Example of the quantities of petroleum and natural gas extracted in each source (Source: AKBN).

b) Renewable energy resources

In this category is energy produced by hydro sources, solar or wind power, and biomass and geothermal energy. Municipalities along the coastline may list sub-categories such as wave power.

Hydropower: For power from hydro sources there are detailed estimates for each municipality.

Source of information:

National Agency of the Natural Resources (www.akbn.gov.al)

Data for each municipality can be obtained at the Directorate for Monitoring of Hydropower Plants part of AKBN (http://www.akbn.gov.al/category/drejtoria-e-monitorimit-te-hidrocentraleve-shkencore/)

Figure 14: Map of the large and small hydropower plants of Albania (Source: AKBN, 2019)

Solar power: Data on the installed capacities of the solar power plants and the potential for the development of this resource at local level can be obtained at the AKBN Directorate for Renewable Energy Resources.

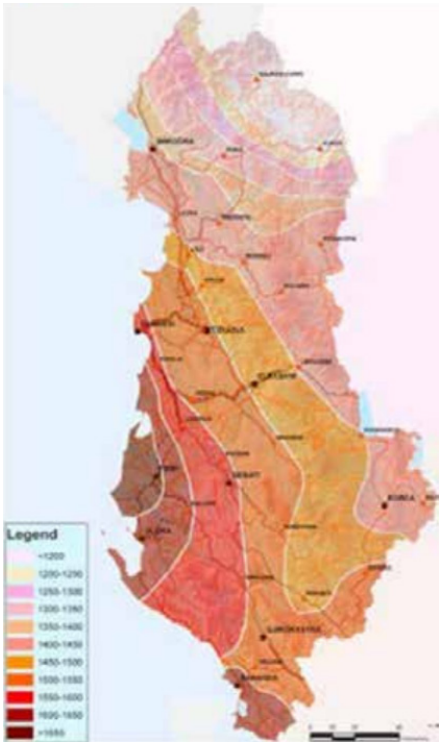


Figure 15: Map of the average solar radiation in Albania kWh/m²/per year (Source: AKBN 2019)

Wind and geothermal power: Capacities of Albania related to these types of resources are still being evaluated. There are some studies on different regions of the country but data on these resources remain limited. Due to the limited investments in this sector, the production potential can only be calculated roughly.

Rough data on the wind and geothermal potential can be obtained from the AKBN Directorate for Renewable Energy Resources.

Figure 16: Map of the wind speed (m/s) in Albania (Source: AKBN 2019)

CHAPTER 6

REPORTING ON CLIMATE CHANGE

Reporters should be looking to tell their viewers and readers about the most important stories of the day and none is more pressing than climate change.

Despite the broad acceptance that the world is changing quickly and the impact of climate change could be devastating, many continue to view it as an abstract concept rather than an impending threat.

It is therefore imperative for journalists to explain to the public why climate change matters. In order to do so, they must ensure that this global story is focused on local issues that are relevant to day-to-day life as well as challenging climate sceptics.

In the process of reporting on this topic, it is also essential for reporters to understand and convey clearly what climate change is, and isn't. For example, it does not help the public grasp the issue if all weather events are blamed without good reason on climate change.

In this chapter we will look at the definition of climate changes, how reporters should handle climate change sceptics and how to make a global crisis relevant to local readers in Albania.

6.1 Climate Change - the basics

Not all extreme weather events are about climate change

Global warming and climate change are often used interchangeably, as is weather and climate, but it is important to understand the difference between the two.

Weather is what we are used to seeing on nightly TV bulletins telling us what the temperature will be the next day, the wind speeds and whether there will be rain or sun.

Figure 17: A screenshot of a BBC weather, not climate, forecast

Climate refers to long-term conditions and how they will evolve over a longer period, even decades.

A crippling heatwave or destructive storm are not climate change but weather events which may, or may not, be caused by climate change.

Italy, and to a lesser extent Albania, suffered a series of storms in the spring of 2023 which brought about devastating flooding which claimed 17 lives.

Were these extraordinary weather events the result of climate change? Well, scientists do not believe there is a direct link although they caution that more studies are needed to be sure.

The World Weather Attribution (WWA) group, a gathering of scientists which looks into the ties between extreme weather and climate change, reported that there was a one-in-200 year chance of three cyclones hitting northern Italy in a three-week period.

"This means that in any given year, the chance of such an event occurring is about 0.5%," it reported.

Tests run had shown that climate change had, in fact, lessened the likelihood of heavy rain in the affected area, not increased it.

Part of the blame was however man-made - the built environment.

"In recent decades, rapid urbanisation and increasingly dense urban fabric has limited space for water drainage and increased risk of flooding, which has exacerbated the impacts of the heavy rainfall. However, this was an extremely rare event, and most infrastructure cannot reasonably be built to withstand such low-frequency events."

Conclusion: Extreme weather events are not always about climate change. Weather-related disasters are as old as time. Before drawing any conclusions, speak to the experts.

Climate change and global warming - what's the difference?

Global warming refers to the long-term increase in average temperature due to human activities.

Since the start of the industrial revolution in the 19th Century, humans have been burning fossil fuels at an unprecedented rate, releasing greenhouse gases into the atmosphere which have led to the earth heating.

NASA reports that since the pre-industrial period, human activities are estimated to have increased earth's global average temperature by about one degree Celsius.

Climate change, on the other hand, is about long term shifts in weather patterns. While this encompasses the trend of increasing average temperatures, it also refers to increased frequency of extreme events such as hurricanes, heatwaves and floods.

It also looks at changing wind patterns, such as shifts in the powerful Jet Stream across the Atlantic which has a profound impact on Europe's weather.

Some scientists believe the Jet Stream is on course to stop entirely this century which would bring about colder winters and hotter summers in Europe.

Conclusions: Do not use global warming and climate change interchangeably, they mean different needs. Climate change is not all about hotter summers.

TIP: There are many different sources on climate change, but one of the best is the World Bank. Here you can find specific data on Albania in the coming years, including changes to rainfall and the number of days likely to be more than 35 degrees. https://climateknowledgeportal.worldbank.org/country/albania

6.2 How to deal with climate sceptics and fact-checking

Don't give climate deniers the oxygen of publicity

Journalists often believe they have to balance out conflicting points of view in pursuit of hallowed "impartiality".

Many are driven by the idea of giving the voiceless a voice and holding the powerful establishment to account.

So it feels counterintuitive to ask reporters not to give weight to any community.

When the facts are uncertain, it is of course important for reporters to reflect on the debate.

But in the case of climate change, the evidence of man-made climate change is so overwhelming that voices of "climate deniers" should not be given equal prominence, and should be approached with extreme caution.

1) Swat up on climate change

You shouldn't rely on this handbook or the voice of any single activist or scientist to guide you on climate change, but you should seek out credible information for yourself.

A good place to start is with the UN and this website: https://unccelearn.org/

2) Understand the difference between activism, lobbyists and journalism

Every newsroom and media outlet has a set of principles which guide its reporting in terms of story selection and how these are reported.

All mainstream media outlets, for example, accept that climate change is real.

So while it is impossible for any reporter to disassociate themselves from certain opinions, it is also important to remain, as much as possible, outside the realms of activism.

Activists can be important sources of data and quotes but they should be treated with the same caution as any interlocutor. Reporters must ask what agenda they are pushing and why.

3) Be careful of greenwashing

Companies which make large profits while contributing to climate change have a vested interest in pushing skewed and false information.

A whole industry has sprung up providing opportunities for companies to greenwash their image through a variety of schemes, including some types of carbon credits which have little benefit to the environment.

Always question the source of the information and what interest they have in pushing the information.

And remember, even ostensibly green developments can have drawbacks. Solar panels produce green energy but what do we do with them at the end of their 20-year lifespan?

6.3 How to make a climate change story relevant to your audience

Engaging an audience in issues related to climate change is a challenge.

Doomsday headlines of global catastrophe can attract some attention but according to the UN and Thomson Reuters Institute this bombastic approach can also lead people to lose interest.

Instead it is often far more fruitful to focus on the local impact on people's lives which go beyond the climate and to tell real life stories.

The local angle can even be found from following supply chains across the world.

The destruction of the rainforests, arguably one of the world's most pressing environmental issues, is tied in myriad ways to life in Albania.

For example, chickens consumed across the globe are often fed with soya grown from cleared rainforests and wood cleared from the tropics is used in furniture and other goods.

