



TRANSFORMATION TOWARDS A SUSTAINABLE
AND RESILIENT ROMANIA

ROMANIA'S VOLUNTARY NATIONAL REVIEW 2018





MINISTRY OF ENVIRONMENT

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"Weather Snake" – Derna, Bihor County, Romania (2017-2018)

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FOREWORD BY THE PRIME MINISTER / 4

STATEMENT BY THE VICE PRIME MINISTER, MINISTER OF ENVIRONMENT / 5

INTRODUCTION / 6

POLICY AND ENABLING ENVIRONMENT / 7

LEAVE NO ONE BEHIND /10

SUSTAINABLE DEVELOPMENT GOAL 6

Ensure availability and sustainable management of water and sanitation for all/ 34

SUSTAINABLE DEVELOPMENT GOAL 7

Ensure access to affordable, reliable, sustainable and modern energy for all/ 41

SUSTAINABLE DEVELOPMENT GOAL 11

Make cities and human settlements inclusive, safe, resilient and sustainable/ 54

SUSTAINABLE DEVELOPMENT GOAL 12

Ensure sustainable consumption and production patterns/ 65

SUSTAINABLE DEVELOPMENT GOAL 15

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss / 70

SUSTAINABLE DEVELOPMENT GOAL 17

Strengthen the means of implementation and revitalize the global partnership for sustainable development / 84

FOLLOW-UP / 89

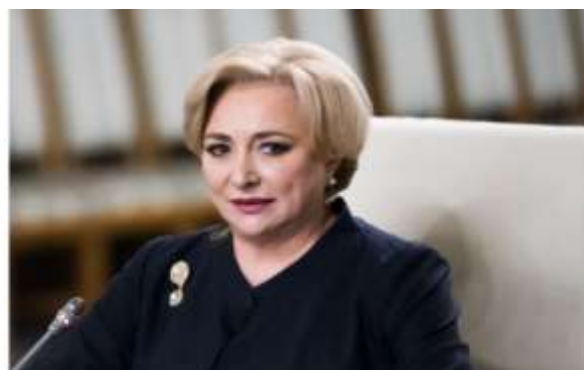
List of Figures / 90

List of Terms / 92

FOREWORD BY THE PRIME MINISTER OF THE GOVERNMENT OF ROMANIA

VASILICA - VIORICA DĂNCILĂ

Romania has been working at internalizing the core principles of the 2030 Agenda for Sustainable Development, as soon as it is committed to achieve the Sustainable Development Goals and their targets. The guidelines outlined in the 2030 Agenda provided the highlights that enabled us to analyze, plan and create our national road-map for sustainable development.



The aim of the present Voluntary National Review is to provide information on the Romanian preparation process and the strategies for implementation of the 2030 Agenda. It also underscores the commitment at political level to create the optimal environment that would allow sustainable public policies.

At the heart of the Romanian development paradigm, as it is presented in the Report, lie the key principles of sustainable development, such as: good governance and respect for the rule of law, human rights and gender mainstreaming. Romania strives to address inequalities of all kinds and engages in the creation of opportunities by a series of long and medium-term strategies, countrywide. It is an ongoing process, and the present report will enable us to calibrate and set future goals.

The Report outlines the steps taken towards the development of strategies and we hope that the particular experience of our country may be considered useful to other countries facing similar challenges. The vast capital of shared expertise that peers can benefit from during the implementation process is a great learning tool and Romania has also taken full advantage of it.

STATEMENT BY THE VICE-PRIME MINISTER, MINISTER OF ENVIRONMENT

GRAȚIELA - LEOCADIA GAVRILESCU

Romania is a supporter of the “leave no one behind” promise of the 2030 Agenda for Sustainable Development, according to which the UN Member States recognized that the dignity of the individual is fundamental and that the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals and 169 targets should be met for all countries and especially for all segments of society. To this end, Romania advocates for shared responsibility, full solidarity and collective action.



Romania is fully committed to the implementation of the 2030 Agenda for Sustainable development and is determined to support other countries in achieving sustainable development.

The Voluntary National Review “Transformation towards a sustainable and resilient Romania” is an opportunity to assess our successes but also our weaknesses. That is why Romania’s first VNR outlines the areas in which we do well and takes a critical look at those goals in which efforts are still needed in order to achieve them by 2030.

This report sets out the Voluntary National Review of the 2030 Agenda’s implementation process, as a result of inter-ministerial coordination and public consultation efforts through participation of the representatives of the civil society at the meetings of the Inter-ministerial Committee. It reflects the national perspective on Sustainable Development Goals to be reviewed at the High - level Political Forum on Sustainable Development (HLPF) 2018 (SDGs 6, 7, 11, 12, 15 and 17), identifies priorities and challenges, policies and initiatives contributing towards the achievement of the 2030 Agenda and shares good practices and national measures.

Much more than just a reporting exercise, the 2018 Voluntary National Review of Romania proves our strong commitment to multilateralism, sustainable development and human rights embodied in the 2030 Agenda for Sustainable Development.

That is why we are very eager to present our Voluntary National Review, as the first assessment of the 2030 Agenda’s implementation, at the High-level Political Forum on Sustainable Development 2018.

On behalf of the Government of Romania, I wish you all continued success in the implementation of your prioritized development goals in the coming years.

INTRODUCTION

Sustainable Development in Romania is currently a shared responsibility between the *Inter-ministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level* (Inter-ministerial Committee) led by the Vice-Prime Minister, Minister of Environment and the Department for Sustainable Development, led by a State Counsellor, under the Prime-Minister Office.

The *Inter-ministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level* served during 2001 – 2006 as main interdepartmental instrument on negotiating Chapter 22: “Environment Protection” of the EU *Aquis Communautaire* regarding Romania’s accession to the European Union. In July 2011, the responsibilities for coordination of sustainable development in Romania have been transferred from the “not yet established” Inter-departmental Committee for Sustainable Development (as the National Sustainable Development Strategy provided and meant to function under the direct coordination of the Prime – Minister) to the *Inter-ministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level* lead by the Vice-Prime Minister. In September 2017 the *Inter-ministerial Committee* decided that the Voluntary National Review is conducted by the Secretariat of the *Inter-ministerial Committee* (The Unit for Sustainable Development of the Ministry of Environment), establishing a drafting open working group, that comprises all ministries and institutions, civil society representatives and academia. Having as main responsibility the implementation of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals, the Department for Sustainable Development tackles the process of reviewing the National Strategy for Sustainable Development of Romania.

Institutional arrangements for implementing the SDGs

In November 2008, by Government Decision No. 1460/2008 and based on 2 years reviewing process of the first National Strategy for Sustainable Development (1999), was adopted the National Strategy for Sustainable Development of Romania - Horizon 2013-2020-2030. The Strategy provides, as coordination body on implementation and reviewing, an Interdepartmental Committee for Sustainable Development meant to function under the Prime Minister’s direct coordination (not actually established). The *Inter-ministerial Committee* was reorganized in 2011 by Government Decision No. 741/2011 being appointed as the legally responsible body for sustainable development policy in Romania, until the setup of the Committee for Sustainable Development under the Prime-Minister’s direct coordination, which will include all ministries and relevant agencies.

In 2015, the Parliament of Romania decided to create a Sub-Committee for Sustainable Development which in April 2016 adopted a Declaration of the Parliament of Romania on Sustainable Development Goals of the 2030 Agenda for Sustainable Development. One of the main provisions of the declaration states the creation of a unit under the direct authority of the Prime-Minister dedicated to the implementation of 2030 Agenda. In April 2017, by the Government Decision 313/2017 was created the Department for Sustainable Development having as main responsibility the implementation of the 2030 Agenda at national level.

This report analyses in detail the Sustainable Development Goals (SDG) revised during the 2018 Session of the High-level Political Forum on Sustainable Development, focusing on SDG6, SDG7, SDG11, SDG12, SDG15 and SDG17. The first substantive chapter entitled “Leave no one behind” presents Romanian policies and trends on developing an inclusive and sustainable society focusing on social aspects of sustainable development.

POLICY AND ENABLING ENVIRONMENT

The 2030 Agenda for Sustainable Development provides a new direction for development, and this new direction requires a new way of conducting public policy by creating the right enabling environment. The goal is to establish an effective implementation and review mechanism, to integrate the present workflow across different ministries and institutions, thus improving inter-departmental cooperation and creating a favorable environment. Working on breaking the silo approach, such a complex and interlinked agenda requires the use of existing expertise at national level, gather the energies and define an ownership of the 2030 Agenda in which a larger community should be involved. The 2030 Agenda presents a universal road-map to guide countries in their pursuit to achieve a sustainable future. If it is to succeed, each state will have to create the right enabling environment to allow for public policy to become sustainable. This chapter will look at how Romania has created such an environment, and how its experience could serve as a good example.

Taking Ownership of the SDGs & Institutional Mechanisms

Sustainable Development is part of the Romanian public policy, academic, and civil society circles. Romania's first "National Sustainable Development Strategy" dates back from 1999 (by motto: "Doing more with less") and, after achieving EU membership in 2007 was revised and updated in 2008. The adopted document (approved by the Romanian Government Decision No. 1460 on 12 November 2008, Official Gazette No. 824/ 8 December 2008) "National Sustainable Development Strategy of Romania. Horizons 2013-2020-2030" (by motto: "Keep healthy what keeps you in good health") was a result of a joint project of the Romanian Government through the Ministry of Environment and Sustainable Development and the United Nations Development Programme. The Strategy provides a mechanism for implementation - an *Inter-departmental Committee for Sustainable Development* at executive level, under the direct authority of the Prime Minister, bringing together the ministries and national agencies of the central government that are involved in the implementation of the Strategy. In 2011 it was decided (G.D. No. 741/2011) that the *Inter-ministerial Committee for the Coordination of the Integration of Environmental Protection into Sectorial Policies and Strategies at the National Level* will be responsible for the coordination of sustainable development at national level. The Minister of Environment is the President of the *Inter-ministerial Committee* who is working close with vice-ministers of all ministers and governmental institutions. The leadership of several Romanian Ministers of Environment played a significant role on sustainable development at national level as well as at international level: Chair of the 19th Session of the UN Commission for Sustainable Development (CSD19, 2011) and Vice-president of the governing body (Governing Council - 2012) of United Nations Environment Programme - United Nations Environment Assembly UNEA (2014 - 2016).

Building the '*critical mass*' of the public support for an idea to become part of any given area's common sense, needed to achieve the 2030 Agenda, requires support from all stakeholders and it begins with the legislative. The Romanian Parliament, on the 18th of April 2016, was the first member of the Inter-Parliamentary Union to declare its support for the 2030 Agenda. The lower house of the Parliament of Romania, *the Chamber of Deputies*, even has a sub-committee on Sustainable Development. The support of the legislative branch is the first step in taking ownership of the SDGs.

Romania was a very active member of the UN Open Ended Working Group on elaborating the SDGs, as well as member of the Board of the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns (for 2 mandates).

Taking ownership of the SDGs requires having a sustainable public policy, and this is where the executive branch of the Romanian government becomes essential. The President of Romania expressed his support for the 2030 Agenda for Sustainable Development during the UN Summit for Sustainable Development in September 2015. The Government of Romania, through the Government Decision No. 313/2017, established a Department for Sustainable Development which coordinates all activities on the implementation of the 17 Sustainable Development Goals at national level.

On breaking the silo approach and effective implementation of the 2030 Agenda and its 17 SDGs, the ownership of SDGs is not something dealing with one person or organization. All ministries and institutions, all civil servants from central and local governments, decision makers, and members of Parliaments should be part of the implementation process.

Though the 2030 Agenda is intuitive and provides a holistic approach to the problems of our time, for it to succeed, one needs the support of all stakeholders. From November 2017 to May 2018, the Department has organised a series of events aimed at raising awareness of Sustainable Development Goals. These events include: a conference at the national level with the participation of the key stakeholders ranging from decision-makers and representatives of public institutions, leading academics, representatives of research institutes, business leaders, and NGOs. However, considering the importance of mitigating regional gaps, the Department for Sustainable Development considered it essential to host *regional seminars*, one in each of the eight development regions as to involve all segments of society including local authorities. In addition, the Department also hosted two national conferences – one which focused primarily on the Academic sphere and another one which was aimed towards NGOs. There is a clear consensus on the importance of Sustainable Development in Romania.

One of the essential principles, if not a definition, of Sustainable Development, is making sure that our developmental patterns meet humanity's current needs without compromising the ability of future generations to meet their needs. It is in this spirit that the Department for Sustainable Development is hugely interested in bringing the values of Sustainable Development to Romania's future leaders who are still students. The Department organized a competition between Bucharest's top High Schools and, listening to the student's feedback and perspectives on Sustainable Development, it is safe to say that they will play a pivotal role in achieving the critical mass needed to achieve the SDGs.

Incorporating the SDGs in National Frameworks & Means of Implementation

The process of localizing the 2030 Agenda to the particularities of Romania is made through the upcoming review of the National Sustainable Development Strategy. The revised strategy aims to be innovative and intuitive in the sense that, instead of just proposing policies that contribute to a more sustainable future, it also seeks to add a sustainable component to other strategies that are either directly or indirectly involved in meeting the Sustainable Development Goals. Also, the target audience is not only public servants, experts, and politicians, but also the civil society. As such, Romania's National Sustainable Development Strategy is the way of guiding public policy and justifying the principles of the 2030 Agenda for the national audience.

There are three issues that the Department encountered while revising Romania's National Sustainable Development Strategy which, it believes, presents a learning experience for other countries which are currently considering ways of incorporating the SDGs in their respective national frameworks. These are: involving all segments of society, having experts and a robust monitoring system.

Firstly, involving all segments of society is critical. Sustainable Development, being a vast topic, requires a plurality of opinions if its spirit is to be preserved in its integrity. Specialists tend to see their niche as the most crucial aspect of any given subject, and it is only through building bridges that one can find the balance. That requires bringing politicians, public servants, NGOs, the private

sector, academics, and civil society together and, at the same time, being aware of the specificities of the national context which it seeks to address. Integrating Sustainable Development's three dimensions – economic, social, and environmental, Sustainable Development highlights how interconnected all the three aspects are, and to maintain the balance needed; we need as many voices as possible.

Secondly, Sustainable Development requires experts that deal specifically with its complexities and nuances, and that requires training in the spirit of SDG 4: Quality Education. Romania's Ministry of Labour and Social Justice has recently recognised the title of 'Expert in Sustainable Development,' a new profession which, medium to long-term, will help enhance the act of incorporating the SDGs into Romanian public policy. We envision a team of experts in every public institution, and these experts will act as a liaison between the public institution and the Department for Sustainable Development. Such experts will help boost inter-ministerial collaboration as well as help inform the public institution they are working for about the importance of sustainability.

Finally, monitoring Romania's progress by quantifying the SDGs into measurable indicators is essential in making sure things are on the right track. Considering the shift ushered in by the 2030 Agenda, Romania is currently in the process of updating its Sustainable Development indicator set – and this is an essential part of both the upcoming National Sustainable Development Strategy and the upcoming Action Plan which seeks to build upon the former by having a more specific, in-depth, character. To achieve this, the Department is closely collaborating with the National Institute of Statistics by bridging both the United Nations', and the European Union's indicator sets to choose the right indicators to address Romania's specificities.

LEAVE NO ONE BEHIND

Transformation towards a sustainable and resilient society requires a continuous adaptation of policies, resources and taking care of all individuals and communities, starting with the most vulnerable.