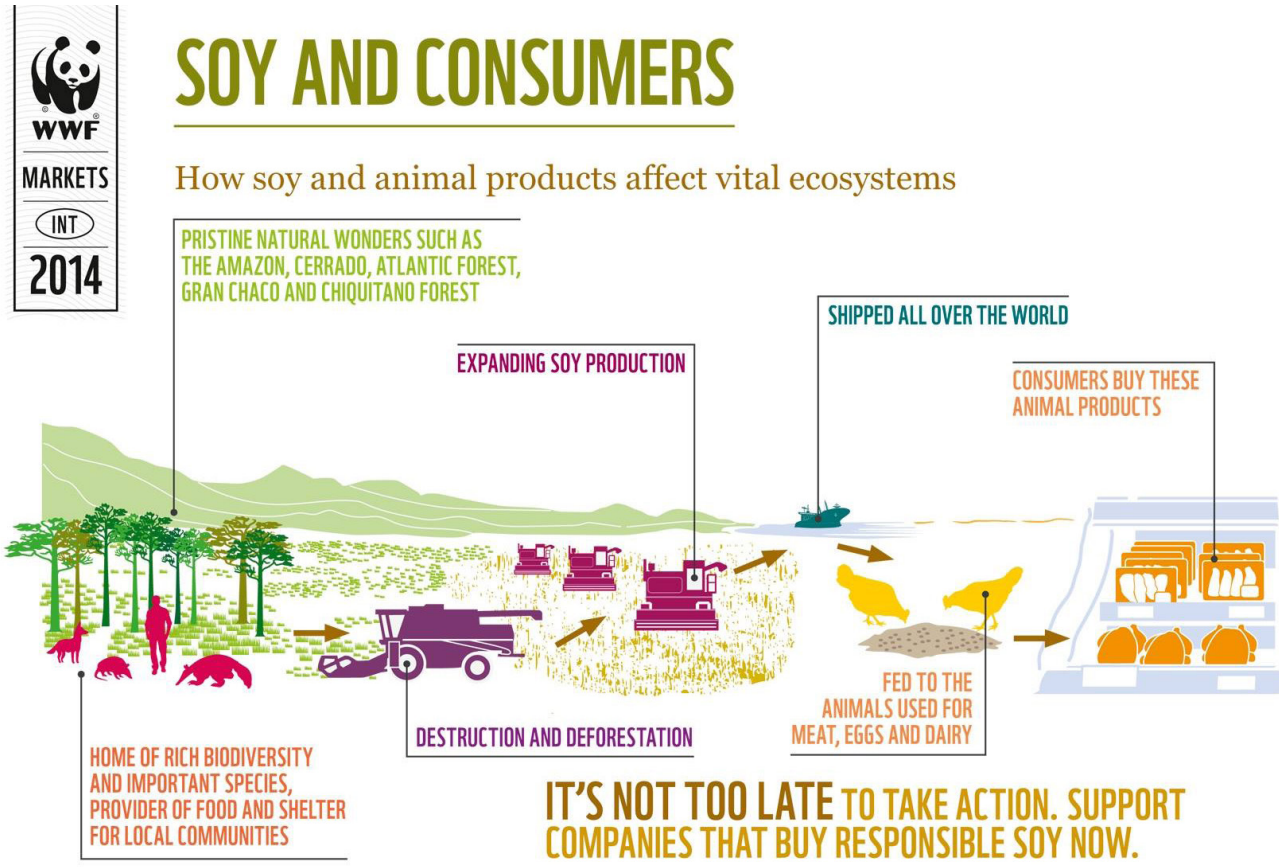


Figura 18: Ilustrim i WWF mbi përdorimin e përgjegjshëm të sojës.

An infographic produced by the World Wildlife Foundation showing how the chickens bought in your local supermarket can be tied through long supply chains to deforestation.

Look into your local big actors - factories, restaurants, retail etc - and investigate where their products come from and the connection to the climate crisis.

By understanding how climate change will affect Albania, it is then possible for reporters to investigate how this will impact specific communities in the country.

Albania's largest economic sectors are all vulnerable, or will be impacted, by climate change.

Here are some questions for Albania's future that reporters could be asking:

- How will the energy sector, which relies on hydropower, be affected by falling rain levels?
- As temperatures surge, will tourists continue to visit Albanian coast in the summer or will they switch to different times of year or even the mountains?

- How much will Albania's agricultural sector suffer with more extreme weather?
- How will Albania's small oil and gas sector, which may expand if further potential finds are confirmed, be impacted as country's shift their source of energy?

Example: Rising water levels

While local climate data in Albania is not always available, there are a number of international websites which also provide local insights.

One good example is coastal.climatecentral.org which uses the latest sea-level projections, including those from the recently released Sixth Assessment Report (AR6) from the Intergovernmental Panel on Climate Change (IPCC) and the 2022 Sea Level Rise Technical Report from an interagency U.S. government task force.

If you look at the map for sea level rise and scroll through the years, the results for some areas of Albania are shocking.

Take for example Durres and Vlora - two key cities. According to the current map of Durres, much of the city is already below the annual flood line and the situation is set to become worse. This means that it is at risk of flooding even today.

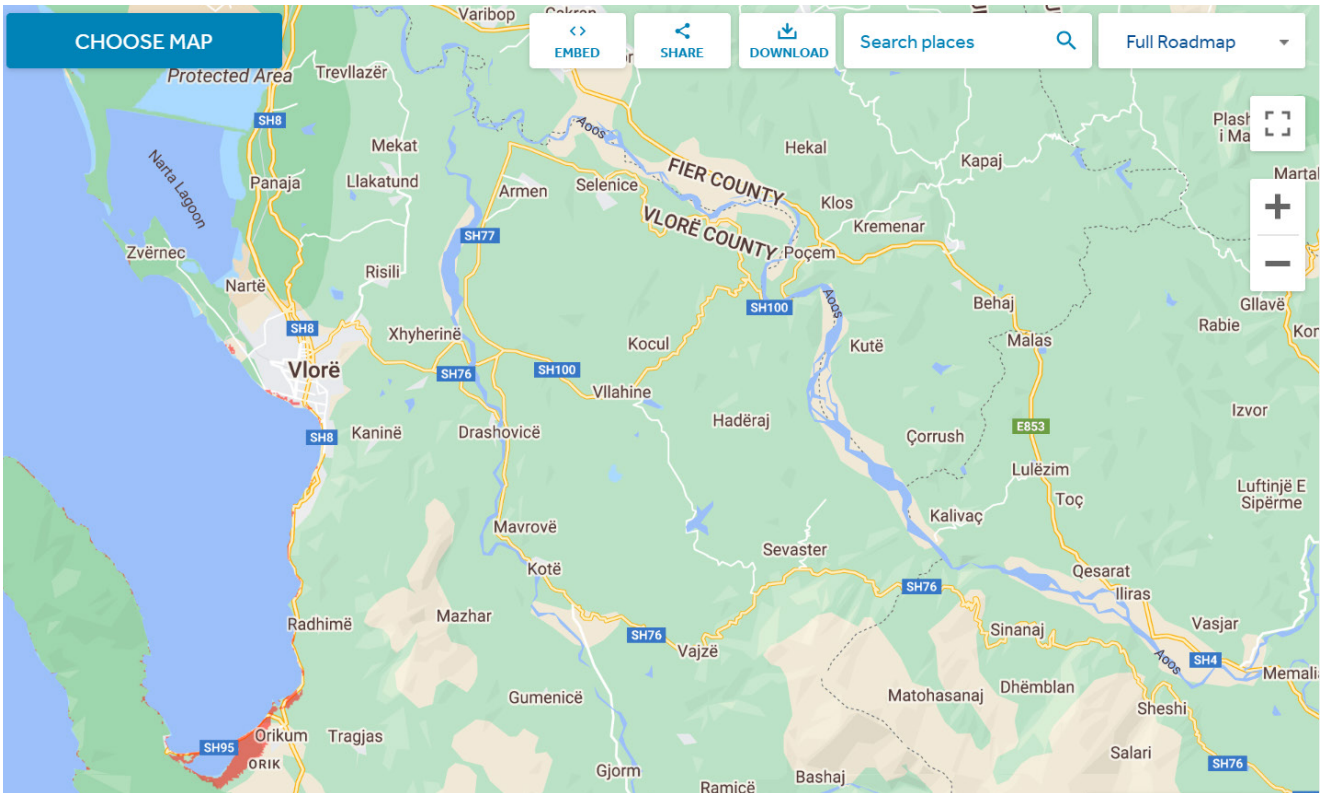
Vlora's situation is perhaps more worrying with tracts of the city due to fall below the line by 2030.

That doesn't mean that the areas will be flooded by that date, but it does mean that coastal flooding is a serious threat and action may be required to address this.

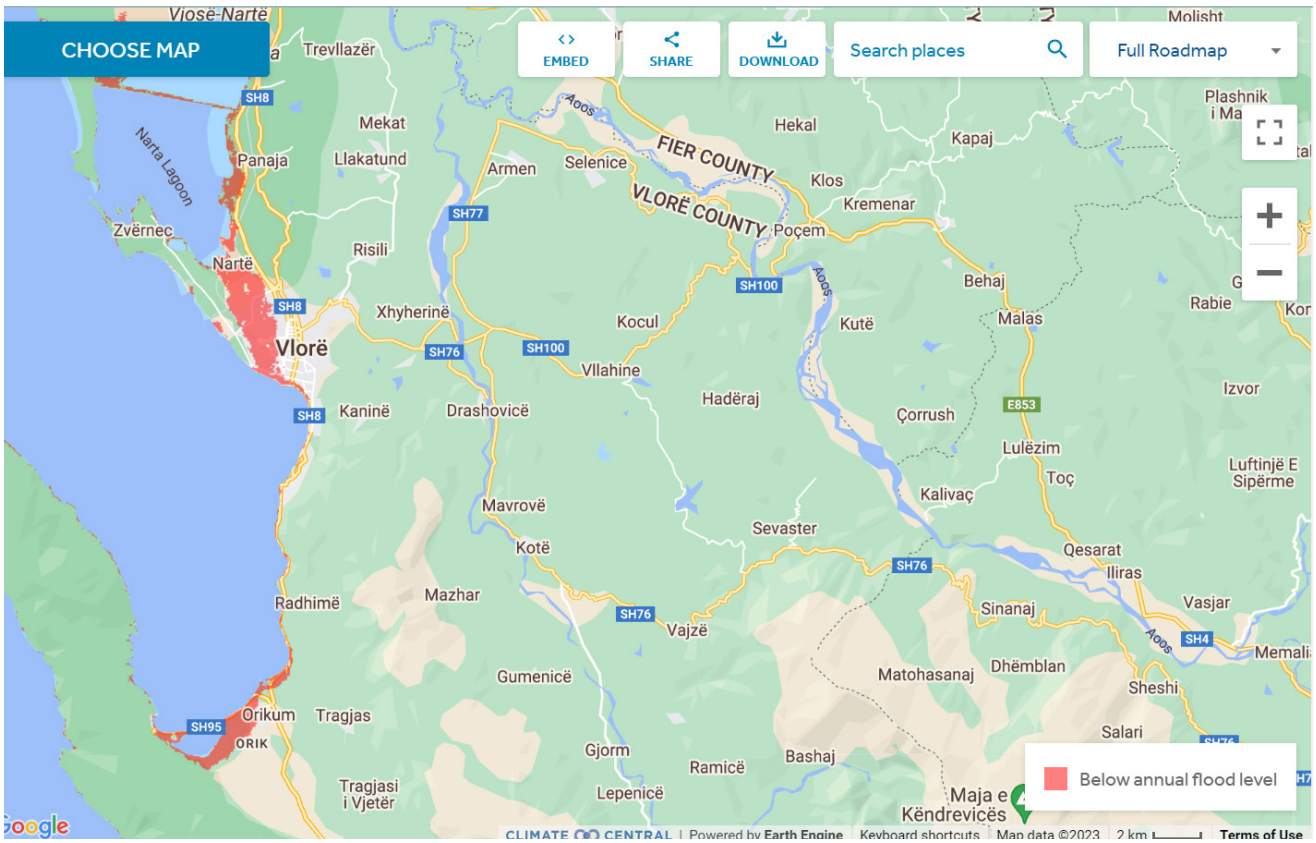
At the very least, this issue needs to be part of a serious national and local debate about mitigation and the impact on communities.

It would be interesting to explore what authorities are doing to tackle this issue and speak to people whose homes and livelihood could be threatened in a flood.

The current situation in Vlora



The situation in 2030



Example of stories that deal with the impact of rising temperatures

With temperatures soaring, life in the coming years will change markedly.

Two international outlets looked at how different communities were affected by climate change and increasing temperatures.

Propublica recently looked at how climate change will affect poor communities more. Poorer areas of California tended to be significantly hotter than the richer.

This granular investigation showed how real life communities would be impacted and how a few miles will make an enormous difference to how people are affected by climate change.

How will climate change affect different parts of Albania and the rich and poor?

With Europe predicted to hit 50 degree heat in the future, the BBC has been looking at communities already grappling with this extreme cope with the series "Life at 50". How will cities in Albania adapt to inevitable heatwaves and how will life change?

CHAPTER 7

TOOLS FOR REPORTING ON CLIMATE CHANGE

In this chapter we will explore both traditional and cutting-edge tools for journalists in Albania to report on, and investigate environmental issues.

7.1 Aerial Imagery

Aerial imagery, that is satellite and drone footage, offers reporters covering environmental issues huge research potential.

Today, satellite images are widely available from a variety of free and paid-for sources online, not just the well-known offer from Google, and have been put to good use by journalists investigating deforestation, forest fires, oil spills, illegal development and much more.

Often several images are used to show change over time, proving in one or two photos what months of on-the-ground reporting can achieve.

Reporters no longer have to rely just on original satellite images: a range of filters can be applied to the photos to highlight changes by emphasising vegetation, urbanisation or forest fire damage, to name but a few.

Computers can also be trained with the help of coders to identify certain objects across swathes of land, opening up new avenues for reporters. In France, officials used artificial intelligence to identify 20,000 illegally built swimming pools by training the computer to recognise their specific characteristics and then matching these against the planning register.

In South America researchers have been using satellite photos and AI to count cows on the outskirts of the Amazon (Livestock production—primarily cows—produce 14.5 percent of global greenhouse gas emissions.)

Last, when satellite images are not available or unaffordable, drones offer a handy Plan B over a smaller scale.

In this chapter we will look at how these techniques have been used by reporters and researchers internationally, and how these can be applied to the Albanian context.

7.1.1 Finding satellite images

The world of satellite imagery can appear daunting at first. Dozens of state agencies and companies offer a variety of free services, trials and paid-for services.

In this section we will pick through these options to help you navigate.

The best place to start is with Google, which has vast amounts of useful images available online for free.

Google:

The first step in using Google's satellite tools is to download Google Earth Pro, the desktop version. This provides a much wider scope of tools compared to the online version.

www.google.com/earth/versions/

Historical images:

One of the most useful features on Google Earth Pro is the ability to look back in time.

This allows you to see from the air the major changes in towns, forests, coastlines and more.

In order to scroll through historical satellite images you must either click on "View" in the menu toolbar and then check the "historical image" box.

You can also click the clock icon in the toolbar.

Once this is done, you will see a spool appear in the top left hand corner of the screen which allows you to scroll through historical images.

If you find something of interest, you can save that image by clicking on "File", then "Save", then clicking on "Save Image".

It is also possible to copy the image, by going to "Edit" in the menu bar and then "copy image".

I decided to take a look at how the southern edge of Tirana's main park has changed in the past 20 years. As you will see from the images, this once quiet, green neighbourhood has been transformed with the Elbasan highway and major construction works.

You are also able to illustrate this in a nifty way by uploading your images to Juxtapose - a tool created for journalists by Knightlab, a unit of Northwestern University in the US.

This allows you to scroll through two superimposed images, clearly showing the changes over time.
https://juxtapose.knightlab.com/