In respect to the progress in achieving the national targets of *Europe 2020 Strategy*, Romania has attained and overcome the target on reducing the number of people exposed to the risk of poverty or social exclusion and it has obtained good results regarding the employment rate, in the field of greenhouse gas emissions, energy from renewable sources and tertiary education.

After the 4.8% growth in 2016, **Romania recorded an accelerated 6.9% economic growth in 2017, the largest growth rate after the economic crisis and one of the largest in the world.** The 2017 growth was driven by the positive contribution of domestic demand (7.6%), both for consumption, stimulated by wage increases that improved the purchasing power of population and for gross investments, especially from the private sector. Thus, private consumption increased by 10.1% and government consumption by 0.7% compared to 2016. Gross fixed capital formation increased by 4.7%. Net exports had a negative contribution (0.8%) to real GDP growth, while exports of goods and services grew, in real terms, by 9.7% and imports of goods and services by 11.3%, yet a lower contribution than in 2016.

Labor market improved, the total number of employees (ILO) increased by 3.1% compared to 2016, while the unemployment rate was 4.9%, i.e. 1 p.p. below the 2016 level. The employment rate of people aged 20-64 was 68.9%, standing at a distance of 1.1 p.p. compared to the 70% national target set in the context of Europe 2020 strategy.

Romania has successfully restored its growth potential, strongly affected by the economic and financial crisis, its potential GDP dynamic returning to values exceeding 5% annually from 2018.

The most important contribution to potential growth is that of total factor productivity. Moreover, the greater contribution of total factor productivity, compared to the extensive use of labor and capital, has been a characteristic of the Romanian economy over the last 20 years. Looking ahead, a significant increase is expected in terms of contribution of capital stock to real GDP growth, based on infrastructure investment and favorable developments in machinery and transport investment. Labor force will also have a positive contribution (although reduced), which shows, taking into account the major contribution of the total factor productivity, an inclusive and sustainable character of the high economic growth that Romania is recording during this period.

The macroeconomic framework for 2018-2021 has taken into account: (i) the positive impact of the measures included in the Government Programme on business environment and purchasing power of population; (ii) the European and global context, as highlighted in European Commission winter forecast, characterized by reducing uncertainties; (iii) the economic and social achievements of 2017 and first months of 2018. As a result, the Romanian economy is expected to continue to perform, with gross domestic product increasing by an average of 5.6% per year, slightly above potential, following a deceleration trend of the pace from 6.1% in 2018 to 5% in 2021.

Domestic demand will continue to be one of the main drivers of growth in the coming years. Private consumption will be fueled by a sound consumer confidence and improvements in the labor market. Gross fixed capital formation will increase at high pace, because of improving the investment climate and of financing conditions from both budget sources and structural and investment funds. Exports and imports of goods and services will continue to register high

dynamics, with net export contribution to real GDP growth remaining in the negative area, i.e. around -0.5%.

On the domestic supply side, the GDP growth forecast is based on robust dynamics in construction and services sectors as well as in industry, especially in industries with high export potential.

Romania, an upper middle-income economy, with a slight increase of total GDP since 2011 is facing a decline in the population. According to census data, in 2002 and 2011 the total number of inhabitants decreased by 7.2%, a close value being recorded for municipalities and cities (-5%).

The causes of demographic decline are related to low fertility (1.3 children / woman), which does not ensure the replacement of generations, external migration (whose values are high but not precisely quantified - in particular in the case of temporary migration for work). Of those left to work, 65% are aged ranging from 20 to 40 years, so they are in the category of active people from the point of view of childbearing.

Last but not least, the decrease in population is related to general mortality. Natural decline contributed by -55.2 ‰ to the numerical decline of the population, while net migration contributed with -2.8 ‰. In 2012, 2.4 million Romanians live in other EU countries.

According to Eurostat estimates, if the current demographic decline continues, the population of Romania will decrease to 19.8 million people by 2035, from 21.4 million as it was initially recorded in 2010, and then to reduce by 2060 to 17.3 million inhabitants. According to Eurostat, the population of Romania could drop by 7.5% by 2035, a fourth decrease in space European countries, following Bulgaria (-15.3%), Latvia (-12.7%) and Lithuania (-10.6%).

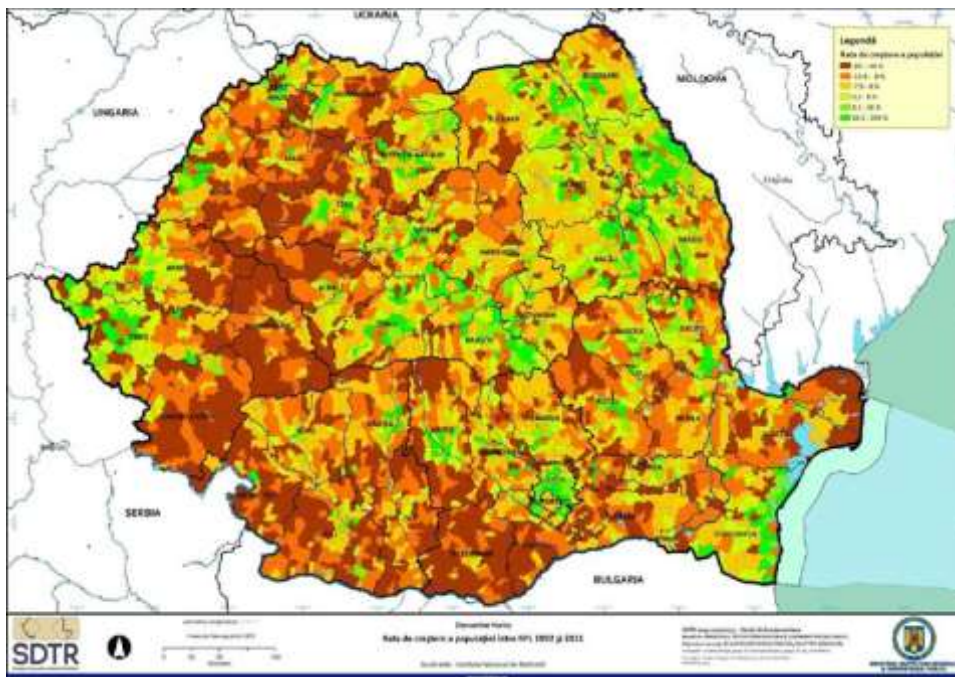


Figure 1. Population decline at national level. Source: Territorial Development Strategy of Romania, Polycentric Romania 2035. June 2014

In the territorial profile, the population is and will be declining in all regions of the country. National Institute of Statistics (INS) shows that by the year 2030 is expected a more pronounced decrease of the population in the regions of South-Muntenia (by over 425 thousands of inhabitants) and South-West Oltenia (with nearly 400 thousand inhabitants).

A slightly higher survival rate of females at birth in both, rural and urban area is registered. The chart below (Fig.2) illustrates the less steep shape of female distribution by age, determining the raised likelihood for woman to surpass man population, augmented by migration force process.

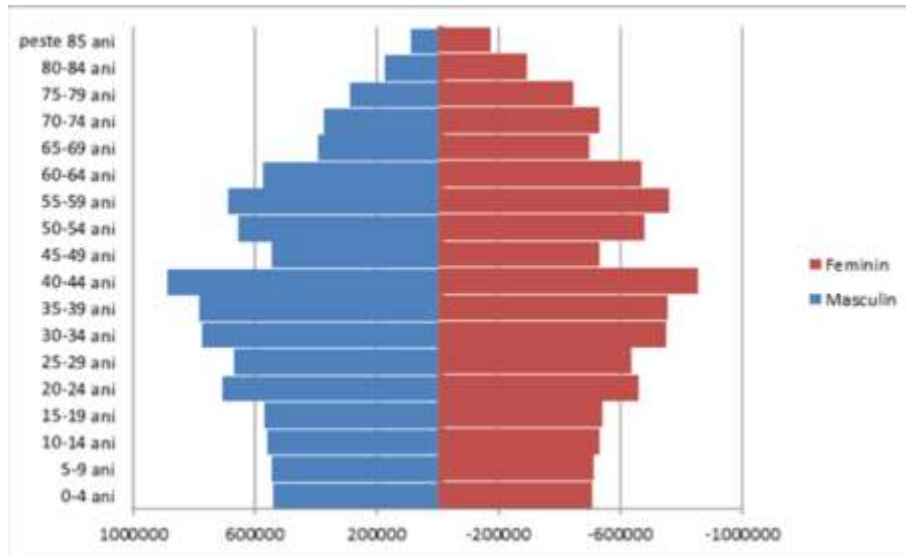


Figure 2. National population distribution, in 2010. Source: Territorial Development Strategy of Romania, Polycentric Romania 2035. June 2014.

The principle of equal opportunities for women and men is laid down in Law No. 202/2002, which provides measures for the promotion of equal opportunities between women and men. The Istanbul Convention on Preventing and Combating Violence Against Women and Domestic Violence was ratified by Romania through the Law No. 30/2016

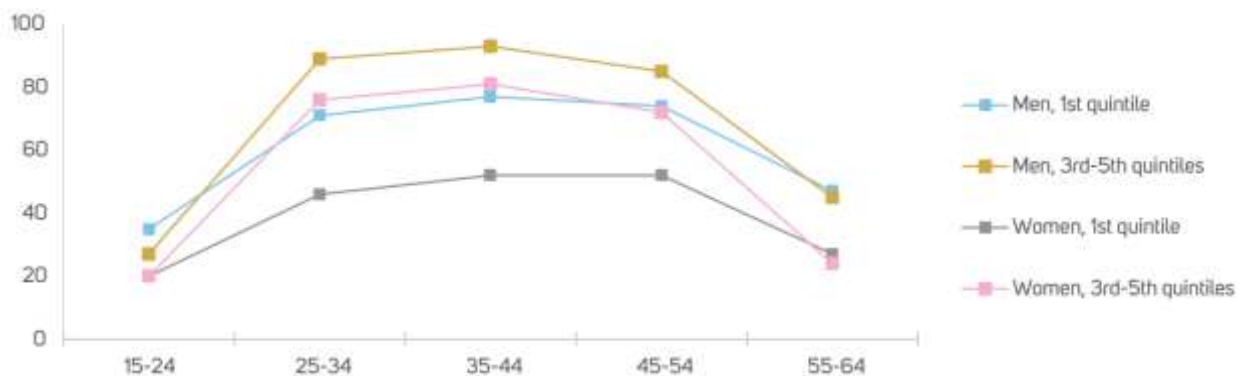


Figure 3 Income gender gap

Employment and gender gap by income level, 2011-2012, World Bank calculation based on data from the 2012-2013 HBS. Source: National Strategy on Social Inclusion and Poverty Reduction 2015-2020.

Health

During the last decade, as an upper middle-income economy, with a slight increase of total GDP since 2011 Romania has also a slight increase in expenditure for health per inhabitant. Proportion of public spending from total health expenditure is also high (around 80%).

As of 1st January 2017, Romania had 19.64 mil. inhabitants, among which 51.1% females and 46.4% of population living in rural areas. The country is facing an unprecedented process of population ageing, having a negative natural growth since more than a decade, a continuous decline in natality and fertility and a considerable and partially known emigration.

In the health field, the main strategic document is represented by the *National Health Strategy 2014 – 2020 (NHS)*, adopted by the Romanian Government at the end of 2014 (GD no 1028/2011). Beyond this, many sectoral strategies have been developed with the timeline 2014 – 2020 at national level, in an attempt to define a coordinated framework for reforming those sectors and to access, in this purpose, the EU funds (e.g. the strategy for child protection, the strategy for long life learning, the strategy for promoting active ageing, the strategy for social inclusion and poverty reduction, the strategy regarding the persons with disabilities) etc. Most of these strategies have objectives or areas involving the health sector, but the synergy and coordination in their implementation should be improved.

Also, the strategic directions for health system development are included in the Governing Program, which is assumed by each government taking over the executive power in the country, during its mandate.

The National Strategy for Health

The context of EU financing cycle 2014-2020 and the Cohesion Policy for Europe 2014-2020 imposed to EU member states, and also to Romania, to have in place a national or regional strategic policy framework for health, with the aim to closely align the Europe 2020 objectives, with economic and other relevant policies of the Member States. This strategic policy framework supposes to contain: coordinated measures to improve access to health services; measures to stimulate efficiency in the health sector, through deployment of service delivery models and infrastructure; a monitoring and review system; a framework outlining available budgetary resources on an indicative basis and a cost effective concentration of resources on prioritized needs for health care.

Following these requirements, the Romanian Government has adopted the National Health Strategy 2014 – 2020 (NHS) (GD no 1028/2011). The *vision* of the strategy is to reverse the pyramid of health services, which is currently based mainly on (excessive) hospitalization, by increasing the coverage with basic services of good quality (family doctors, community centers and ambulatory specialized care) and by bringing these services closer to communities and to vulnerable groups.

The *main goal* of the strategy is to improve the health status of the Romanian population by increasing the access to evidence-based and cost-effective services, mostly on those services centered on prevention. It includes three strategic areas of intervention (SAI) and seven general objectives (Fig. 4), envisaging a macro-structural reform of the health system.

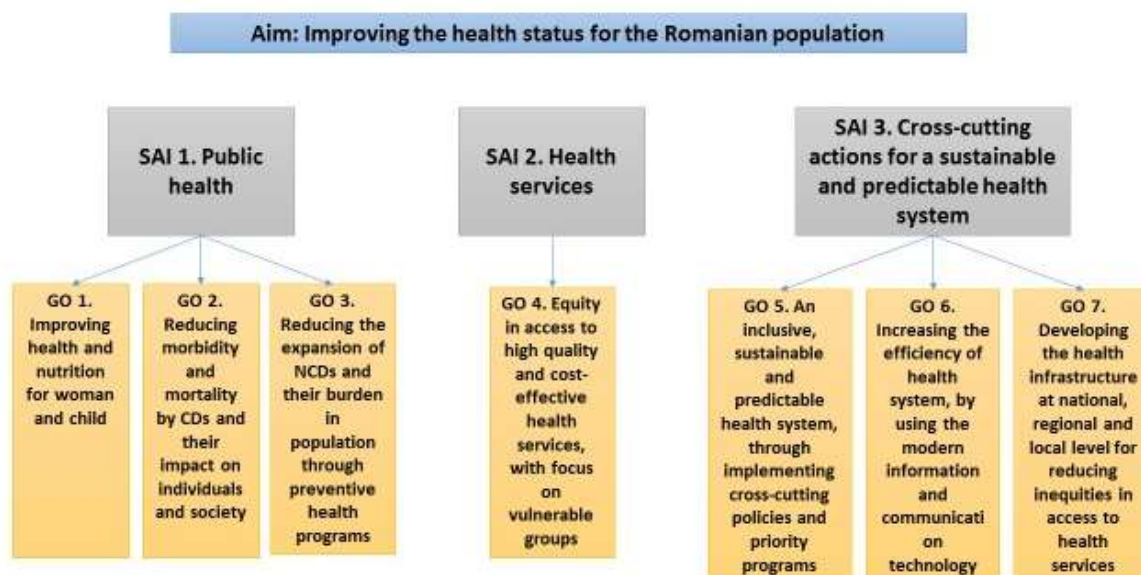


Figure 4. The National Health Strategy – priority areas and strategic objectives

The Governing Program – Health chapter

The Governing Program 2018 – 2020 defines six main areas of intervention [29]:

- 1) **Improving health infrastructure** – in line with the objectives of NSDS, through: building 8 regional hospitals and a national one; rehabilitation of 15 county hospitals, 150 outpatient clinics and 25 emergency departments; building integrated community centers; developing the capacity for emergency response by providing new ambulances.
- 2) **Improving the capacity for diagnosis and treatment** – in synergy with the objective of quality improvement – through developing telemedicine and e-health services and implementing national screening programs for non-communicable diseases (cervix, breast and colon cancer, cardiovascular diseases), communicable diseases (hepatitis and tuberculosis) and pre- and neo-natal screenings.
- 3) **Improving access to essential medicines** – updating the national drug catalogue, creating a national catalogue for medical devices and value-based payment for new medicines.
- 4) **Developing human resources in the health field** – by providing financial incentives, assuring a career pathway and building a national catalogue for medical professionals, as a long-term planning tool.
- 5) **Developing the national health programs** in an attempt to switch the parading of health care towards prevention.
- 6) **Improving the institutional framework** – by providing e-tools for health services management like registries for non-communicable diseases and e-patient-file and by developing quality standards for health care providers from all levels of care.