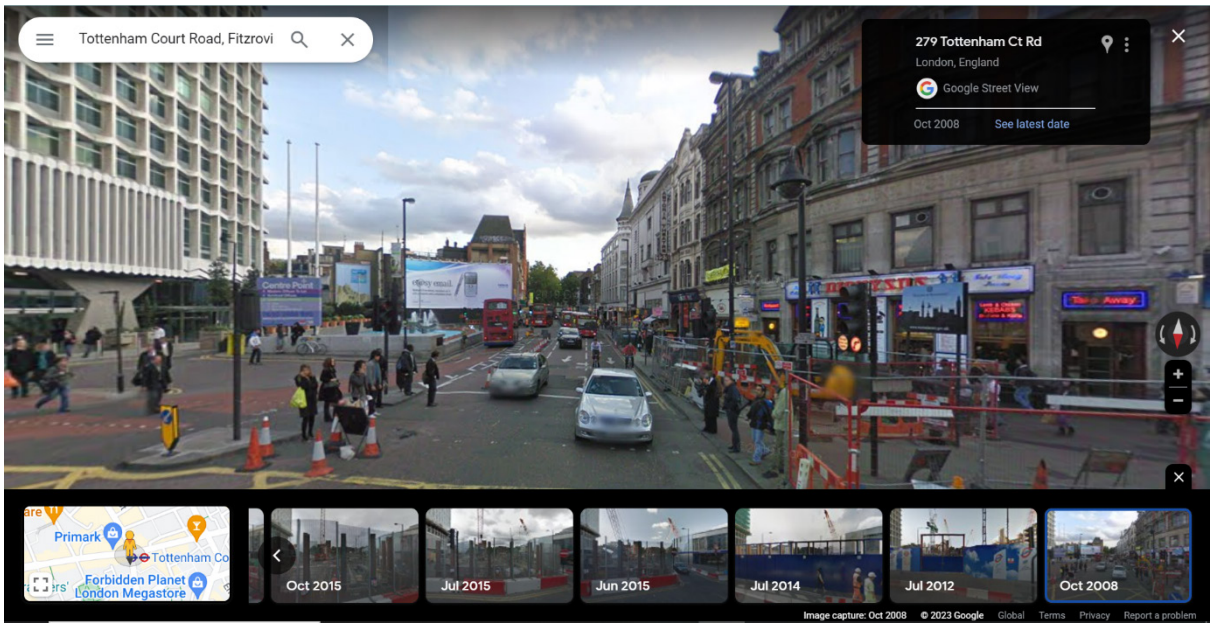
2002-2022

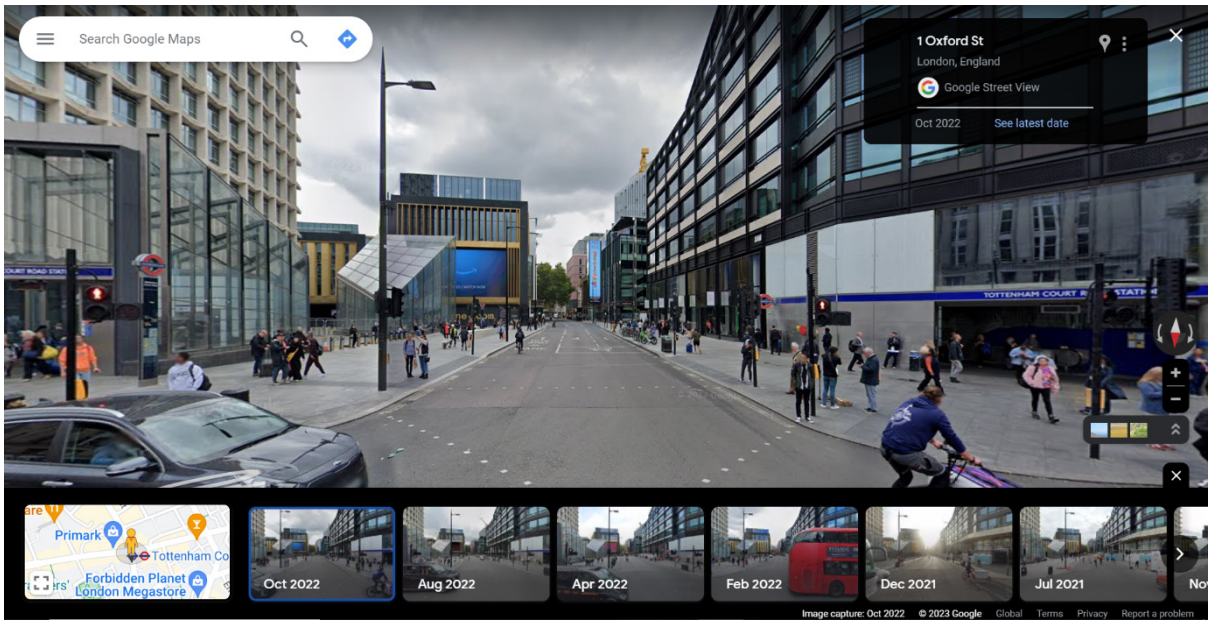
Street view:

Street view has fewer practical applications for environmental reporting, particularly in Albania where the images are not updated frequently. But given Google's relentless march, it is nonetheless worth learning this simple technique as it may prove more useful in the future.

Currently Google Earth Pro does not provide historic Google Street View data, so you will need to switch back to the online version: google.com/maps.

If you take a look at a city like London, the main streets are recording more than once a year. And if we focus in on the busy junction between Tottenham Court Road and Oxford Street in the heart of the city, we are able to see how much this crossroads has changed over recent years.





Even in places where Street View is not available, geolocalized photos uploaded by the public are. If you activate the "Street View" layer on Google Maps, areas with "Street View" are marked with a thick blue line.

Photos are available as a light blue dot with a dark rim. These are sometimes static, sometimes panoramic photos and are timestamped.

Historical images, whether they are from Street View or uploaded by the public, can be hugely helpful for reporters as they provide evidence of change to a location. This could be used to illustrate illegal construction, deforestation or mining for example, with before and after shots. These images also allow reporters to scout out a location ahead of visiting it in person.

Sentinel Hub:

Sentinel Hub is an extremely useful source of satellite data.

It processes vast amounts of data from Sentinel and Landsat satellites and makes them available through an easy search. It also provides different ways of analysing these images, including through specific filters which allow users to see changes more clearly, such as the loss of vegetation.

The website is run from Slovenia, Ljubljana, by IT firm Sinergise and although there are paid-for plans available, occasional users will find that they are well covered by the free package.

Visit https://apps.sentinel-hub.com/ and register for a free trial.

Case Study: Checking the impact of the forest fire in Sazan Island, Albania

In June 2022, a large forest fire engulfed Albania's largest island, Sazan, off the coast of the southern city of Vlora.

While the fire received quite widespread coverage, there was little follow up on the damage that it was left.

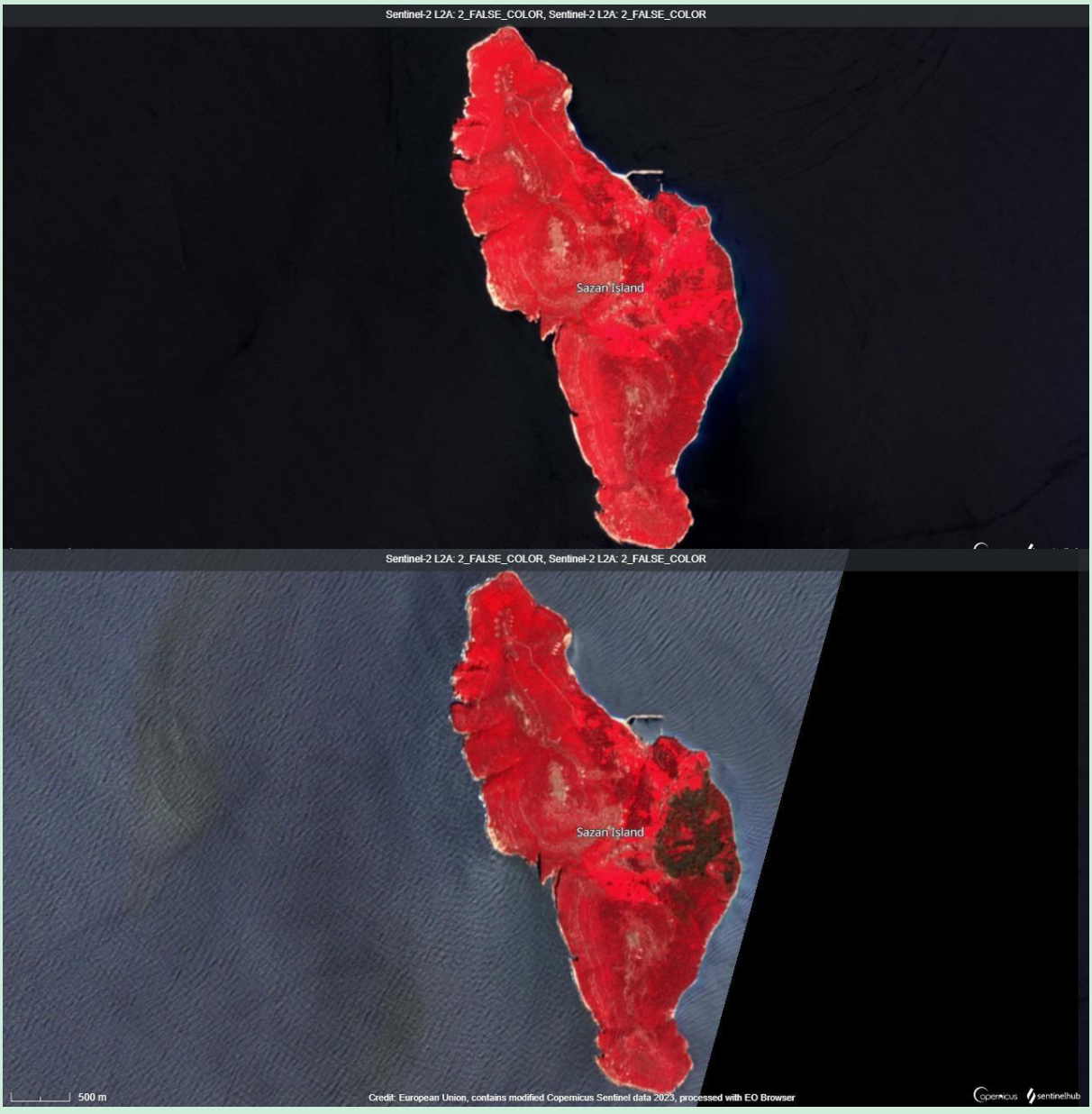
The fact that the island is not easily accessible and infrequently visited likely added to this media amnesia.

In order to check what damage had been left, I used the Sentinel hub.

Here is a step by step guide

1) Enter the area that you are looking for in the search bar and zoom in
2) Go to the "Discover" tab on the left-hand side and select which satellite database you want to search. I used Sentinel 1, which had more than enough available images. Select your time range: I was looking for satellite images before and after the fire so selected a date range covering May to July 2022

3) Click the “Search” button and then scroll through the options, taking into account cloud cover, which could obviously impede your view of the island.
4) Once I found an image from before the fire with a clear picture I clicked on “Visualize”.
5) You are then offered a selection of filters to help your search. In this case, I am looking at the loss of vegetation so I opted for “false colour” which more clearly shows plants damage.
6) In order to compare it with a later image I then clicked on the tab with arrows pointing in both directions (see below). This uploads the photo to the “compare” section.
7) I then repeated the same process with an image from after the fire.
8) If you then click through to the “Compare” section you are able to shift between one image and the other clearly showing the change - and the damage to the island where the fire took place.
9) I then downloaded the images using the tab on the bottom right of the page.



You can see from these before and after photos that scale of the damage caused by the wildfire shown by the darker colours on the east coast of the island

Global Forest Watch:

Using Global Forest Watch takes a lot of the hard work out of monitoring deforestation.

Its website uses satellite data to map changes in forest cover pixel by pixel over the past 20 years, giving a clear indication where deforestation has occurred.

While there are limitations to using this approach, the data undeniably allows you to focus on key areas of concern and provides a good perspective on country trends.