Some objectives for the health chapter are planned to be implemented by using the EU funds under the Operational Programs 2014-2020 (Regional OP belonging OP and Human Capital OP), but up to present only few of the projects have been started.

Access to basic health services for everybody

This direction has been followed by implementing few categories of actions, stipulated by both NSDS and NHS:

- a) **Improve access to basic medical care provided by family doctors**

The health system is social insurance based and theoretically all the people supposed to be insured. Some particular groups are protected by law, being insured without payment (eg: children, pensioners with low income, people with disabilities, people benefiting for a minimum income guaranteed by the state, unemployed, prisoners, pregnant women without income or uninsured people with severe diseases, covered by the national health programs).

Huge efforts were done in the last decade for assuring access to primary care services for everybody: the registering procedure was simplified once progressing in developing the e-health tools (insurance card), the basic package of services was expanded with preventive services, a minimum package of services was defined and reimbursed for non-insured people. The family doctors (first level of care) were encouraged and incentivized to practice in rural or remote areas and flexible ways of practice were developed. Following to these measures the coverage with family doctors has been improved especially in urban area, rural areas remained still underserved.

b) Develop alternative basic services in communities which are most underserved

In the effort to improve the access to essential health services, the MoH increased the number of community nurses and health mediators in rural areas by 50% in 2015 (1160 community nurses and 420 health mediators, according to the NHS Implementation Report 2016) compared to 2010.

Community nurses and health mediators are employed by the local authority but paid by salary from MoH. Community nurses are responsible for providing the essential health services in community and for active identification of vulnerable people with risks for health and their monitoring and facilitation of access to the needed care. Health mediators are facilitating the access to Roma people to the needed health care, also at community level.

Relevant projects have been implemented for increasing access to basic health care in communities:

- 1) Project RO 19.03 **“Consolidating the health mediators’ network for improving health of Roma population”**, financed through Norway Grants. Under this project 45 community centers were developed in poor Roma communities and local teams of community nurses and health mediators were trained for providing the basic health services to vulnerable groups.
- 2) Project **“Integrating Health and Social Services at Community Level”**, financed through Swiss-Romanian Cooperation Programme. Under this project, 7 medico-social centers were developed in rural poor or remote communities, providing integrated medical and social services in the centers and in community, in accordance to the main needs of the vulnerable inhabitants.
- 3) Project **“Helping the Invisible Children”**, financed by UNICEF. This project provided training and tools for local teams in order to identify the vulnerable children and properly manage their access to the needed services.

The models developed through these projects could be scaled up using the opportunity of the Regional Operational Programme 2014-2020.

c) Increase the number of preventive services in the basic package and award incentives for family doctors

Starting from 2013, financial incentives were awarded for some preventive health checks included in the basic package and considered previously as per-capita obligations (e.g. preventive health checks for children and adults, pregnancy visits, cardiovascular risk assessment using SCORE diagram etc.). However, despite their evidence-based benefits, these exams are reported to be under-performed, because the family doctors are most focused on the curative ones.

d) Improve the response to emergencies. This is planned to be achieved through important investments that will be used for procuring new ambulances and for rehabilitation and endowment of some emergency departments.

e) Develop screening programs for most burdening non-communicable and communicable diseases and direct these screening to those which are most of risk

The OP Human Capital had dedicated financing lines for developing national screening programs for most important communicable and non-communicable diseases, aimed to assure early detection in population which is most at risk. Main screening programs which have been planned or are already on-going, are: screening for breast, cervix and colon cancers; screening for cardiovascular diseases; screening for TB detection; screening for viral hepatitis B and C, directed also to most at risk groups.

All these programs are planned to be developed during 2018-2023 and to be further institutionalized and included in the basic package of services, with the goal of ensuring an appropriate access to secondary prevention for all the citizens and, on medium term, of decreasing the preventable deaths, prolonging life and improving the wellbeing and quality of life. These programs are directed to people which are most at risk, due to their general health status or due to their social determinants. At least half of the beneficiaries will come from the rural areas. The innovative approach is based on universal access, but, as well, on an active approach that brings the services closer to the communities.

f) Improved strategies for primary prevention and health education

Since many years ago, the Ministry of Health has constantly financed a national program focused on health education and health status evaluation. This program is coordinated by the National Institute of Public Health and at county level it is implemented by the county public health directorates (C-PHD). Main activities are directed to health education in relation to most important health determinants (nutrition, alcohol, physical activity, drug consumption etc).

MoH through the National Institute of Public Health, within the Project RO 19.03 **“Consolidating the health mediators network for improving health of Roma population”** financed from Norway Grants 2009-2014 has implemented a number of health promotion and health education campaigns for Roma population living in the 45 selected locations of the project, providing specific health promotion materials. The national program on health education and health status evaluation has distributed these health promotion materials at national level in vulnerable communities.

Addressing geographic inequalities

As previously mentioned, in Romania there are still many gaps in health status and in access to health services between rural and urban population, in favor of urban. Also, there are differences between counties and between regions (the country has 8 regions and 42 counties). Few major policies were developed for addressing these differences:

- a. In Romania all the insured people have the right, by law, to freely choose their health care provider at any level of care.
- b. Some financial incentives are awarded from the national health insurance fund, but also from the local authorities for family doctors working in rural, remote areas or for specialized doctors working in small cities.
- c. MoH encouraged the local authorities to employ community nurses and, if the case, health mediators (mostly) in rural areas and supported the salaries for these community workers. The number of community workers increased by 50% in 2016 compared to 2010 (currently more than 1500 community nurses and 600 health mediators are employed by the local authorities).

- d. Few pilot projects of telemedicine in rural remote areas were implemented since 2010 and the roll out of these is planned for the upcoming years.

Addressing most vulnerable groups

Some health policies and national health programs are targeting vulnerable groups:

- a. In Romania some categories of people are exempted from the payment of health contribution, in order to be protected by poverty (children, people with disabilities, pregnant women without income, retired people and adults with low income, unemployed etc.).
- b. Ministry of Health and National Health Insurance House finance systematically national health programs targeting important public health problems. These programs can be accessed by any citizen, even by non-insured ones.

Strengthening the health system for universal health coverage

The Romanian health system was marked by a reforming process at macro level in the last two decades. Most of these reforms had as goals to increase efficiency of the social health insurance system, to increase quality of the services (by assuring proper infrastructure and endowment and by developing the human resources skills) and to increase access to services. Few of them are described below:

Developing the e-health was major transformation of the health system in the last ten years. Actually, a national unique informatics system for social health insurance has been created, which includes all health care providers from all levels of care. Each citizen has an e-health card for accessing the system. Also, drugs' prescriptions are managed electronically. Further investments are planned for developing e-health tools and national registries for major diseases and telemedicine.

Improving infrastructure and medical equipment was a constant priority of successive governments. Romania has around 400 public hospitals, most of them built since '70ies. During the EU financing cycle 2007-2013 major projects for rehabilitation and endowment were financed for around 100 medical units and more than 1000 mobile emergency units. Four World Bank projects in the field of health system reform were implemented (last one still ongoing), each having among the objectives to assure improvements in hospitals infrastructure and to procure medical equipment.

Universal access to essential drugs is a particular priority of the Romanian Government and a package of synergic policies is implemented for this purpose: developing the health technology assessment framework and capacity at national level, extension of the lists of reimbursed drugs, by including new/innovative products and developing the partnership with the pharma sector through cost-volume and cost-volume results contracts, in order to increase access to innovative drugs. Major progress in access to drugs has been done since the years '2000, by extending the national list of drugs.

Increasing capacity of human resources through dedicated training programs and financial incentives is an actual priority and major actions will be implemented in the next few years. Romania is facing a shortage of doctors and nurses due to the free movement of health professionals among EU member states. For encouraging retention of staff, major training programs were planned to be implemented under the European Social Fund. These trainings are oriented to develop competencies and skills for medical staff involved in national or local health programs. In addition, the Government promoted important increase of salaries for doctors and nurses working in public system.

Overall Romania achieved good progress in main health indicators in 2015 when compared to 2000, but we are still behind the EU average and with disparities among regions, among counties or between rural and urban areas.

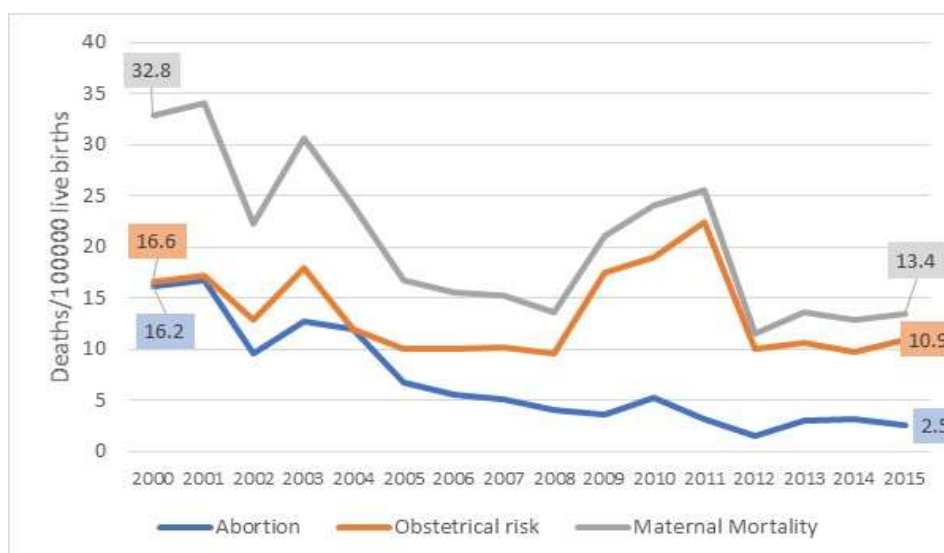
Regarding **SDG 3**, the current situation for each target is as follows:

Target 3.1. By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births

Globally, the maternal mortality declined by 37% in 2015 compared to 2000. In Romania, this decline reached to 59% (34% for mortality due to obstetrical risk and 85% for mortality related to abortion).

Maternal mortality was a serious public health challenge in our country before the '90s, due to the coercive pronatalist policy of the communist regimen of the country. Immediately after '90, the abortion started to be allowed as medical procedure and, in synergy to this, massive programs of family planning (including health education, family planning services and access to contraception) started to be implemented with the support of international donors. These programs conducted to an important decrease in maternal mortality, but the level is still high compared to EU (Fig. 5)

Figure 5. *Maternal mortality rate in Romania, 2000 – 2015*



Data source: National Institute of Public Health

Following policies targeting mother's health were implemented in the due period:

- a) **Assuring universal access to affordable (free) services for women health and in particular for pregnancy:** two main actions were adopted in this purpose:
 - Legislation was amended by including pregnant women with low income among the categories exempted from payment the health contribution. In this sense all pregnant women are insured, having the right to receive the basic package of services.
 - The family doctors were incentivized per service to follow the pregnancies.
- b) **Improving the quality of services for mother and child:** In this purpose massive investments were directed for improving infrastructure and endowment in main maternities. Meanwhile programs for training of medical staff were implemented and clinical guidelines were developed
- c) **Develop access to contraception:** In Romania a national program for women health is systematically implemented and, in this frame, some vulnerable categories of women are receiving free contraception (students, women from rural areas, women asking for abortion, women living in poverty, unemployed).

Target 3.2. By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births

At global level, under five mortality declined by 44% in 2015 compared to 2000, but in Romania this decline reached to 59%.

Under five mortality is dominated by infant mortality (deaths before the age of one year, accounting 81% of all under-five deaths). During 2000 – 2015 infant mortality decreased by 61%, but gaps are still seen among counties and between rural and urban areas (Fig. 6). This decline was more visible in postneonatal mortality (66%), marked by avoidable causes of deaths and in urban areas (64%).

Figure 6. Infant Mortality – overall and by component, Romania 2000 - 2016



Important policies targeting children health were implemented in the due period, aiming to ensure universal access to affordable (free) services for all children, which are ensured by law, without any payment or relation to parents' contribution:

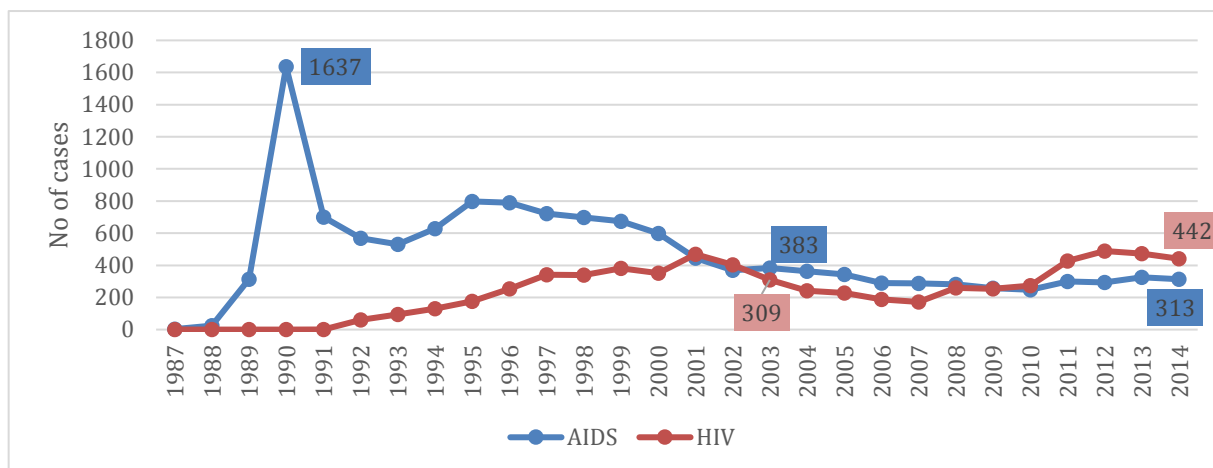
- **A national health program for mother and child health was implemented systematically** during this period, assuring free Ferum and Vitamin D supplements for all the children, free powder milk for children with no or partial breastfeeding, adequate treatment for premature children and special food products in case of malnutrition.
- **The national vaccination program continued also systematically and the national scheme for vaccines has been improved.** The family doctors were incentivized for providing vaccines to any eligible child, even not registered on their lists. However, more attention should be paid to vaccination, because for various and partially understood reasons, the vaccination coverage decreased, despite the improvements in national scheme for vaccines, the easy access and the free provision of the service.
- **The family doctors were incentivized per service for performing regular health checks in all children** (beyond the per capita payment), in order to assure proper conditions for healthy development and early detections of any harms. However, the preventive services remain still under-used.
- **Improving the quality of services for mother and child:** massive investments were directed for improving infrastructure and endowment in main maternities. Meanwhile programs for training of medical staff were implemented and clinical guidelines were developed

Target 3.3. By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Globally, in 2015 HIV declined by 45 % and TB declined by 17% compared to 2000. Also 900000 deaths were attributed to hepatitis in 2015.

HIV/AIDS: In Romania, at end of 2017, 22095 cumulative cases were reported since the beginning of the global epidemic, among which 15587 alive. The new yearly reported cases decreased by 27% in 2017, compared to 2000, with increased proportion of transmission among injecting drug users and men having sex with men. All diagnosed cases are included in a free antiretroviral treatment program.

Figure 7. Trend of the new cases of HIV/AIDS reported in Romania



Source: Health for All Data base

TB: Romania reported in 2016 a notification rate of 74 cases /100000 inhabitants, with a decline of 48% versus 2000, and a sharp and continuous decreasing trend since 2002, but still with the highest notification rate in EU (20% of cases notified in EU are from Romania). A specific concern is related to resistant TB, which is more difficult to diagnose and to treat. Romania has an estimated of 500 - 1500 cases per year, of which only 66% cases are detected

Main policies: Romania is financing a national health program addressing TB (free services for diagnosis, treatment, management of contacts and social support measures). The program is accessible to all people, even insured or not. During 2015-2020 Romania is implementing a national TB strategy, based on the three pillars of the Ent-TB strategy and aiming to improve the TB control.

Hepatitis: Romania has a reporting system for hepatitis according to the EU requirements, but the reporting is valid at a certain extent. Traditionally Romania was an endemic area for hepatitis B and now more and more cases of hepatitis C are diagnosed. However, strong policies are in place for achieving the control of the disease (universal free vaccination against hepatitis B for new born and, from time to time, for other risk groups, free access to treatment for hepatitis B and C). In the next years a massive program of screening will be implemented in order to have a better approach of the disease.

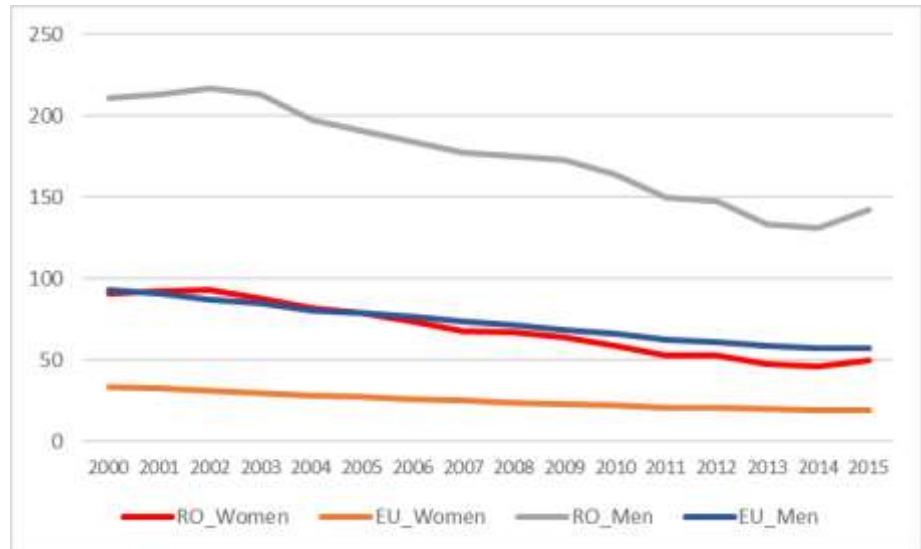
Target 3.4. By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

Global achievements:

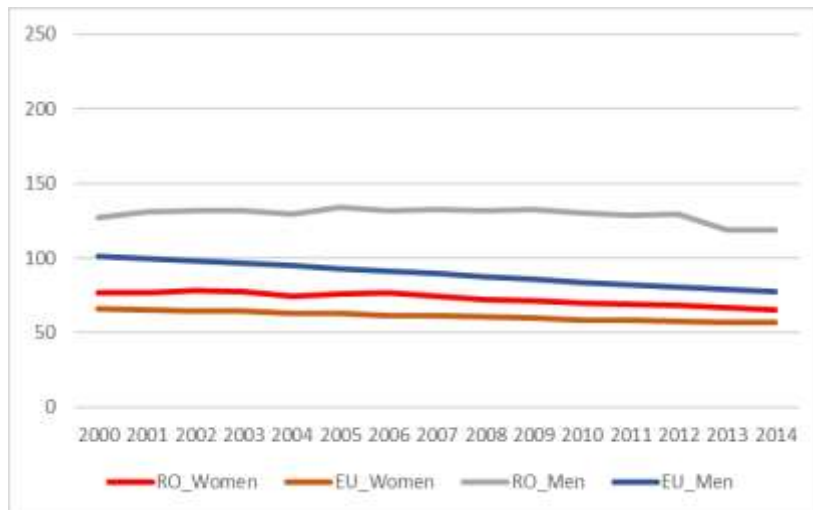
- In 2015, premature deaths (before 70) owing to CVD, cancer, COPD or diabetes totaled 43 % of all premature deaths.
- Risk of dying between 30 - 70 years of age from one of those four causes decreased from 23% to 19%.

In Romania, mortality rates attributed to cardiovascular diseases and cancer, are still higher compared to EU, but a constant decreasing trend is noticed (Fig. 8).

Figure 8. Standardized mortality rates by cardiovascular diseases in males and females, Romania versus EU (age 0-64 years)



In 2015 premature mortality by CVD decreased by 45% (women) and 32% (men), compared to 2000, meanwhile in EU decline reached 42% (women) and 39% (men)



Premature mortality by cancer decreased by 15% (women) and 7% (men), compared to 2000, but in EU decline reached 15% and 25% in women and men respectively (Fig. 9)

Figure 9. Standardized mortality rate by cancer 0-64 years, Romania versus EU

Target 3.5. Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

Global achievements: In 2016 the Framework Convention for Tobacco Control has been ratified by 180 countries, smoking prevalence decreased by 2% and the average alcohol consumption reached to 6.4 liters pure alcohol /person/year

Romanian context:

- **Substance abuse:** a methadone substitution program is financed systematically by Ministry of Health, but it seems to cover the needs just partially. Harm reduction interventions are also implemented with the efforts of very experienced NGOs, but they are at risk of discontinuity due to fragmentary financing. Interventions of primary preventions are implemented in schools, with joint efforts of the Ministry of Education, National Anti-Drug Agency and Ministry of Health.
- **Tobacco:** the Framework Convention for Tobacco Control has been ratified since 2005, visual warnings (pictograms) were implemented since 2008 and in 2016 a law for total ban of smoking in in public areas was approved and became active.

- **Alcohol:** lower progress has been registered, the average consumption of pure alcohol in 2015 reached to 10.4 liters pure alcohol/capita/year, slightly increased compared to 2000.

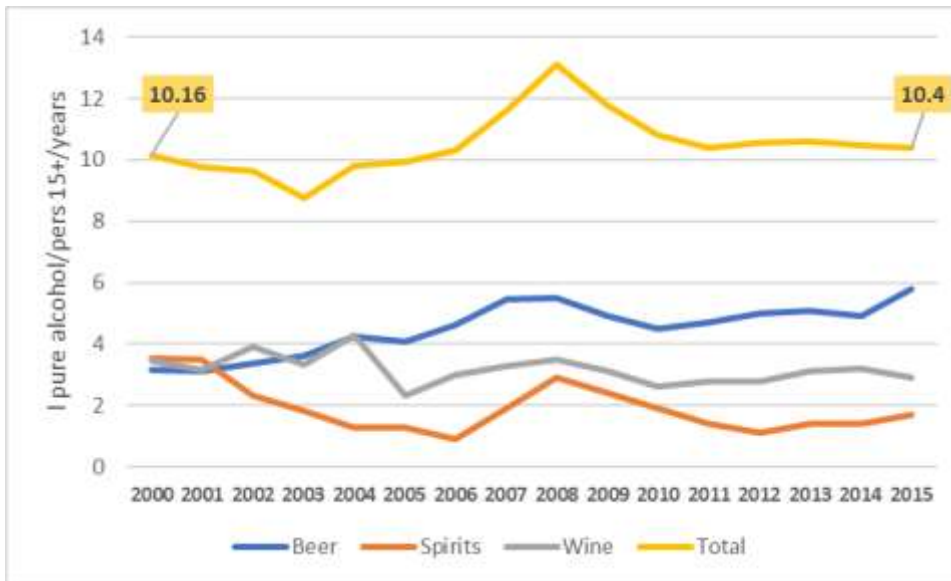


Figure 10. Recorded alcohol consumption per capita Romania – overall and by type of drinks

However, lot of efforts were done in the area of alcohol control. The national health Strategy includes some interventions of alcohol control, brief intervention guidelines were developed for

the family doctors and Guidelines for low risk drinking developed in an EU Joint Action are ongoing to be implemented in Romania. Primary prevention is done in schools. Every year the National Institute of Public Health is implementing a national awareness campaign on alcohol risks with a particular focus (e.g. pregnant women in 2015, youth in 2016 and 2018), alcohol dependence in 2017.

Target 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents

Global context:

- In 2015 deaths from road traffic accidents increased by 13% compared to 2000;
- About 1.25 million people died from road traffic injuries in 2013, this the leading cause of death among males between 15 – 29 years old.

Romanian context

- Slow progress in reducing traffic deaths compared to EU
- Better progress in second decade, but decreasing in the last years

Year	RO			EU		
	No	% Decrease vs 2000	% Decrease vs 2010	No	% Decrease vs 2000	% Decrease vs 2010
2000	2466	NA		57100	NA	
2001	2450	1%		55000	4%	
2002	2411	2%		54000	5%	
2003	2229	10%		51100	11%	
2004	2442	1%		47900	16%	
2005	2692	-9%		45900	20%	
2006	2587	-5%		43700	23%	
2007	2800	-14%		43200	24%	
2008	3061	-24%		39600	31%	
2009	2796	-13%		35400	38%	
2010	2377	4%		31500	45%	
2011	2018		15%	30700		3%
2012	2042		14%	28200		10%
2013	1861		22%	26000		17%
2014	1818		24%	26000		17%
2015	1893		20%	26100		17%
2016	1915		19%	25600		19%

Reducing the traffic deaths implies joint inter-sectoral efforts. A national committee on road safety was nominated and a new strategy is put in place in this purpose.

Target 3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

Romania has a national health program providing free contraception for vulnerable women (students, unemployed, women from rural areas). Despite the free provision, access is under needs, mainly to the lack of awareness of the beneficiaries and the limited involvement of the family doctors. Early pregnancies continue to represent a public health problem, despite decreasing.

Target 3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

Romania has strong policies oriented to achieving the universal health coverage. The health system is social insurance based and there are some economically vulnerable categories of people which are insured without paying the health contribution, for their financial protection. The insured people have access to a basic package of medical services which is comprehensive. Meanwhile, even for non-insured, a minimum package of services, including prevention for children and pregnant women, emergency treatment and diagnosis and treatment for communicable diseases was developed and is largely accessible. Meanwhile, the country has an extensive and very developed emergency care system, which is a good practice model in Europe, being accessed by any person. At the same time, the National Health Insurance House and the Ministry of Health are implementing national health programs focused on main public health priorities, and these programs are freely accessible, being equally addressed to insured and non-insured people.

Education

Education is central to the universal achievement of the SDGs. It contributes explicitly to the human capital development, which has a substantial contribution to societal wellbeing. However, all that is achievable if there are holistic approaches and systemic actions, operationalizing integrated public policies that are community based, and subsequently, leading to the collective wellbeing.

The aim of the SDG 4 being to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”, the relevant institutions in charge in Romania are focusing equally on the quality and quantity dimensions of access, when addressing the appropriate measures.

In Romania education is mainly free and is supported through public funding. The first strategies adopted in the field of education and training were: The strategy for reducing early school leaving; The National Strategy for Tertiary Education 2015-2020, the National Lifelong Learning Strategy for the period 2015-2020 and the Education and Training Strategy of Romania for the period 2016-2020.

Eurostat data shows that Romania has the lowest percentage from GDP, allocated to the national education budget, almost twice as low as the European average. In 2014, Romania has allocated 2.75% of GDP to this sector. In 2016, Romania increased its allocation to 3.7% of the GDP for Education compared to 4.7% of the European average. Even though a constant progress has been recorded, Romania is still facing serious problems as:

High early school leaving (ESL), concentrated in rural areas and among Roma communities. The proportion of early school leavers among young people aged 18-24 decreased slightly from 19.1 % in 2015 to 18.5 % in 2016. The difference between ESL in rural (26.6 %) and urban areas (6.2 % in cities, 17.4 % in towns and suburbs) is high, suggesting that early school leaving will remain a challenge in the years to come.

Participation in early education and care (ECEC) is improving. The participation of children aged between 0- 4 years of age is increasing gradually, but remains below the EU average (87.6 % in 2015 vs. 94.8 %). Romania is currently implementing a means-tested program to increase the participation of children from disadvantaged backgrounds; the program has improved attendance rates. In 2012 Romania introduced a preparatory grade into compulsory education, which is assessed as having had a positive impact on reducing dropout rates in the first school years

Strengthening initial teacher education (ITE) remains a challenge. Initial teacher education in Romania offers less preparation than in other European countries, especially in practical domains (OECD 2017), while subjects related to special educational needs and working with students from disadvantaged backgrounds are insufficiently covered. Although the Education Law requires teachers to follow a two-year master's program in education, this legal requirement was not implemented. The authorities are looking into the possibility of designing a dedicated ITE module focused on special educational needs.

Teacher salaries are increasing, but attracting high-quality teachers in disadvantaged schools remains difficult. The salary grid was revised, resulting in an average 10 % increase for beginner teachers, while in February 2017 teachers' salaries increased by 15 %. Teachers in rural areas also receive an additional allowance, but attracting teachers to disadvantaged schools remains difficult. The current merit-based allowance system, which rewards teachers who achieve exceptional results in examinations and competitions, may encourage a narrow focus on preparation for tests and academic competitions (OECD 2017). In December 2016, criteria for working with disadvantaged students, including students at risk of dropout, were included in merit allowances.

Labor-market relevance of higher education is improving, but challenges remain. The employment rate of recent tertiary graduates is increasing, supported by developments in both the labor market and education. The indicator reached 80.7 % in 2016, narrowing the gap to the EU average of 82.8. Also, Romania has adopted a 2015-2020 strategy for higher education with the aim of raising quality, labor-market relevance and participation of disadvantaged groups.

Although **education** represents one of the 5 strategic priorities of the Europe 2020 plan, the school drop-out in Romania reached 18.5% of school population according to Eurostat 2016. Only 3% of the Romanian GDP is allocated to education, the lowest level in the EU. As there is no specific strategy targeting the education in the rural areas, rural children have limited access to quality education. The quality of education is strongly related to the school infrastructure, access to education institutions and psycho-social and family factors.

The 2018 Child Wellbeing study in rural areas findings show that:

- In 2018, **32%** of children go to school by school buses, compared to **19.3%** in 2014,
- the high cost of school determined 1 out of 2 children to drop out school,
- the poor school results determined 1 out of 2 children to drop out school,
- the inequalities related to discrimination of children in schools are still present, in 2018, **15%** of children consider that they are sometimes or always treated differently compared to the rest of children in their class,
- Child work in the household or outside influence the school participation and performance of children,
- **79%** of children do household work, and 4% do outside household work, mostly coming from poor families.