The best place to start is on the map page: https://www.globalforestwatch.org/map/

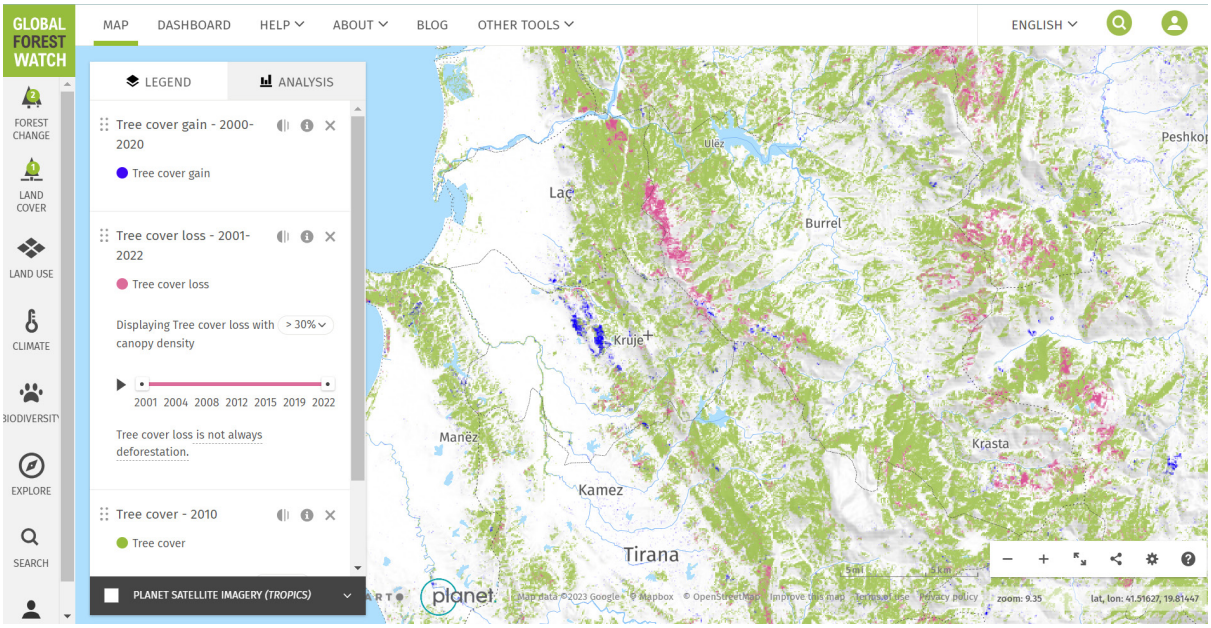
Here you can zoom in on our area of interest - likely to be Albania.

It is possible to run an animation showing the change in forest cover since 2010.

What is immediately obvious is that deforestation is not evenly spread across the country.

An area of particular concern appears to be the Qafshtama National Park which has seen large areas of tree loss (pink) but also some new planting (blue).

This raises immediate questions about why such large areas of a national park have been lost and what trees have been planted. While reforestation can be beneficial, planting of unsuitable trees can have a negative impact on the environment and does not make up for the loss of biodiversity.



If you find the pink, almost vertical, strip to the right of Laç, that represents deforestation in the Qafshtama National Park.

7.1.2 Artificial Intelligence

Combining satellite imagery with machine-learning opens up a host of options for reporters.

Trying to manually find small structures across reams from satellite imagery is time-consuming. But thanks to developments in IT, it is today relatively straightforward for coders to train computers in order to recognise certain features in satellite imagery.

This can be illegally built swimming pools, houses burnt down in conflicts or even cows.

In France, the authorities were able to identify 20,000 illegally built swimming pools by programming a computer to recognise their specific characteristics and then matching these against the planning register. These features likely included the shape and reflection.

Obviously, this method will create many false positives by identifying structures which share characteristics with a swimming tool, but are not. These need to be weeded out by hand but computers at the very least hugely reduce the time needed.

It is possible to train a computer to identify illegal mining, deforestation, illegal constructed buildings and even cannabis plantations, see here: https://insider.govtech.com/california/news/humboldt-using-satellite-tech-against-illicit-cannabis.html.

As in the French case, it is sometimes necessary to check satellite imagery against other maps or databases, such as official government development plans to identify suspect construction.

In order to test whether your story could benefit from this type of approach, you should consider what are the key characteristics of the structure or object you are searching for and whether these are repeated.

This can be size, shape, colour, reflection, height or even its position next to or near another object.

In South America researchers have been using satellite photos and AI to count cows on the outskirts of the Amazon (Livestock production—primarily cows—produce 14.5 percent of global greenhouse gas emissions.) so even small objects can be tracked using satellites.

Use of drones

Drones are used in a wide variety of environmentally monitoring by scientists and activists today.

These include monitoring air and water pollution, looking for the impact and spread of floods, surveying deforestation and even investigating the presence of plastic debris.

You can use your own drone to collect data or there are private firms able to provide detailed footage.

Drones are able to offer greater flexibility and detail than satellite imagery. You must however check the local legislation for flying a drone before embarking on filming.

7.2 International sources of stats and data

While finding local sources of data is often preferable, there are sometimes advantages at looking internationally.

Sometimes the data is not available from a local institution and, even if it is, it may be organised in such a way that is difficult to query in order to extract the key information that you need.

Second, international sources allow you to quickly gauge how Albania is performing against other countries.

Third, the absence of statistics is also significant and can lead to a story. Why is the data not being collected?

And last, with regards to trade data, which can be useful in environment-related investigations, there should always be at least two sources - the importer and exporter. Not only does this mean that you increase your chances of finding data, it can also mean you have the ability to see if your country is hiding certain damaging facts.

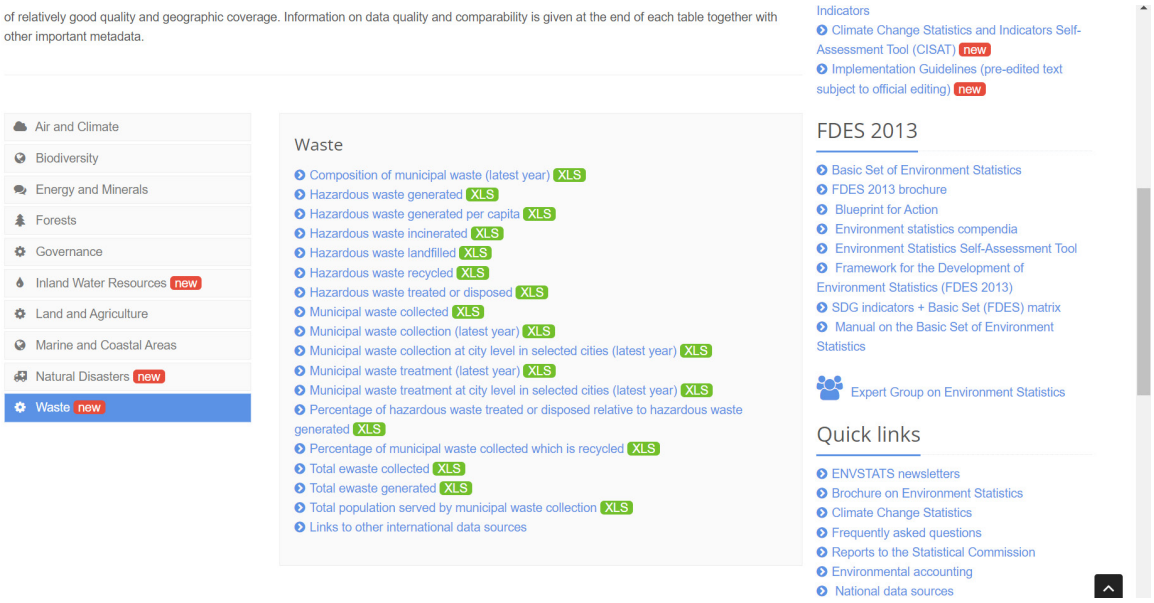
7.2.1 UN Statistics

The United Nations' Statistics Division gathers environmental data around ten themes: Air and Climate; Biodiversity; Energy and Minerals; Forests; Governance; Inland Water; Resources; Land and Agriculture; Marine and Coastal Areas; Natural Disasters; and Waste.

We will look at a few examples of how you can generate stories from these statistics.

If you visit the section related to the "total population served by municipal waste" you will see that for Albania, the reporting is sporadic and that no data has been provided since 2015.

The first date for the data is in 2003 and from there to 2015 the percentage of people receiving municipal waste collected increased by just 3 percent from 60 percent to 63. That is lower than Albania's neighbours which have provided data.



This raises questions about why more recent data has not been provided and why Albania had been performing worse than its neighbours.

Try exploring the data here: https://unstats.un.org/unsd/envstats/qindicators.cshtml

7.2.2 UN trade data

The UN trade database, Comtrade, is a hugely helpful tool for journalists looking at the movement of goods.

Trade has a major bearing on reporting on the environment - from investigating the movement of waste to looking at the import and export of fossil fuels. The website is relatively straightforward to use and you can quickly come up with useful information.

Goods are broken down into commodity codes ranging from two to six digits. For example, 93 represents military equipment of all sorts, 9306 all types of ammunition and 930621 ammunition for shotguns.

Information is available in terms of the monetary value of the import/export, as well as often the weight. Both can prove useful.

Importantly, there are two parties in each export-import transaction so even if one side has not reported the movement of goods, the other may have.

BIRN Albania editor Besar Likmeta put this to good use in a report from 2010 in which he revealed how Albania had continued to import waste material, including some which was potentially dangerous, despite a government ban.