There is a **50%** increase in the number of children who work in the household and feel tired at school (**6.3%**), or who do not attend school because they have to work (**5.5%**), **in 2018 compared to the previous studies.**

Education for Sustainable Development (ESD) is assumed by the National Sustainable Development Strategy of Romania-2013-2020-2030 (NSDS). According to the NSDS, ESD is regarded as one of the main cross-cutting issues that states: “The entire educational and training system will internalize the principles and objectives of sustainable development as an integrator of the knowledge, aptitudes and skills that are needed for personal and socio-cultural performance in the modern world. Promotion of sustainable development through education transcends the boundaries of the education paradigm allowing the classification of formal, informal and non-formal modalities. Education for sustainable development requires cooperation and partnership among many decision-making factors: central and local authorities, education and research units, health system, the private sector, manufacturing industries, transport, agriculture, commerce, the labor unions, mass-media, non-governmental organizations, local communities, citizens and international organizations. Education for sustainable development must not be limited to an environmental perspective. It should develop as a broad, inclusive concept, bringing together interconnected environmental, social and economic aspects.”

Tackling the broad and diverse array of topics associated with the principles of sustainable development requires an inter- and trans-disciplinary approach through integrated, cross-curricular and mutually reinforcing educational forms, which should also take into account specific local, regional and national conditions, as well as the global context. The training and education system will encourage pro-active participation and voluntary contributions expressing the civil values acquired during school years.

Through the measures that are being envisaged, Romania's educational system will combine the traditions of the national school with the principles of education for sustainable development. The thematic substance is thus integrated in the formal, informal and non-formal educational systems through a three-dimensional approach: socio-cultural, environmental and economic."

As acknowledged by the UNESCO document on "ESD Goals: learning objectives", the key competences for sustainability, notably: Systems thinking, Anticipatory, Normative, Strategic, Collaboration, Critical thinking, Self-awareness and Integrated problem solving, all and everyone, are now subject of analysis on how better to be reflected into the ongoing revision of the curriculum, and later on included into the teachers training courses. At the macro-regional level, the United Nations Economic Commission for Europe (ECE) Strategy for Education for Sustainable Development offers a valuable opportunity for countries to learn from each other and to share newly produced resources and materials within and beyond the ECE region. The UNECE Strategy for ESD's main aim is to encourage countries to integrate ESD into all forms of their education systems and covers all levels from primary to tertiary, including vocational and adult learning. ESD means including key sustainable development issues into teaching and learning, such as poverty alleviation, citizenship, peace, ethics, responsibility in local and global contexts, democracy and governance, justice, security, human rights, health, gender equity, cultural diversity, rural and urban development, economy, production and consumption patterns, corporate responsibility, environmental protection, natural resource management and biological and landscape diversity.

According to the *National Education Law (NEL) no.1/2011*, the key themes of sustainable development are included in the general provisions of the *National Education Law*, being reflected in the principles (of equity in access to education, respect for national cultural identity and for intercultural dialogue, conservation and promoting the of national identity and of cultural values of the Romanian people, recognizing, conservation and ensuring rights for ethnic minorities with a view to development of their ethnic, cultural, linguistic and religious identity, social inclusion, promoting health education) which are governing Romanian education and also in the final educational outputs (personal development with a view to respecting for civic values and for natural, social and cultural environment, social integration, active citizenship, participation to sustainable economy development). According to the *National Education Law No.1/2011*, the national curriculum for primary and lower - secondary education (now in course of revision), is based on 8 domains of key-competences which determine the student's education profile: Romanian language and mother tongue communicate on competences, for national minorities; foreign language communication competences; Elementary mathematics, science and technology competences; competences of using information technology as an instrument of learning and knowledge; social and civic competences; entrepreneurial competences; cultural expression competences; learning how to learn competences.

In *pre-university education*, the key-themes of SD are addressed in the curriculum starting with early childhood education till post high school education of formal education, including VET. The key themes of SD are included/ integrated in disciplines/ modules in core curriculum or optional curriculum for the following subjects: Environmental Knowledge, Nature Sciences, Civic Education, History, Biology, Geography, Technologic Education, Ecology and Environmental Protection, Sociology, Philosophy, Economy, Entrepreneurial Education, Civic and Entrepreneurial Culture, Financial Education, Make – up your environment, Project management, Intercultural education, European Education., The history of National Minorities in Romania. The key-themes of SD, as they are written in the paragraph 15 of the UNECE Strategy for ESD, are addressed in the curricula in terms of: students' competences, learning contents & domains, examples of activities & themes to

be developed at classroom level, attitudes and values. Developing the national curriculum for primary and lower - secondary education based on 8 domains of key-competence determine the student's education profile, according to the new law of education provision is an important step forward for ensuring supporting the promotion of ESD. With the same view to support the promotion of ESD is also important the elaboration of the secondary legal framework (consequent on NEL) for the "After school" and the "Other kind of school!" programme.

At The Secondary school level, all schools in Romania have the responsibility of drawing up a four years draft institutional development projected and annual management programs containing actions/ activities consistent with the 2030 Agenda for Sustainable Development. *National Education Law* provides content areas including: humanism, ecology, civic and cultural issues in extracurricular activities.

At the Higher education level, elements of sustainable development and new fields associated to it have been introduced, according to the study programs and the mandatory and optional curriculum. In Romania, higher education benefits from university autonomy. Under those circumstances, a large number of universities have introduced new Bachelor's degree curricula in the area of sustainable development. By Government Decision no. 117/2017 have been approved areas and master's degree programs for the 2017-2018 academic year such: Polytechnic University of Bucharest - Environmental management and sustainable development; Technical University of Civil Engineering of Bucharest – Sustainable Development, Energy, Comfort and Sustainable Development; University of Agronomic Sciences and Veterinary Medicine of Bucharest – Sustainable Agriculture; Transilvania University of Braşov – *Product design for sustainable development and environmental protection* etc.

As main stakeholders in ESD implementation, besides central administration institutions (ministries, agencies), we mention: the labor unions and employers representatives, private sector (with role in approval of curriculum for initial VET); NGOs and community (parents) (with role in elaboration of optional/school decision curriculum); Local government, private sector, labor unions and employers representatives and NGOs (with role in external assessment in qualifications certification exams with a view to quality assurance in VET); Private sector (role in work-place training for students in initial VET); Local government, community, NGOs, private sector, media (practical involvement/partners and public awareness in non/formal ESD learning).

Learning in *non-formal and informal* contexts is included in the provisions of the NEL. Regarding *non-formal* education related to SD the most representative programme is the "Other kind of school". The programme is implemented in pre/university education at national level, since school year 2011 – 2012 and includes educational activities for democratic citizenship, for promoting humanitarian values, for health and a healthy life style, activities of ecology and environmental protection. Under this initiative, schools have the possibility to plan and include sustainable development activities during a five days program.

Another form of promoting ESD is through contests organized at county, regional and national level (for example: National Contest for Environmental Projects, National Contest for "Make-up your environment" Projects, National Contest for Antidrug Projects ("Together" Projects) , "Made for Europe" National Contest, "Young are debating" National Contest); the calendar of the contests is approved by the MoNE each school year;

The "After School" program is implemented at national level, at primary and secondary education. Also, a large number of schools take part in educational projects and programs financed from EU funds in order to support all pupils in making full use of their potential.

Under the extracurricular activities program, each school develops its own program that includes activities on environmental protection and quality of life, resource efficiency, environmental education, civic education, education for change and personal development, financial literacy, health education and so on. Few examples are:

- The Green Schools project (financed by the EEA Grants 2009-2014, within the NGO Fund in Romania) - eco education through experiential learning, and the Competition "Let's Be Eco", organized by "Let's Do It, Romania!", in partnership with National Environmental Guard and the county school inspectorates. The first edition of the project was attended by 716 rural schools. The project aimed to support communities in preventing waste and reusing resources.
- The educational themes conducted by WWF - Romania (World Wide Fund for Nature): European Schools for a Living Planet (11 countries, training and grants - projects for students); university course Education for Sustainable Development (WWF, University of Bucharest); The book of the Black Sea (educational kit developed by WWF - internationally awarded, distributed in Romania).
- The Eco-Schools International Program coordinated by the Carpatho - Danubian Center in partnership with the Ministry of National Education, Ministry of Environment, the National Agency for Environmental Protection, National Environmental Guard and other institutions, with the active involvement of students, teachers, parents and local community.

At the level of *technical and vocational education*, in the standards of initial training for qualifications at level 3 and 4 was introduced information regarding skills and competences concerning the environmental protection, entrepreneurship, problem solving. Programs were implemented to support students in identifying and attracting them to jobs in the fields of sustainable development, through the counseling centers, educational and vocational education in the schools.

Teacher support through staff resource centers (Teachers Houses)

The training courses for secondary school teachers in the field of sustainable development are centered on development of new and innovative skills in the field of sustainable development education. During the period of 2015-2017, 1270 teachers have been trained on SD topics.

The initial training of teachers is accomplished by the program of psycho-pedagogical studies organized by the departments for the preparation of teachers of institutions of higher education, ESD is found in the optional curriculum in subjects recommended by Ministry of education: Economic Approach to Education, Psycho-pedagogy of risk behaviors, Intercultural Education, Educational Communication, Guidance and Counseling, Psycho-pedagogy of learning motivation, computer assisted instruction, special Psycho-pedagogy. The list of optional subjects is open to the decision of each Department of Teacher Training.

In order to ensure quality and foster excellence in state and private higher education, Ministry of National Education implemented with the financial support provided through the European Social Fund, the Sectoral Operational Program Human Resources Development and in partnership with six universities - the project "Quality, Innovation, Communication in the System of Continuous Training of Teachers", an innovative program of training of teachers in higher education, which offers a new approach in teaching didactics discipline and thereby increasing the attractiveness of learning in universities. For the stage of transition from school to the workplace of the future teachers in pre-university education, Ministry of National Education implemented the project "From the Debut to Success - National Mentoring Program for the employability of teachers ", with financial support provided by the Social Fund European Sectoral Operational Program Human Resources Development. The project provided support for newcomers in completing the road from the

theoretical approach to effective classroom teaching. Training offerings of Teachers Houses, approved annually by the Ministry, include the organization of courses, seminars, workshops on the theme "Education for sustainable development". In these activities, approximately 15 000 teachers participated in the last 4 years.

To achieve the main goals assumed by Romania in relation to Europe 2020 Strategy (to attend an employment rate of 70% for 20-64 age group, to increase the participation rate of adults 25-64 years of age in life-long learning (LLL) to 10 %) it will be crucial for the Government to implement the measures stipulates by the National Strategy on Employment and Plan of Actions 2015-2020, approved by GD no. 1071/2013 and Life Long Learning Strategy, approved by Government Decision no. 418/2015.

The National Strategy on Active Ageing Promotion and Protection of Elderly and the Action Plans 2015 – 2020, adopted by the Government Decision (GD) no. 566/2015. The strategy recommends a range of measures and policies to be developed in order to support a better integration of older workers on labor market, to improve labor places 'conditions by adapting them to the needs of the workers, to strengthen professional abilities through proper vocational training programs, to prevent the risk of abuse and neglect, to set up an unified long term care (LTC) system, to provide the necessary financial resources for social, health and LTC services, to promote elderly participation and to improve their involvement in voluntary movement.

National Strategy on Social Inclusion and Poverty Reduction for the period 2015-2020 and its corresponding Strategic Action Plan, approved by GD No.383/2015. The Strategy proposes a set of flagship initiatives/ key interventions in various policy fields, among which: Employment and Life Long Learning (LLL), Social Enterprises, Social services and Social Assistance, Education and Child Care, Public Health System, Housing. Each chapter has in view the risk of poverty for elderly persons and provides recommendations in order to combat the possible negative consequences of demographic ageing by using the economic and social value of older people in the future. The main goal of the strategy is to reduce the number of people at risk of poverty by 580 000 till 2020. **The Government Decision was amended by GD No. 861/2016.**

Romanian labor market experienced significant changes in terms of the volume and structure of the main labor force indicators, this process being characterized by the reduction of the economically active population and employment, with a relatively steady level of the unemployment rate. Romania's working age population (20-64 years) is projected to decline by 30% until 2060 and the old age dependency ratio is projected to double by 2060 according to Eurostat. The active population of Romania in 2015 counted 9159 thousands persons, out of which 4571 thousands have been registered as employees in economy.

Administrative data on employment and pensions show that a large number of persons are already pensioners, most of them through the invalidity program (17-20% aged 50-54 years). In the age group 55-59 years, there are 2.5 women pensioners per employed woman and in the age group 60-64 years, there are 4.5 male pensioners per employed man.

Longer working life is encouraged and ability to work is maintained

The older population is an underused resource of Romania's economy. The employment rate of population aged between 25 and 54 is only 2% below the EU average, while that rate for the population aged 55 to 64 is 9% below. In urban areas, almost half of all people aged 18 to 64 not in school, training or with the labor contract are in the 55 to 64 age range. A significant reduction in the number of formally employed people begins as early as ages 50 - 54. Between those ages, 20% of women and 17% of men are already retired, mostly through the invalidity program, typically assuming a permanent full-time pensioner status. Despite the well-intentioned last reforms which

tightened old age pension eligibility conditions, early retirement through the old age program also remains strong. Between the ages of 55 and 59, up to five years before statutory retirement age, there are already 2.5 women pensioners for every employed woman. Similarly, between the ages of 60 and 64, up to five years before statutory male retirement age, there are 4.5 male pensioners for every employed man (World Bank Study on Poverty Reduction 2015).

At the same time, presently, a very low percentage of people with disabilities are active in the labor market - only 7.25% of people with disabilities between the ages of 18 and 64. Thus, the disability indemnity and the complementary budget are the main sources of income for this vulnerable group. Based on the legal rules, people with disabilities can enter the open (and highly competitive) labor market. Romanian law specifies that companies with more than 50 employees must ensure that at least 4% of their staff are comprised of people with disabilities. If not, they need to pay an amount equivalent to half of the minimum income for all positions that are not occupied by people with disabilities or to buy products from the sheltered units. In practice, the majority of enterprises prefer to pay the penalties, instead of hiring people with disabilities and to benefit by the incentives and facilities established by law.

Taking in consideration the national context, Romania adopted the National Employment Strategy 2014-2020 (NES) and a corresponding action plan approved by the Government's Decision no. 1071 from 11th December 2013. NES proposes, on short term, a set of objectives such as: improving the legislation in force regarding employment and social dialogue, combating black market, developing and diversifying active measures for the employees, rising financial support and fiscal incentives for employers, consolidating professional competences of the workers, improving the employment rate in rural area, rising the competitiveness on labor market and strengthening the performance of public agencies for employment.

One of the specific objectives of the NES consists in "Increasing youth employment and prolonging elderly' active life", with the following measures to be implemented: (i) Decreasing youth unemployment rate and the number of NEETs, (ii) Increasing elderly's labor market participation by implementing elderly employment schemes, (iii) Developing knowledge and know-how transfer initiatives (from elderly to young employees, such as mentorship and coaching programs etc.), (iv) Developing flexible work forms (by amending the Labor Code), (v) Encouraging active life including through fiscal measures, (vi) Reducing subsistence agriculture employment and (vii) Enhancing human capital relocation to non-agricultural activities.

A special attention has to be focused on improving of LLL programs and implementing of healthy and age-friendly work environments.

Participation, nondiscrimination and social inclusion of older persons are promoted

One of the most important strategic document adopted by the Government is the Lifelong Learning Strategy (LLL Strategy), based on the regulations of *National Education Law*. The LLL Strategy, approved by GD No. 418/2015, has in view actions and measures to be implemented, following three major pillars: (i) access and incentives for participation; (ii) quality and relevance; (iii) partnerships for better information. One of the objectives of the strategy starts from the idea that learning should be promoted among older people, so that they could see the value of learning continuously, including for everyday life and become motivated to take part in learning activities. The LLL Strategy includes big investments in community learning centers which should cover employment aspects, such as reskilling (for older workers), as well as aspects related to everyday life, such as health, elder care, financial and legal planning for retirement and inheritance management, and benefits of technology to enhance social connectedness.

Dignity, health and independence in older age are promoted and safeguarded

The background study conducted by World Bank for the National Strategy on Social Inclusion and Poverty Reduction 2015-2020 in 2014 highlights the need to improve the present social services system. Although almost half of the population lives in rural areas, only 24% of the social services are located there and only 6% of the subsidies from the state budget for NGO's goes to social services in rural localities. The ageing of the population in rural areas together with the optional pension insurance for farmers (2010) as well as youth and adult migration for labor abroad, are expected to result into an increase in demand of social services for older persons. Over the next few years, external migration of women is likely to have an even greater impact on the need for and supply of social care services.

Long-term and health care for dependent elderly

Decreased dependence of the elderly and improving long-term care (LTC) as part of Active Ageing concept is a strategic objective assumed by the Romanian Government in the National Strategy for promotion of Active Ageing and Elder Protection 2015-2020. A detailed technical analysis of the context of the current situation and policy challenges in this area can be found in the World Bank report "*Living Long, Staying Active and Strong: Promotion of Active Ageing in Romania*" (2014).

According to this report, the long-term care (LTC) system in Romania is characterized by relatively less developed policies and practices, given the level of funding, the extent and quality of facilities and services as well as coverage and the regulatory framework. The level of formal supply of LTC services is low, and the system is fragmented across the health/social service divide, distinctions between disabled and older persons, as well as across jurisdictions with uneven access to services. A heavy burden of care provision is therefore falling on family members without any major support structure. Historic cultural norms of care provision by the family have more recently been stressed by strong emigration flows.

Intergenerational solidarity is maintained and enhanced

According to the last researches, for a better understanding of the demographic change impact on intergenerational solidarity, it is important to translate the attention to the changes in family members 'support across generations.

The individual characteristics, family structure and country culture influence especially partnering, childbearing and parenting. The increasing of longevity which led to the phenomenon of the "sandwich generation" or "women in the middle" could have an important impact on intergenerational solidarity as well. It is expected that in four-generation families, women would have to combine care for young children or grandchildren with care for parents and grandparents. This would imply an increase of caring burden resulting in a negative influence on intergenerational solidarity and on economic resources also, due to the needs of more formal care at home or in residential facilities.

The contemporary Romanian demographic context of families highlighted the increase in the number of successive generations together with the reduction of the number of children for each generation. Migration, another demographic phenomenon which affected Romania after 1990, will influence intergenerational solidarity in a negative way, but it could have positive consequences in the same time. According to the World Bank (2016) Romania was, in 2015, the third remittance recipient country in Europe. The remittances sent by Romanian migrants are used primarily for daily expenses and then for healthcare, work home improvement, children's education, payments of debts or loans. Thus, the importance of the financial aid offered by adult children who work abroad is considerable.

Combating elder abuse and discrimination

In Romania, at official level, the types of abuse recognized are correlated with those defined by WHO. However, the traditional perception of population on elderly abuse is related much more to violence, neglect and financial/material exploitation.

Physical abuse is recognized because it is the object of the legislation on preventing and combating domestic violence by family members. Financial abuse is more likely to be detected and reported, as frauds are subject to public awareness campaigns organized by police force or have more visibility in the media. The other forms of abuse are less tackled, as elderly abuse is not a subject of national debates and general population and even professionals are not fully aware of this issue.

In Romania there is a lack of information regarding the prevalence of elder abuse. Eurobarometer Survey Health and Long term care in EU found that Romania is the only country where the majority of population (86%) considers that poor treatment, neglect and abuse of older people is widespread at national level, taking into consideration the following topics: elderly are living in poor conditions, receive inadequate care and physical and psychological attention. Romania has no official statistics regarding the phenomenon of elder mistreatment, abuse and neglect.

The present picture of Romania in relation to economic and social situation of older persons could reveal the following major aspects: poverty rate of elderly persons remains lower than other categories of age, due to the fact that the majority of elderly persons are benefiting of pension, more than 90 % of elders are the owners of the dwellings, more than 1,472,186 pensioners receive health care without any contribution to health insurance fund and 3,067,624 pensioners are not paying income taxes.

The accelerated process of ageing will determine the decline in the share of the population contributing to the economic output, followed by a lower growth in income per capita. While most of older persons currently are recipients of pension, it is expected that pension system coverage will decline among middle age cohorts especially and pensions' income will decrease in relation to wages. National low average of fertility, the growth of life expectancy and outmigration of active population will add a major pressure on the labor market, pension, health and social assistance systems.

In order to increase the economic growth and to ensure a sustainable development, Romania has to promote adequate social inclusion's public policies for all, giving also more attention to older generation as a valuable resource for entire society. Any policy focused on active ageing must take into consideration the real availability of older persons to understand the concept and to accept their active involvement in all aspects of society.

Having in view the demographic trends, Romania is fully aware of the fact that, on medium term, without the participation/integration of elderly on the labor market, there will be a lack of human and professional resources and moreover a huge pressure on the social insurance and social assistance benefits' budgets. Having in view the major demographic trends that Romania will face in the coming years, more attention should be done and higher budgets allocated to risks and needs associated with old age.

Last, but not least, given the demographic trends that Romania will face in the coming years, more attention should be paid to allocating larger budgets in order to mitigate the risks and cover the needs associated with the elderly population/ with older people.

Measuring the contribution of culture to sustainable development

The 2030 Agenda for Sustainable Development mentions **culture** for the first time in the context of sustainable development goals both as a transversal dimension – in relation to education, food security, environment, economic growth, sustainable consumption and production patterns, peaceful and inclusive societies, but also as a direct dimension, in relation to *Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable*, namely *Target 11.4 - Strengthen efforts to protect and safeguard the world’s cultural and natural heritage*.

The Ministry of Culture and National Identity, in partnership with the National Institute for Cultural research and Training, initiated the implementation of the UNESCO project, Culture for Development Indicators (CDIS). CDIS directly contributes to the implementation of Article 13 ([Integration of Culture in Sustainable Development](#)) of the 2005 Convention for the Protection and Promotion of the Diversity of Cultural Expressions.

The project is a pioneering and innovative policy tool that allows the design and analysis of 22 indicators that reflect the multidimensional contribution of culture to development. CDIS will assess for the first time in Romania the contribution of culture to the sustainable development taking in account 7 interrelated policy dimensions: economy, education, governance, social participation, gender equality, communication and heritage. The project establishes a common ground for culture and development actors to better integrate culture in development policies and strategies, generating concrete impacts at policy level. Alongside Ministry of Culture and National Identity and National Institute for Cultural Research and Training, 14 other national authorities and institutions are stakeholders in the project.

As indicated in the picture below, the 22 indicators - that generate data in relation to the context in which culture evolves and its contribution to national development processes - can be correlated with 9 SDGs and 36 targets of the 2030 Agenda for Sustainable Development:



SUSTAINABLE DEVELOPMENT GOAL 6

Ensure availability and sustainable management of water and sanitation for all

On July 28, 2010, the UN General Assembly declared clean and safe drinking water as well as sanitation a human right, essential to the full respect for the human right to life and all of its other rights. The UN General Assembly expressed their deep concern that approximately 900 million people in the world (figure suggested by WHO/UNICEF in the joint monitoring program) do not have safe drinking water.

Subsequently, at the fifteenth session of the United Nations Human Rights Council, in September 2010, there has been stipulated that the right to water and sanitation is derived from human right to an adequate standard of living, so "*for the UN, the right to water and sanitation is included in the existing treaties on human rights and is therefore legally binding*".

Even if we are still facing many of the traditional water supply challenges, sewerage and water quality protection, new challenges such as adaptation to climate change, rising food and energy prices, obsolete and insufficient infrastructure are now increasing, which also increases the complexity and financial burden of the water management.

From an economic and pragmatic point of view, Romania's capacity to provide efficient infrastructure and services in the field of environmental protection, both at national and local level, is also an important factor in the development of the private sector. At the same time, public capital investments have a particularly important role in the market economy, because some public infrastructure facilities are inputs for private sector activity and contribute to increasing the marginal productivity of private capital.

With the transition to a market economy and a democratic political system, after more than four decades of centralized management, Romania decided to return to the principle of autonomy through decentralization and the transfer of major and concrete responsibilities to local public administrations. The Law on public administration, No. 215/2001 republished, refers to the obligation of local governments to organize their operations effectively and adequately, in order to provide public services. Under this law, local governments have the right to associate with the goal of developing efficient public services for the common/regional interest.

The need to reform, modernize, develop and restructure the water sector has become even more stringent and obvious once Romania became a member of the EU, having to comply with the European Directives 98/83/EC on drinking water quality (by 2015) and 91/271/EC on wastewater treatment (by the end of 2018).

For the above reason, Romania is constantly pursuing the achievement of those investments needed in order to comply with the water quality indicators imposed by the European Union. Besides that, by the end of 2015, 263 urban agglomerations with more than 10,000 population equivalent (p.e.) should have met the wastewater collection and treatment targets and by the end of 2018, 2,346 agglomerations between 2,000 to 10,000 population equivalent (p.e.).

In order to achieve these ambitious targets, Romania implemented pre-accession programmes (PHARE, ISPA), the Sectoral Operational Programme Environment (SOP Environment) 2007-2013 and the Large Infrastructure Operational Programme (LIOP) 2014-2020.

The Sectoral Operational Programme Environment (Environment SOP) 2007-2013 took into consideration the strategic objectives for the financing of the environmental infrastructure, being fully in line with the strategic national objectives set up through the National Development Plan for 2007-2013 (NDP) and the National Framework Strategic Plan (NFSP) that take into account the objectives, principles and practice of the European Union.

One of the specific objectives of SOP Environment was to improve the quality and access to drinking water and wastewater collection and treatment infrastructure, providing drinking water and wastewater collection and treatment services in line with EU policies and practice, in a most of the urban areas by end of 2015 and to develop regional structures to manage the drinking water and wastewater collection and treatment services.

The implementation of the Large Infrastructure Operational Programme (LIOP) 2014-2020 is ongoing. LIOP includes the Priority Axis 3 – Development of environmental infrastructure based on an efficient management of resources, with an allocated amount of EUR 2.892.443.785,00, and is focusing on the programme area 3.2 Improving the level of wastewater collection and treatment in urban areas, as well as improving the level of population access to drinking water services. The investments provided by this programme area aim to ensure the progress towards the compliance with the environmental *acquis* and, implicitly, to reduce the disparities between Romania and the other Member States in this particular area.

Likewise, the Governance Programme 2016-2020 provides for 5,000 new investments for drinking water, wastewater collection and treatment infrastructure, financed from the state budget, through engagement credits, and European funds.

Also, establishing the regional operators (RO) and delegating the management of water and sanitation services to them is an essential process to ensure compliance with the deadlines and, at the same time, for building the absorption capacity of the EU structural funds and to implement the future investment projects. The association of a number of territorial-administrative units in order to conjunctively delegate their water and sanitation services management has also to respond to the need of reducing the development disparities between the territorial-administrative units and is an application of the solidarity principle as one of the fundamental values of the European Union, with positive effects for the users.

Currently, the regionalization process of water services, which aims to overcome the excessive fragmentation of the sector and achieve economies of scale, is almost over.

The above-mentioned programmes, namely the pre-accession programmes (ISPA, PHARE), the SOP Environment 2007-2013 and the LIOP 2014-2020 are co-financed by the state budget and cover all 42 counties in Romania, so that at present there are 42 regional water companies (in general, at county level) and the water company of Bucharest Municipality.

The analysis of the current state of development and of the recent evolution of the Romanian water sector

The costs for alignment of drinking water supply and wastewater collection, treatment and disposal to the standards required by the EU environmental *acquis* were estimated at approximately 15 billion euros, by the end of 2018.

Those costs are, first of all, investment costs for the development of infrastructure for drinking water distribution networks, wastewater collection systems and wastewater treatment plants.

Public Drinking Water Supply Network

As regards the supply of drinking water, a national report established that only 65% of Romania's population is connected to the public drinking water network, out of which 98% is urban population and only 33% rural population (3.4 million inhabitants).

Romania is in a rather unfavorable position compared to the rest of Europe, where 96-100% of the population is connected to the drinking water distribution network, 100% in urban areas and 87% in rural areas. According to this report, there were only 4 countries in Europe reporting that they did not have full coverage of drinking water and sanitation services, Romania being the least developed from this point of view.

However, drinking water distribution networks have expanded continuously, especially as major cities have developed, so that the network's length (about 50,000 km) was 55% higher in 2009 compared to 2001. At present, 86% of the population resident in 256 urban localities (11,551,096 inhabitants) benefit from running water through public networks. 55 urban localities have 100% population connected to the public drinking water distribution network.

5.11 Rețeaua și volumul apei potabile distribuite Drinking water supply network and volume

	2009	2010	2011	2012	2013	2014	
Numărul localităților ¹⁾ cu instalații de alimentare cu apă potabilă (la sfârșitul anului)	2191	2252	2304	2328	2367	2447	Number of localities ¹⁾ with drinking water supplied installations (end of year)
din care:							of which:
Municipii și orașe	317	317	317	317	317	317	Municipalities and towns
Lungimea totală simplă a rețelei de distribuție a apei potabile (km) - la sfârșitul anului	60456,4	63094,9	65900,9	68299,3	71513,7	74263,2	Simple total length of drinking water supply network (km) - end of year
din care:							of which:
Municipii și orașe	26857,3	27225,8	27474,3	27680,2	27828,7	28321,9	Municipalities and towns
Apă potabilă distribuită consumatorilor (milioane m ³)	1065	1024	1022	1035	1014	995	Drinking water supplied to the users (million m ³)
din care:							of which:
Pentru uz casnic	681	689	677	695	690	684	For household use

¹⁾ Municipii, orașe, comune. / Municipalities, towns, communes.

Figure 11 Drinking water supply network and volume. Source: Romania's Statistical Yearbook 2015

An interesting fact is the year-on-year decrease in the total volume of drinking water distributed to consumers across the country (1,064.8 million m³ in 2009, over 50% less than in 1995), at the same time with the increase in the share of drinking water consumed for household use (57% in 2005, 64% in 2009), due to the reduction and restructuring of the industrial activity in the last 10 years, the economic crisis in 2009 (when the quantity of water distributed decreased by 1% compared to 2008) as well as consumption, the metering of the consumption and education of the citizens on reducing consumption/eradication of waste. The 2009 reference year is taken into account in the context of the economic crisis.

In 2014, 62.4% of the country's population was a beneficiary of the public water supply system.