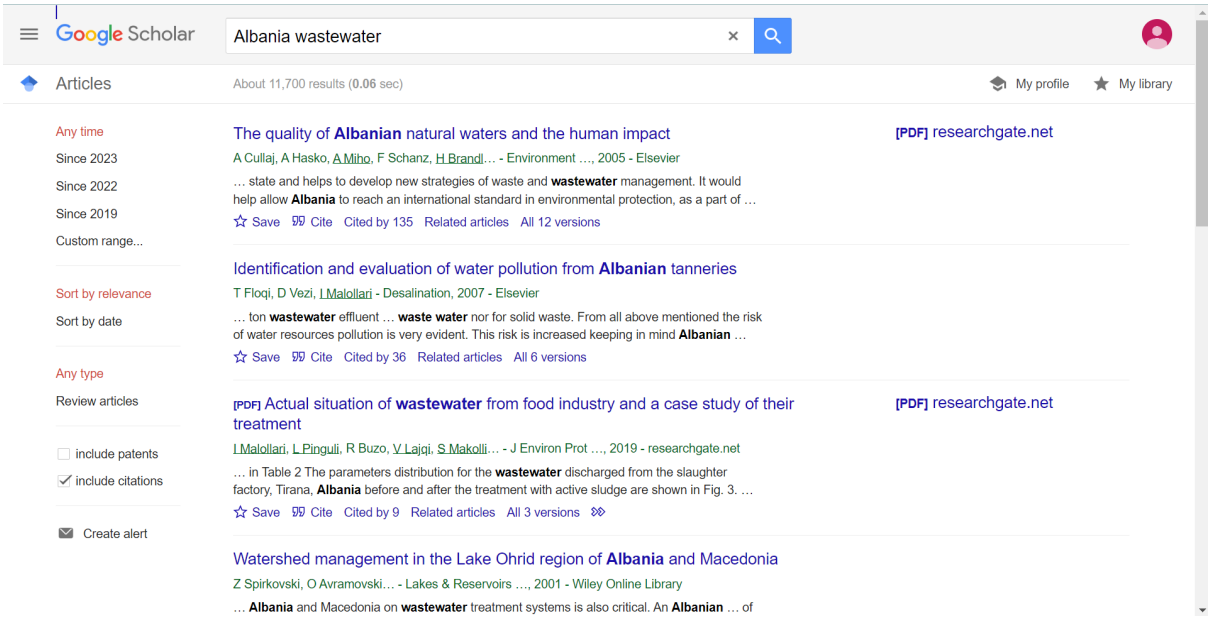
These were revealed because other countries had reported exports of waste to Albania, not the government in Tirana.

During the investigation, the journalist also used a handy table produced by US academics which provided guidelines on which UN commodities could be considered hazardous. You can check these by visiting the following website: https://faculty.georgetown.edu/aml6/pdfs&zips/WasteOfEffort.pdf

7.2.3 Google Scholar

Google scholar is a handy tool for searching for academic papers that may be of interest. A great deal of the most detailed work on environmental issues is carried out by academics, so it is a good place to start looking.

A search for "Albania wastewater" delivers more than 10,000 results. These may provide useful results both in terms of statistics and offer suggestions into how the research is carried out.



7.2.4 Advanced Google searches

Google is host to vast amounts of helpful international data but it can be difficult to track down what you need and then ensure it is trustworthy.

Here are a few tips to how to use advanced Google commands:

Quotation marks

Never forget to use quotation marks around your search term. If, for example, you are searching for references to climate change, and do not include the quote marks ("climate change"), Google will return pages with references to "climate" and "change", but not necessarily the exact phrase "climate change".

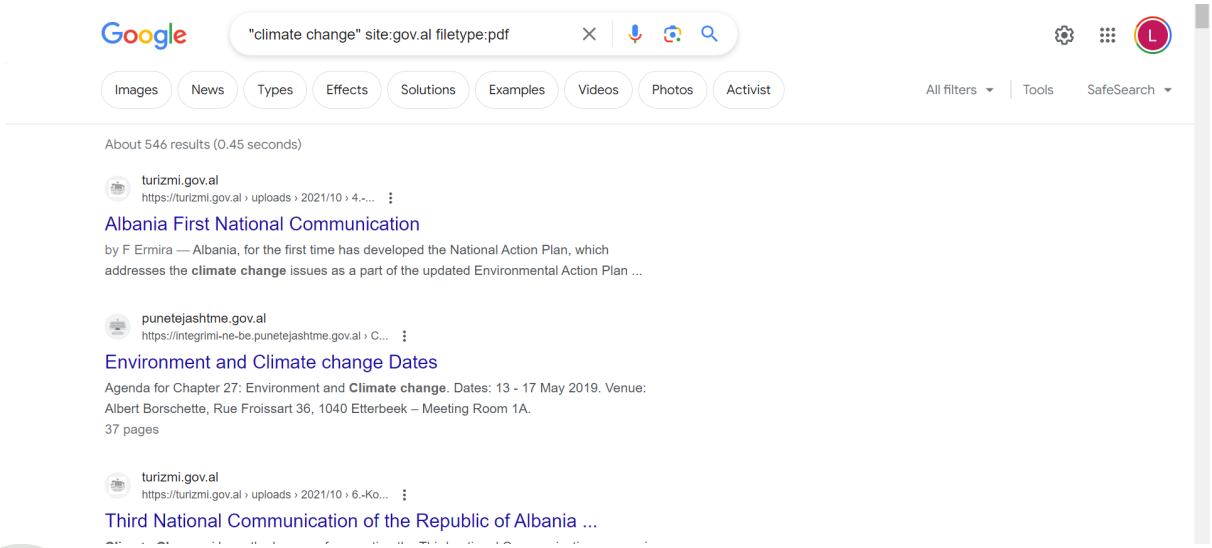
Searching information on specific pages

Finding trusted sources Google in the world's biggest library is sometimes tricky. You will come across swathes of information but how can you be sure of its sourcing? Luckily, there is a way of narrowing your searches to more reputable sources. Governments are often excellent sources of information, and Google allows you to narrow your results to those found on certain webpages. Most countries in the world have "gov" in the url of their official websites.

The US has ".gov" and the UK has "gov.uk". Not all of Albania's institutional websites follow this pattern, but some do, including National Environment Agency's akm.gov.al.

By typing your search term, followed by site:gov in Google, you will be searching for any web pages with your search term within websites with domain names that end in ".gov".

Here is a search for references to "climate change" through a range of Albanian government websites which end with gov.al.

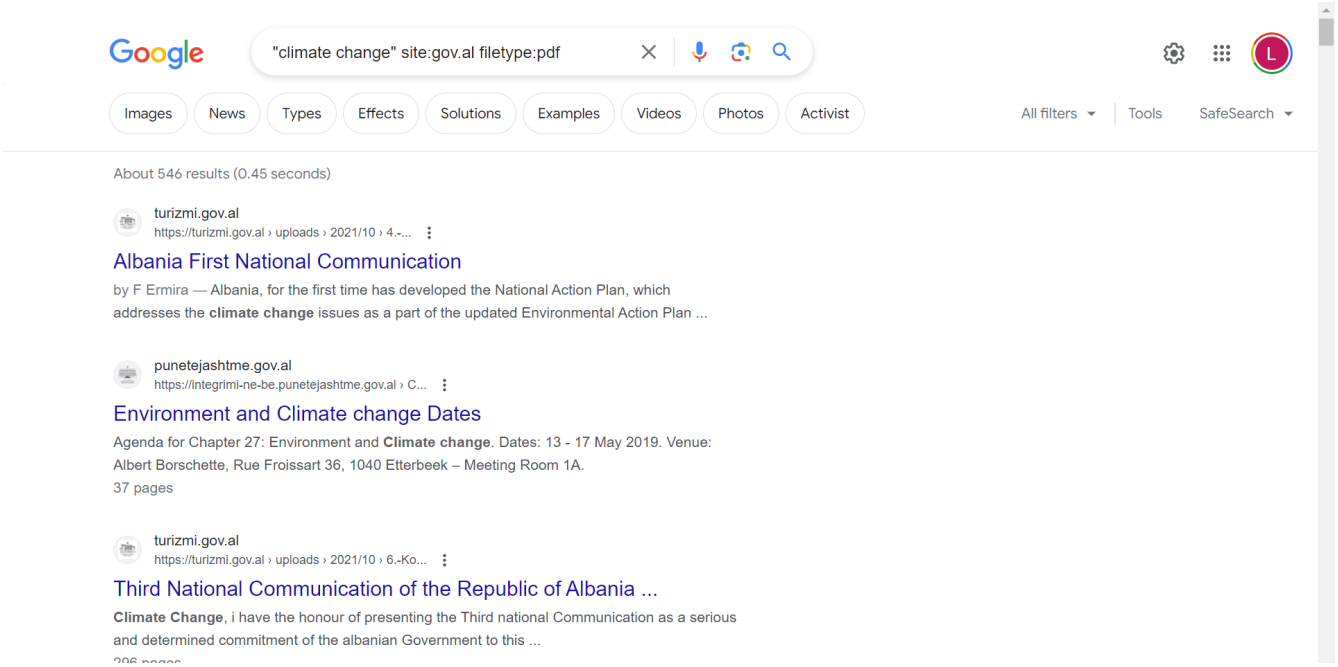


International organisations are also a good place to turn. These tend to have .org or .int as the suffix and these can also be used to narrow down your search options.

Document type

Last, the type of information you will be looking for is likely to be found in a document. You can specify the type of document you are searching for by adding filetype: at the end of your search followed by “doc” or Word documents, “pdf” for PDFs and “.xls” for spreadsheets.