5.G6 Volumul de apă potabilă distribuită consumatorilor Volume of drinking water supplied to the users

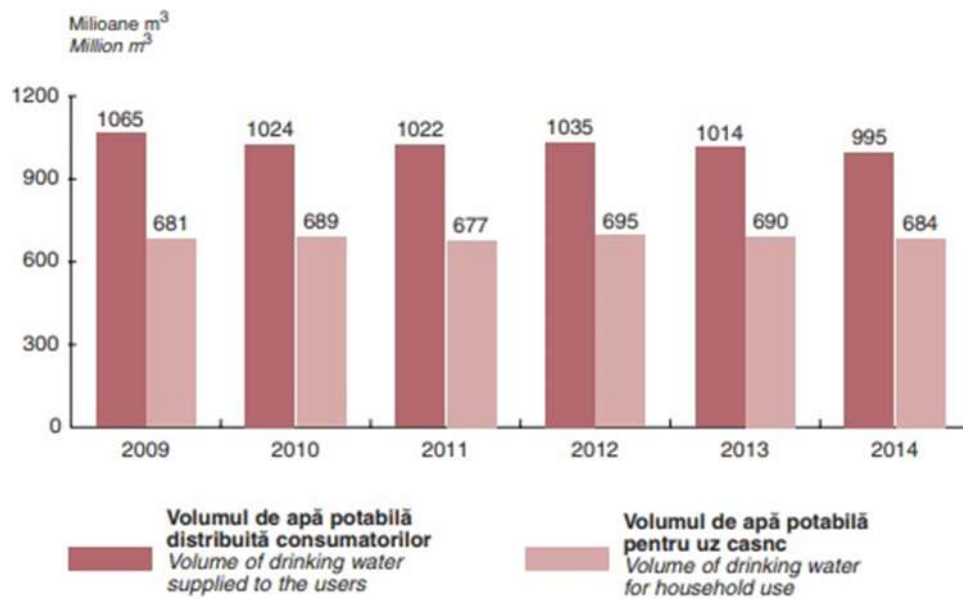


Figure 12. Volume of drinking water supplied to the users.

Source: Romania's Statistical Yearbook 2015

Romania has also undertaken other actions in order to improve water quality and access to water supply infrastructure, during 2009 - 2017, so 317 cities and municipalities out of 320 and 2189 villages out of a total of 2861, at the end of 2016, were connected to the public drinking water network. However, only 65.4% of Romania's population was connected to the public drinking water system in 2016, so that Romania was the least developed country in this respect. Romania's situation is comparable to other EU countries in terms of connection rate within urban areas (99% in Romania and 96-100% in the other EU States). Instead, in the rural area the connection rate to water supply infrastructure is below the EU average.

In 2016, qualitatively 66.14 % of water bodies which have been taken stock of achieved a good or a very good ecological status (2002 waterbodies), 33.33% which means (1009 waterbodies) with a moderate condition, and (2 waterbodies) in a poor state, and (8 waterbodies) in a bad condition, all represents under 1%. 6 water bodies were not been taken stock of.

Role of the Protocol on Water and Health in achieving the 2030 Agenda

Successful cooperation between stakeholders involved in achieving the 2030 Agenda, through the Inter-ministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at National Level led by the Minister of Environment.

During the sessions of the Open Ended Working Group (OEWG) for drafting Romania's VNR under the Inter-ministerial Committee, there has been strong cooperation between Protocol on Water and Health, in Romania, led by the Ministry of Environment, Ministry of Health and the Ministry of Waters and Forests, to fill the SDGs Matrix (including MEAs), all 169 targets - mapping the main processes and actions by each target.

The links between the Matrix of SDGs and Template of PoW Report, and how the connected data is used in preparing the Voluntary National Review Romania 2018, support of the High Level Political Forum 2018, New York is illustrated below:

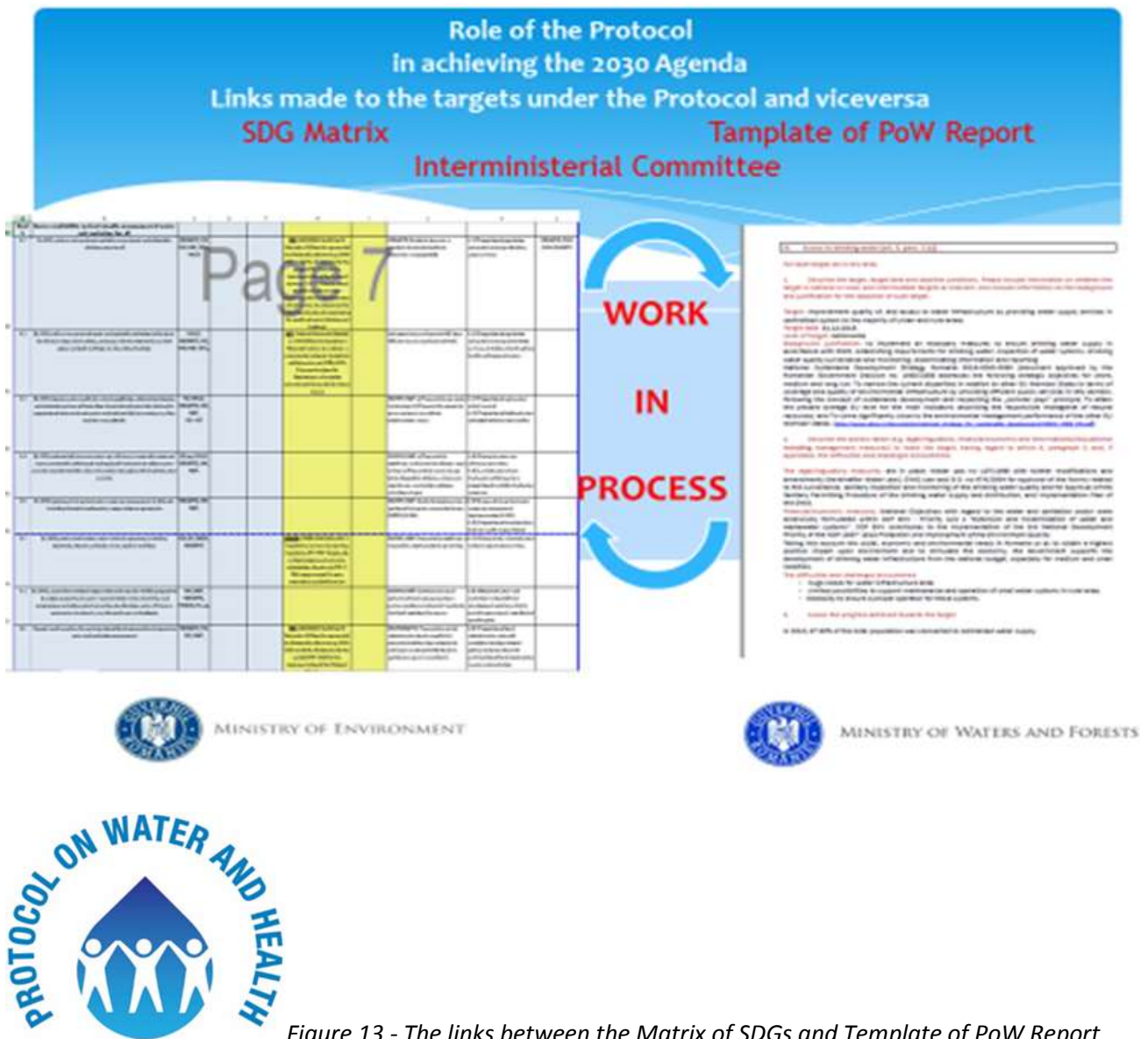


Figure 13 - The links between the Matrix of SDGs and Template of PoW Report

In Romania, targets have been set and approved under the Protocol, and now, this kind of work is useful to setting national targets for SDG 6 and others in Voluntary National Review Romania 2018.

At the same time, the Voluntary National Review Romania 2018 offers the opportunity to review Protocol targets to check their relevance, comprehensiveness and appropriateness and to update priorities in the context of SDGs and other relevant global and regional commitments.

Romania ratified the Protocol Water and Health (PoW) by Ordinance No. 95/29 August 2000, approved by Law No. 228/30.11.2000. The Protocol is the first international legal instrument that promotes at national and international levels the protection of human health and well-being in the framework of sustainable development, by improving the water management, including protecting the aquatic ecosystems, and by preventing, controlling and reducing water-related diseases.

At the same time, the Protocol introduces a social component in the cooperation on water management. Water resource management must link the social and economic development of society and the protection of natural ecosystems. Moreover, the improvement of water supply and sanitation is the decisive factor in interrupting the vicious cycle of poverty.

For more than 17 years, the Protocol on Water and Health has proven its effectiveness as an enabler for sustainable development, for improving the water supply, sanitation and public health in Romania.

Also, Romania is a member of the **Bureau of the Protocol on Water and Health**, which is a coordinating mechanism for implementing measures in this field.

The Protocol is the mechanism to advance and operationalize progress on the goals and targets related to water, sanitation, hygiene and health.

In Romania, the responsibility for implementing the Protocol on Water and Health is shared between the Ministry of Waters and Forests, as main coordinating body, and the Ministry of Health.

Romania participated to the reporting cycles in 2010, 2013 and 2016, but the process of setting targets according to the Protocol has started back in 2009.

The reporting is based on the yearly reports elaborated by the National Administration "Romanian Waters", the competent authority for UWWTD Reporting to EU and RBMP 2015-2021, based on information provided by the water services operators.

Regarding the information and public participation, the work under the Protocol have been published on the Ministry of Environment, Waters and Forests website:

Public participation is an important tool in national, regional or local development activities, imparting quality in decision-making and strengthening the authority of decisions through public support in their implementation. Countries with democratic tradition use this instrument efficiently by always refining their legislative framework to expand public participation to the highest levels of decision-making or state policy formulation, aware of the benefits of public support.

Current environmental policies promote an integrated approach in which the public is a key actor in achieving the objectives of any sectoral policy.

This approach has been promoted in the overall process initiated by the United Nations, following the Rio de Janeiro Summit in 1992, where the States Parties signed the Declaration on Environment and Development, recognizing that "one of the main elements indispensable to the achievement sustainable development is public participation in decision making "(Chapter 23 of Agenda 21). In 1998, on 28 July in Aarhus, the European Union and other 39 countries adopted the UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters. Romania ratified the Convention by Law No.86/2000.

The Romanian Constitution stipulates that the state is obliged to take measures in order to assure the hygiene and public health. Hence, the actions of the Romanian authorities are oriented to the extension of the centralized drinking water supply and sanitation systems, including those within the disadvantaged areas.

The specific legislation on water and sanitation require the access and participation of population to the decision-making process. For example, according to the provisions of the Drinking Water Quality Law, the authorities with attributes in the field of drinking water supply should ensure the adequate and updated information on the quality of water intended for human consumption. The access to information and to the decision-making process is also provided by the Water Law and is available for all the population groups.

The development of environment infrastructure requires major investments for extending of water and wastewater networks, the construction and rehabilitation/ upgrading of treatment plants, sewerage networks and wastewater treatment plants. Thus, on SO 3.2 from LIOP, 70 projects were submitted for a total amount of 1,500.9 million Euro (66 projects were contracted for a total amount of 1,474.3 million Euro), out of which: 35 technical assistance projects (32 contracted projects), 5 new integrated projects for developing water and wastewater infrastructure (all of them contracted) and 30 integrated phased projects for developing water and wastewater infrastructure (29 contracted projects).

Regarding the Environment Fund financing, through the *Program of Water Resource Protection, Integrated Water Supply Systems, Treatment Plants, Sewerage and Wastewater Treatment Plants*, 130 water and sewerage projects were finalized, with a financing value of 462.15 million Lei (41 projects finalized in 2017, with a funding value of 182.16 million Lei and one project finalized in 2018, with a funding value of 5.65 million Lei).

At the national level, at the end of December 2017, 1,732 sewer networks were inventoried, out of which 1,052 were functional and 680 at different stages of execution. With regard to sewage treatment plants, in December 2017, there were 1,055 treatment plants, out of which 782 were functional and another 273 new treatment plants, completed, to which the population had not yet been connected or in technological trials/decommissioned. The degree of coverage with wastewater collection systems corresponds to a biological load of approx. 66.32% of equivalent inhabitants, and the degree of coverage with sewage treatment plants corresponds to a biological load of approx. 63.73% of equivalent inhabitants. The investments made during 2007 - 2017 for the wastewater infrastructure amount to approx. 5,708 million Euro, out of which 53.68% for the rehabilitation and extension of sewerage networks and 46.32% for the rehabilitation and construction of new wastewater treatment plants.

Works to improve flood protection systems continue in a fast pace. By the end of 2017, the following facilities were achieved: shore consolidation on 28.13 km; dams on 11.26 km, 281 preparations of bottom sills and falls on the riverbed, a polder and 12 km of riverbed recalibration. Procurement of technical assistance services for design continues to be funded by LIOP. Until the end of 2017, 164 municipalities and 2,166 administrative territorial units received various works to address the threat of flooding. Complementary, 13 simulation exercises on flood defenses were held in 108 settlements in Q2/2017. 22 roundtables/ seminars were organized at regional and local level, to put forward flood risk solutions and to exchange information on best practices for flood risk management.

An important contribution to tackling climate change and improving the state of the Romanian infrastructure is also provided by sub-measure 7.2 of the 2014-2020 NRDP for projects concerning road and water/wastewater infrastructure projects. EAFRD 2014-2020 finances investment projects to modernize secondary irrigation infrastructure, buildings associated to the pumping stations and/or connection to utilities, including modernization of collecting and storage tanks of irrigation water¹⁶⁵. The public non-reimbursable support is 100% of the total eligible expenditure and may not exceed 1 million Euro per project for irrigation systems for pressure pumping stations and access roads and 1.5 million Euro for irrigation systems related to pumping and re-pumping stations, as well as forest roads. At the same time, the investment projects for the development of the main irrigation infrastructure are supported through the national budget, within the *National Programme for Rehabilitation of the Main Irrigation Infrastructure in Romania*.

SUSTAINABLE DEVELOPMENT GOAL 7

Ensure access to affordable, reliable, sustainable and modern energy for all

Romania represents the regional energetic and economical engine, having untapped potential due to a favorable geographical place favoring wind potential, solar energy, water potential, mineral resources and yet untapped potential generated by savings of applied sustainable development and circular economy principles available to implement in our industry.

The energy sector has an essential contribution to Romania's development, with strong influence on economic growth, life quality and the environment. To meet consumer expectations in the long run, the Romanian energy sector must become cleaner, more economically robust and technologically advanced. The energy sector advances a vision and a proposal for developments by 2030 to achieve the strategic goals and prioritized actions against the background of international economic, geopolitical and technological trends.

Romania's low dependency on imported energy resources – combined with structural changes in the economy, leading to the downsizing and relative decline of energy-intensive industries – have helped Romania avoid major disruptions during Europe's recurring energy crises.

We acknowledge that the potential of a leap in an adequate ecological-economical interface with our natural capital is represented by energy consumption. Once this potential is going to be reached would drive an unforeseen economical increase and environmental anthropic impact reduction, unleashing a sustainable technology and economy growth that would enable us to export energy and good practice for a regional green partnership. One such example of lowering our energy consumption for sustainable purposes is represented by the Green House Program (*Programul Casa Verde*) governed by Environment Fund Administration (*Administrația Fondului pentru Mediu*) that aims to lower energy necessary for household heating by the means of thermal insulation and use of solar panels.

In the past 15 years we managed to achieve a 24% (and slightly above) of renewable energy share in energy production, target settled for the year 2020, mainly with the help of solar panels and wind power.