This is a search for PDF documents on Albanian government web pages which end with gov.al



CHAPTER 8

DO YOUR OWN TESTING

State bodies, agencies and institutions are responsible for gathering the bulk of environmental data. Universities and sometimes private companies also chip in.

This takes the form of meteorological statistics - temperature, humidity, air pollution - and also information about water quality - how clean is bathing water, whether tap water is drinkable etc. Then there is data about the land, pollution, temperature for planting etc, and information about flora and fauna.

But journalists do not need to rely on the statistics and data provided by the authorities, universities or not-for-profits to carry out their reporting into environmental issues.

Instead, reporters are able to collect information by using a range of methods from the technologically simple - simply counting - to the more complex - building your own sensors.

The latter is an area of journalism which is a relatively recent development - sensor journalism - and offers a cost effective way for reporters to build small devices to gather environmental data.

In this chapter we will look at what types of data can be gathered, how to do so and the ethical and practical pitfalls of journalists straying into this territory usually inhabited by scientists and specialists.

We will also discuss whether journalists can harness the power of new sensors and the crowd to collect an even greater scope of stats.

In earlier chapters, we looked at what information is available locally and internationally. This chapter is about gathering your own information.

Even in the United States, where vast amounts of public and private data are available, there is still a need for reporters to dust off their walking boots and get outside. We will look at some recent examples of sensor journalism taking place in the US.

In Albania, the amount of data available through standard channels is more limited, making the case even stronger for journalists to tool up and leave the newsroom.

A final argument in favour of journalists collecting information themselves is that companies and states sometimes have an incentive to manipulate data, either by hiding or massaging data, or simplifying by lying.

Does a city want to admit to having the worst air pollution in the world? Would a tourism hub want the travellers to know that its water was not safe to swim in? And have companies throughout time not attempted to hide the external costs of various types of pollution? The answer to all these is obviously "yes" and is why journalists should remain wary of official data.

It is therefore imperative that journalists ask themselves not only if data is available but how trustworthy it is.

This sometimes requires not just a sceptical eye but also some scientific knowledge.

For example, the specific positioning of an air pollution monitor can lead to readings which do not reflect what the general public is breathing in - for better or worse. This could be because it is near a bus stop or in the middle of a park.

In these cases, background research is required which would likely involve consulting some academic material and/or speaking to an independent expert.

The same holds true of sensors built, bought or borrowed by reporters - you should be transparent about what you are using, where you are using it and consult experts in the field. Publish your workings, as these will give weight to your work.

If you are able to collect data from several, or many, sensors this is even better as you are more likely to detect problems with a specific location or with a piece of equipment.

Last, even if your data collection is solid, you must ensure how you interpret the information is equally robust.

As a young local reporter in London, I was intrigued by a report that stated, in terms of dust particles, a 20-minute London Underground journey was like smoking a cigarette. While this came from measurements of dust taken on the London Underground, the inference that smoking a cigarette and travelling on the Tube were equitable in terms of health was plain wrong.

The power of such a catchy "fact" however is that it continues to be repeated today even though it has been largely debunked.

This is both unhelpful in terms of understanding the real potential health implications of dust on the Tube and of smoking cigarettes.

Journalists may prefer snappy headlines to nuance, but when science and health issues are in play, we reporters need to be particularly vigilant.

Air Pollution

The monitoring of air pollution across Albania is far from widespread.

In Tirana, the capital city, there are no official air pollution monitoring stations providing data - an extraordinary situation for a European capital. This, despite the presence of state and municipal run facilities.

You can find data from two non-official Tirana stations via https://www.iqair.com/albania/tirana

Data from official air monitoring stations in other cities can be found here, but does not include Tirana https://akm.gov.al/ova_doc/raporti-per-gjendjen-e-mjedisit-2021/

Monitoring and analysing air pollution is an important public function and the paucity of government data may be one which reporters can fill, working alongside universities, NGOs or independent experts.

8.1 Counting sheep, or lynxes

Keeping a count of animals is not revolutionary, but is important work, particularly in countries where little resources are committed to monitoring flora and fauna.

For example, the Albanian Ornithological Society frequently takes part in counts to monitor the presence of migratory birds (https://aos-alb.org).

Over a number of years, by counting, it is possible to plot trends of whether a species is declining or increasing.

A single journalist or individual is unlikely to be able to carry this on their own, but through the power of crowd-sourcing reporters are able to call upon an army of willing volunteers. If you have dozens or hundreds of data points about the presence of certain animals or plants, you can begin to spot trends.

Another tool that is now widely used by NGOs, and can be rerolled by journalists, are trap cameras. These easy-to-use tools can be purchased for a few hundred euros and used over many years.

For example, the Protection and Preservation of Natural Environment in Albania has documented

the presence of the Balkan lynx in the Albanian mountains thanks to these cameras. This animal is critically endangered. One of the last sighting was in 2021:

Figura 19: Fotografi e Lynx lynx balcanicus e shkrepur nga monitorimet e PPNEA / BLRP.

What other flora and fauna should journalists be tracking? The media has much to learn from the work of NGOs in this sector.

8.2 Buy or hire kit

Reporters are unlikely to have an arsenal of expensive monitoring equipment immediately available to them. But if their newsroom is unable to afford the purchase for a specific investigation, it may be possible to loan, borrow or team up with another institution.

Investigative reporters for USA Today were able to hire a very expensive piece of equipment in their quest to test the chemical composition of the soil around long mothballed factories.

Reporters decided to embark on this investigation after reading a report which identified more than 400 former industrial sites which had not been properly vetted for pollution.

The X-Ray Fluorescence Analyzer costs $41k to buy but reporters were able to negotiate a monthly loan costing $2,250 a month.

While costly, the data gathered was far more valuable - revealing that many of the identified sites had lead levels well above what was considered safe.

The impact has been far-reaching as authorities have sought to investigate the findings and make the locations safe.

Speaking to the Nieman Reports website, part of Harvard's school for journalism, one of the lead reporters Alison Young said that she worked hard to learn about scientific methods, how the technology worked, consulted with experts and carried out additional soil samples to confirm the findings from the monitor.

After reading a shocking story about how 20-minutes on the London Underground was the equivalent of smoking a cigarette, I, at the time a trainee reporter in London, convinced an academic to lend me an instrument to measure dust particles on the London Underground.

I spent the day riding up and down the Northern Line gathering information about what millions of people were breathing in each year.

The data was troubling - the levels of dust were very high - but what this meant for people's health was far from clear and I consulted experts in order to report fairly and level-headedly.

Reporters must still be vigilant that they use the data collected responsibly and consult experts when needed to properly interpret the figures.

There are many industrial sites, both current and historical from Albania's industrial past, where journalists and scientists working together could carry out important investigations into legacy pollution.

8.3 Sensor Journalism

Figure 20: *A photo from the website of Arduino, an Italian electronics manufacturer*

Sensor journalism is a relatively recent development in journalism, brought about by the falling price of do-it-yourself sensors. These projects require some basic understanding of coding and knowledge of how to build simple electronic devices. It is well within the reach of reporters with practical skills who are looking to develop new reporting techniques.

For reporters who are not comfortable with the above, it is easy to find help from friendly coders and electronics enthusiasts.

To build a sensor you need:

1) A board - i.e. a mini computer - which can be programmed to carry out basic functions
2) A power source which is often a battery but could be solar
3) Sensors to collect the data - these can range from temperature to water turbidity
4) Somewhere to save the data collected, either on something like a microSDcard or perhaps in the cloud if the board is connected to wifi or a phone sim card.

Arduino, www.arduino.cc, is a particularly popular brand of electronic board which is used by journalists. There is a vibrant community which shares code and tips. This type of do-it-yourself testing has been put to good use in recent years, mostly in the US.

Here are some examples:

1) What is the real temperature faced by residents of Harlem, New York? With cities like Tirana becoming increasingly sweltering in the summer, this type of experiment could provide interesting insight into the real impact of those living in city centres.
2) The arrival of bugs. Swathes of north east America are overrun by cicadas every 17 years. Armed with the knowledge that the bugs hatch once the ground reaches a certain temperature, they enlisted hundreds of people to install ground thermometers to predict their arrival.
3) Arduino has created its own design for a water quality sensor here. https://blog.arduino.cc/2023/03/23/this-sensor-determines-if-water-is-good-for-drinking/ Which rivers or beaches would benefit from this type of testing?

Sensors can help us with things like water level rises, air quality, radiation and much, much more. For less than 100 euros, and with a bit of technical knowhow, you could be building your own sensors soon.

CHAPTER 9

BUSINESS AND THE ENVIRONMENT

Understanding the impact that businesses have on the environment is a key part of a reporters' work. While there are of course many law-abiding firms who are keen to do their part for the good of mankind, companies are by nature profit driven.

This means that disposing of waste properly and tackling pollution, whether that is in air, land or water, cuts into margins and encourages many to cut corners. This is particularly true in countries with poor law enforcement and/or widespread corruption.

There is, however, growing pressure on governments to properly licence and inspect businesses involved in the relevant fields and to impose environmental impact assessments on property and infrastructure developments.

Major firms are also engaged in national or international attempts to prove their green credentials with claims of carbon neutrality, sometimes supported by questionable carbon trading.

We will look through some of the important sectors in the Albanian economy and how reporters can hold the companies to account.

Agriculture

How widespread are EU-banned pesticides in Albania?

The use of toxic pesticides, which have long been banned in the EU, remains a problem in the Balkans. A recent study of water in Shkoder Lake by The Center for Ecotoxicological Research (CETI) in Podgorica - alongside the University of Tirana and the NGO Green Center of Albania in Shkoder - found traces of pesticides which are banned in the EU in the water.

Balkan Insight recently reported that banned pesticides were widely in use in neighbouring Montenegro. Struggling farmers are keen to use these as they are often stronger than the legal alternatives.

Fishing

Fishing is a licensed activity in Albania with currently almost 800 licensed fishing boats. Albanian seas, like all of the Mediterranean, have suffered from overfishing and damage to the seabeds through inappropriate fishing methods.

This includes the harvesting and sale of date mussels, which is illegal and causes environmental damage to the seabed. The mussels remain widely sold, however.

Tuna is a much prized catch and is subject to international quotas. This creates a huge incentive for fraud and illegal activities, as documented by ICIJ in their 2012 series "Looting the Seas" (https://www.icij.org/investigations/looting-the-seas/part-i-mediterranean-feeding-frenzy/)

There is also pressure to fish outside of your designated zone.

At least one Albanian vessel was caught fishing in Maltese territorial water for tuna in recent years. Foreign vessels have also been caught fishing illegally in Albanian waters. Larger vessels are now equipped with satellite monitoring systems. Many of these larger vessels will be tracked by commercial services such as Marine Traffic.

What documents do officials hold on fishing?

Here are some ideas of documents to pursue which could be useful if you are reporting on the fishing industry:

- A list of licensed fishing boats. With that, you can check who controls fishing in Albania and what are their quotas.
- Which ships have been subject to inspections and prosecution.
- Are endangered fish or shellfish for sale in markets?
- Track Albania's major fishing fleets on Marinetraffic.com.

The Environment Impact Assessment

Many major projects, from housing developments to road constructions, require an environmental impact assessment. These reports, written by independent environmental experts, set out the potential damage and remedial action to the environment as a result of the project.

While these reports are sometimes criticised as a tool for developers to whitewash their project, they can also provide key pieces of information.

For example, an investigation from Belgrade, Serbia, used an unpublished environmental impact assessment to reveal new details about the impact on a proposed, new lithium mine.

"An unpublished environmental impact assessment by Rio Tinto shows that biodiversity would be lost and that air pollution from toxic tailings may be a risk for the wider population," it was reported.

In Bosnia, an environmental assessment report submitted related to new sections of a landfill site revealed worrying details.

"The study showed leachate containing high concentrations of substances that exceed the limit values set in the regulations. It concludes that the current operations and infrastructure cannot guarantee safe waste disposal without risk to the environment and human health. To be safe for the environment, PE "Deponija" must have a treatment plant, and since no such a plant is in place, the enterprise has no [sic] the necessary permits."

The absence of an environmental report, or its failings to cover all issues, is also significant.

Romania was investigated by the European Commission over its failure to account for the loss of 700 hectares of forest in an assessment report for a mine expansion, for example.

A new thermal power plant in Serbia has been delayed after it emerged that the environmental impact assessment didn't consult with neighbouring Romania, which would be affected by the plans.

TIP: Environmental Impact Assessment reports

Check the report before the project and then check to see if the real-life impact is what was initially claimed. EIA reports are available from Albania's National Environment Agency (akm.gov.al).

Pollutant Release and Transfer Register

A Pollutant Release and Transfer Register (PRTR) is a publicly accessible database of chemicals or pollutants released into the air, water and soil and transferred off-site for treatment, according to the OECD. It brings together information about which chemicals are being released, where, how much and by whom.

This should be a key tool for reporters and the public to keep track of environmental issues, but to date there is no publicly available information on the website of the National Environment Agency although a section has been created.

More data can be found: https://akm.gov.al/rregjistri-i-shkarkimeve-te-ndotesve-ne-mjedis/

The oil industry

Problems with pollution from the oil industry have been frequently reported in Albania.

But given the age of some of the wells and the infrastructure, and the possibility of further expansion, issues related to the environmental impact of this industry will likely persist.

A recent report by the Albanian Helsinki Committee found disturbing levels of pollution and was largely based on documents obtained through using Freedom of Information requests.

They obtained a series of inspection reports as well as official decisions to fine oil firms.

These were obtained from local authorities and local branches of the National Environment Agency.

The documents provided valuable insight into the status of pollution in the area and many potential leads for further investigation.

Tips

Find out which official documents are created by the public institution and what they are called.
Research who writes these and who they are shared with.
Use this information to FOIA authorities for documents, including local institutions.

Green washing

Major firms are increasingly seeking to present a green image of their work. This often means buying carbon credits or offsets, rather than directly reducing their own impact.

In essence, this allows a company to exchange their carbon emissions for activities which help capture carbon, such as planting of trees.

A series of investigations have, however, raised questions about the value of these carbon credits.

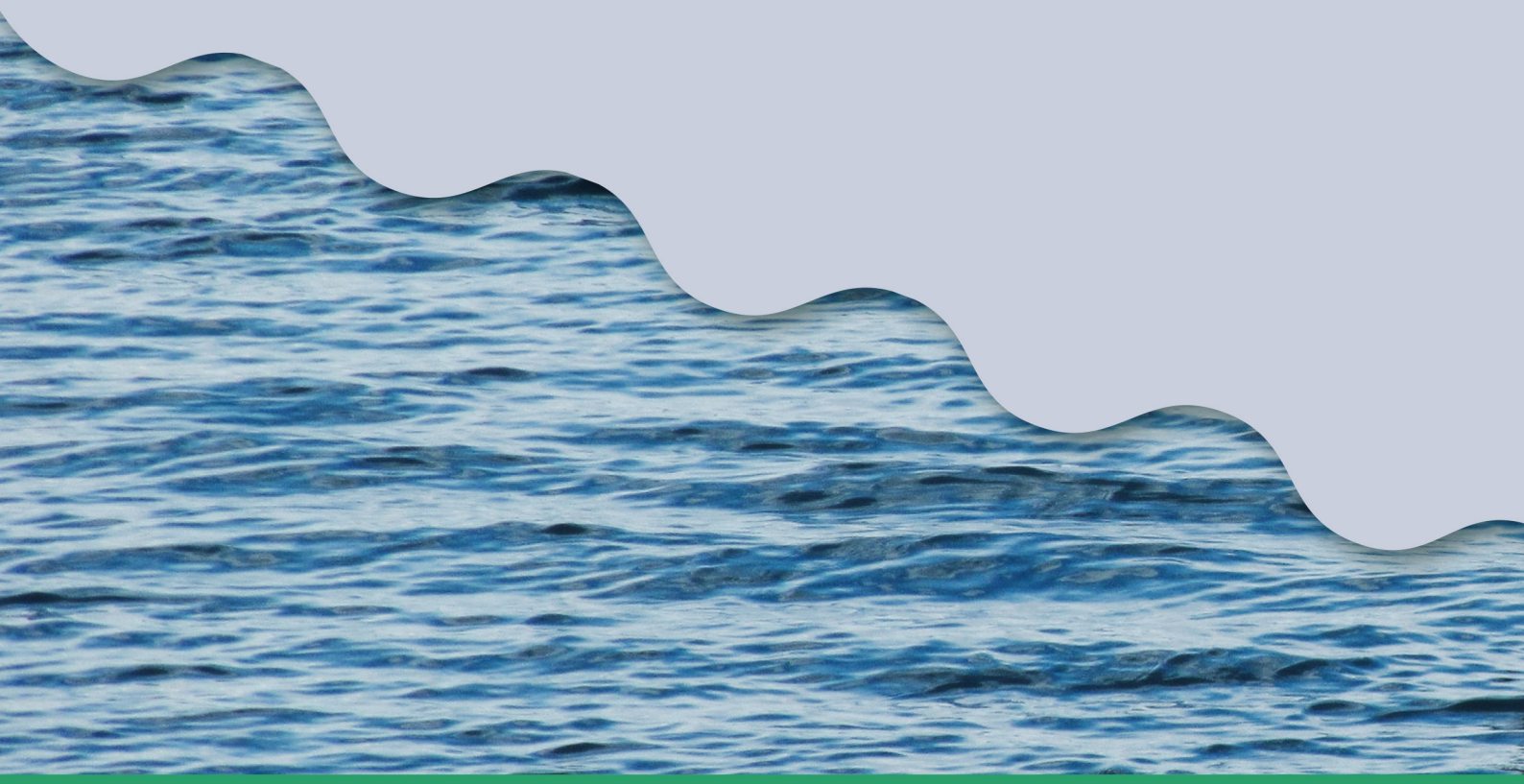
An investigation by The Guardian of London in 2023 found that more than 90 per cent of credits provided by one of the major providers were worthless in terms of their impact on carbon emissions.

An ICIJ investigation also revealed how major firms which had been certified as sustainable were often far from that.

While this is not yet a major issue for Albanian firms, major foreign investors in Albania such as Shell may look to carbon offsetting, and demands for domestic companies to offset will also grow.

It is therefore an area which Albanian reporters will need to keep a close eye on in future years.

HANDBOOK FOR JOURNALISTS: REPORTING ON ENVIRONMENT AND CLIMATE CHANGE IN ALBANIA



Tirana, 2023