All of these have promoted not only an increasing renewable energy share but also an unexpected trend for green economy principle towards a sustainable development, the benefic results of this being seen since the start, especially regarding the emission reduction (greenhouse gases, micro-particles, dioxins, accidental spills, disaster risks, vibrations and noise emissions), higher efficiency of energy transport infrastructure and investments (power lines, fuel distribution network) for a decreased environmental impact associated with production and installation of this kind of infrastructure, all for the our sustainable development country goal.

In the year 2030 we will look back to this striving effort as a complex road towards our wellbeing.

Strategic goals

The Project of Romanian Strategy for Energy for 2016-2030 has five key strategic goals: energy security, competitive energy markets, and clean energy, along with good governance in the energy sector and affordable energy supplies, which entails the reduction of energy poverty and better protection of vulnerable consumers.

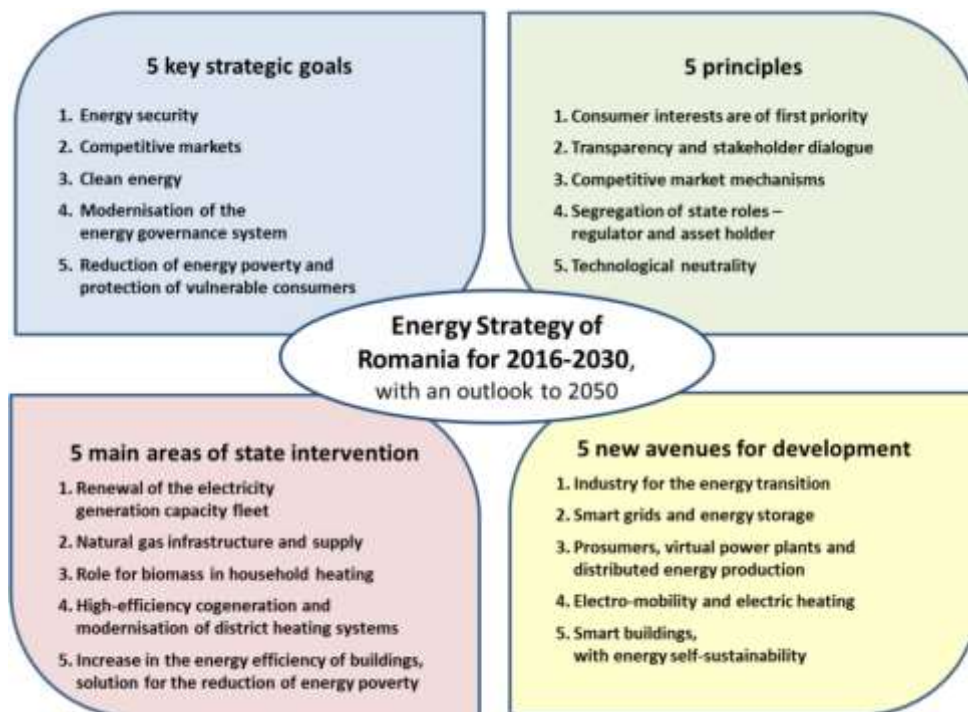


Figure 14 – Elements defining the Project Strategy for Energy of Romania for 2016-2030, with an outlook to 2050

Source: Project of our Strategy for Energy of Romania 2016-2030, with an outlook to 2050 (December 2016)

The objectives address challenging aspects of the Romanian energy sector, which constitute main areas of strategic intervention. The Project Strategy of Romania for 2016-2030 also promotes new avenues of development for the energy sector, which can take Romania forward in the global energy transition and bring substantial environmental and economic benefits.

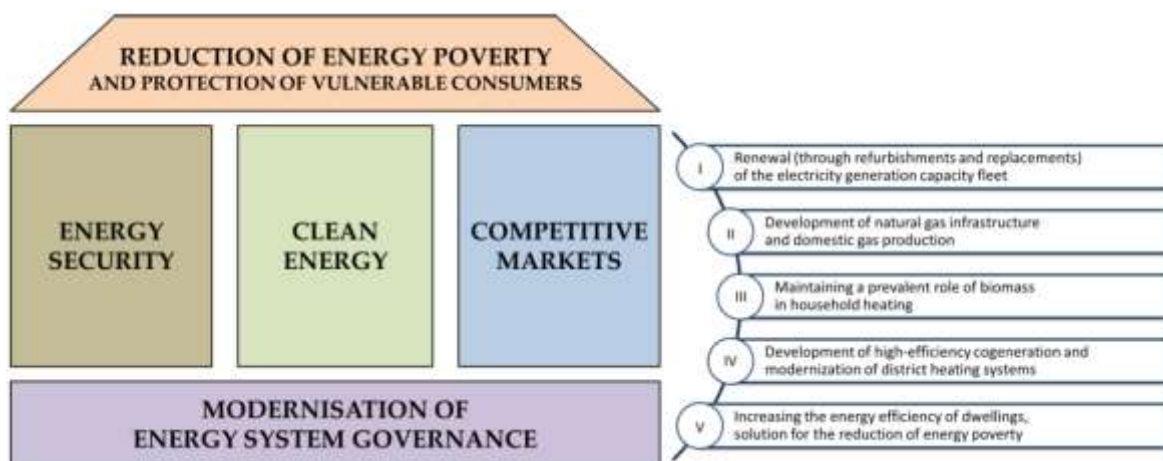
Future energy principles

As a first principle, the Project Strategy is mainly focused on the needs and interests of energy consumers – domestic, commercial and institutional. Such needs and interests are diverse and in continuous evolution. Relating to this, the second principle includes transparency and meaningful dialogue with stakeholders during the overall policy-making process.

Modernization of the energy governance system must follow three principles: better delimitation of the state's roles as policy-maker and regulator from the roles as asset holder and investor; preferential use of competitive market mechanisms in pursuing strategic objectives, to foster a dynamic, yet stable business environment; and technology neutral market interventions.

Technological neutrality minimizes the cost of the energy transition. In pursuit of energy security and emission reductions, one should avoid the tendency to prescribe specific technological solutions, which are not necessarily the most economic. Technological neutrality assumes the competitive market's capacity to select the most efficient technological option in terms of performance-cost ratio. The quantitative modelling exercise indicates the relative competitiveness of technologies and how their mix can make an efficient contribution to the achievement of strategic goals.

Figure 15 – Five key strategic goals and five key areas of strategic intervention



Source: Romanian Project Strategy for Energy 2016-2030, with an outlook to 2050 (December 2016)

Key areas of strategic intervention

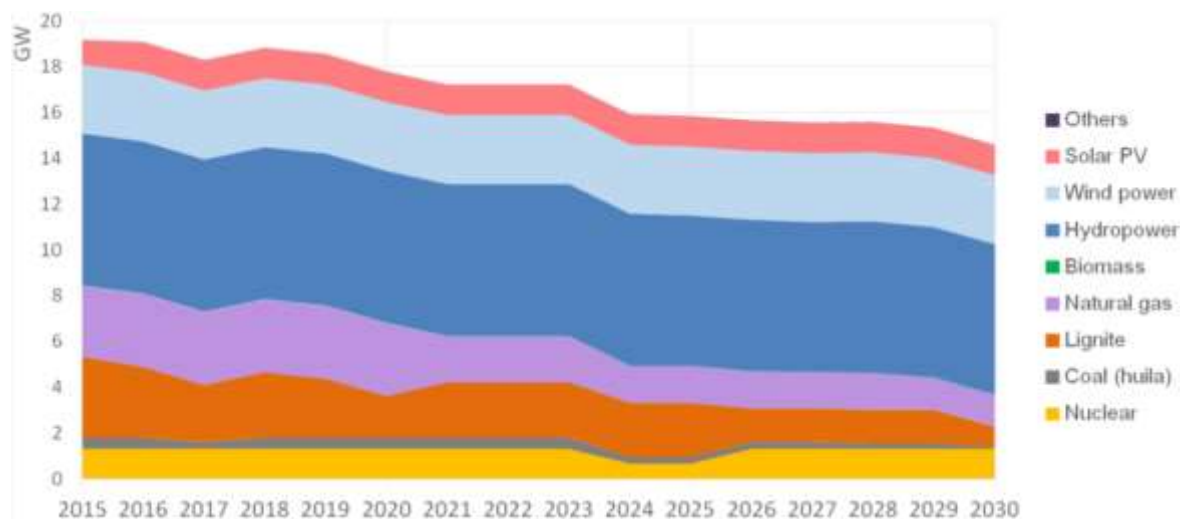
The Project Strategy for Romania for 2016-2030 confirms an important role for conventional fuels - oil, natural gas, coal and nuclear energy - in the energy mix, looking retrospective and to the near future.

Hydropower remains the backbone of the national grid. Despite an increased role for nuclear energy, the energy mix has room also for more renewable energy.

Natural gas produced onshore and in fields recently discovered in the Black Sea, can cover domestic demand, while coal, on a medium and long term, will be under increasing pressure due to rising greenhouse gas emission costs. High-efficiency cogeneration will play an important role, but requires integrated investment planning, in parallel with the modernization and resizing of district heating systems and the progress of energy efficiency programs for dwellings.

The structure of the energy sector and its expected evolution during the period until 2030 indicates that achievement of the five strategic goals depends on successful action within five key areas of strategic intervention.

Figure 16 –Evolution of the existing electricity generation capacities, without investment in new capacities



Source: Energy Project Strategy of Romania for 2016-2030, with an outlook to 2050 (December 2016)

Renewal of the power generation plants

The first key area of strategic intervention is the renewal (by refurbishment or replacement) of the ageing electricity generation capacity. In this process, Romania's electricity mix must remain diverse and balanced. A considerable share of the baseload power generation capacities are nearing their end of life, and some are already economically inefficient and too polluting. The new generation capacities will use efficient, flexible and less polluting advanced technologies, and will be able to contribute to grid stability by providing auxiliary services.

The process of replacing ageing natural gas plants is in progress, as Romania has more than 1500 MW installed in efficient plants, following investments made over the last decade. The process of replacing the remaining old gas power plants will continue during the next decade. Romania has the strategic option to rely on natural gas in the electricity mix, given the flexibility of new gas units (combined cycle gas turbine and gas engines), which can balance unpredictable renewable energy source (RES) generation, and the relatively low cost of initial investment. Gas power is also recommended by low maintenance costs and relatively low emissions compared to other fossil fuel-driven plants.

The competitiveness of coal in the electricity mix depends on the efficiency of each individual group (rather low for existing capacities), on the cost of delivered coal and on energy transfer system (ETS) prices. Coal-fired capacities play an important role in ensuring system stability. The replacement of ageing coal-fired capacities will take place especially after 2025. Any new lignite-fired capacities must have supra-critical parameters, high efficiency and low specific greenhouse gasses emissions.

Our Project Strategy envisages, by 2030, a slight increase in hydropower capacity, following completion of the projects already under construction. The essential role played by hydropower on the ancillary services market will be strengthened through the execution, in due time, of maintenance and refurbishment works.

A pre-feasibility study of potential locations for small sized pumped storage capacities may also be useful. However, investment in a large reverse pumping plant is unlikely before 2030. Hydropower capacities already have a substantial contribution to the ancillary services market, with load variations of up to 4500 MW within 24 hours.

Romania aims to remain an attractive destination for new RES investments in the long run, and capitalize on its high natural resource potential. It also aims to build a new industrial sector,

supplying the energy transition with tools, equipment and materials. New capacities based on intermittent RES will continue to develop in the medium and long term. A key factor for the development of new RES projects will be access to low cost capital. Through adequate support mechanisms, the use of biogas and waste for energy purposes will increase, mainly in cogeneration capacities, in compliance with environmental standards.

Romania has committed to the European target of increasing the interconnection capacity of its power transmission grid to 10% of the total installed power generation capacity and is on track to meet it.

Transition from biomass to renewable energy for household heating

The third key area of strategic intervention addresses the prevalent role of biomass in household heating in rural areas. Almost 90% of dwellings in rural areas and 45% at national level are mainly using firewood for heating. These dwellings are often only partially heated, by burning wood in traditional stoves with incomplete combustion. The comfort level is low and the cost high. For Romania, improving the quality of life for the inhabitants of rural areas is a priority, which includes universal access to quality energy services.

Biomass will preserve a key role in heating rural dwellings. The Government will support, through dedicated policies and Green House Program (Programul Casa Verde) governed by Environment Fund Administration (Administrația Fondului pentru Mediu) for the use of efficient and less polluting equipment (solar panels), as well as other policy to allow biomass and biogas-based cogeneration systems in semi-urban areas which are suitable for the development of small district heating networks.

In 2030, most rural households will probably have access to alternative heating sources, and dwellings will have higher energy efficiency. Growth in distributed electricity generation systems (solar photovoltaic and wind), backed up by small scale storage capacities, will be common in semi-urban areas and facilitate heating with ground heat pumps. Thermal solar panels will become a popular solution for water heating.

Development of high efficiency cogeneration and modernization of district heating

The fourth key area of strategic intervention is the development of high efficiency cogeneration, in parallel with the modernization of district heating supply systems (SACET). The relatively low operating efficiency of thermoelectric power plants justifies large scale development of cogeneration which, in Romania, has high potential. The Project Strategy promotes the integrated local planning of new high efficiency cogeneration capacities, of modernizing the heat distribution networks, and of thermal insulation programs.

The replacement of ageing cogeneration plants by new ones is in progress and will continue during the next decade, especially in municipalities with a high share of apartments connected to the SACET. Most cogeneration capacities are based on natural gas, but the new capacities will use to a higher extent biomass, biogas and geothermal energy.

In parallel, it is necessary to improve and develop local heat markets, increasing the efficiency and resizing the ageing heat distribution networks, as well as by increasing the quality of services provided to domestic consumers.

Increasing the energy efficiency of dwellings and the mitigation of energy poverty

The fifth key area of strategic intervention emphasizes the programs for increasing the energy efficiency of dwellings. In Romania, energy poverty is a result of low income, rather than of high energy prices, but high specific energy use for heating compounds the problem.

The investments will be channeled mainly for the thermal insulation of blocks of flats, with maximum impact in terms of energy savings and number of inhabitants, as well as to energy

efficiency measures in households entitled to heating subsidies, with maximum social and public budget impact. Financing may be both private, supported by appropriate regulations (including to facilitate the development of energy service companies services), and public, such as local budgets, the regional and central budgets, as well as structural funds. Thermal insulation works has to comply with minimum quality standards.

To reach the annual target of thermal rehabilitation of at least 3% of the overall number of public buildings, schools, hospitals, administrative buildings etc. will also be prioritized.

Governance of the energy sector; a review from Center for European Policy Analysis

State-owned enterprises still dominate Romania's energy sector, despite the recent government selloff of significant holdings in energy companies. The government continues to wield significant influence over the sector, although in some cases (Petrom and some energy distribution companies) it owns only a minority share. The state is the majority stakeholder in Romgaz, Transgaz, Transelectrica, Nuclearelectrica and in the coal sector, controlling most of Romania's energy generation companies, an important part of the energy distribution and supply sector, and both national transmission operators.

Implementing long-term, sustainable corporate governance systems at the state-owned enterprises level is key to achieving energy security in the long term. Such a system will provide an effective framework for managing the development of Romania's natural resources, while ensuring much-needed energy security and thus contributing to Southeast Europe's stability in general.

Romania's agreements with institutions such as the International Monetary Fund (IMF), have driven the privatization process of some energy companies. This process started 10 years ago through the sale of majority stakes in state companies to strategic partners like OMV Petrom, Enel, EON and Lukoil.

In 2014, the Romanian government sold 51% of the country's main energy distribution company, Electrica, through a successful IPO. Although the company is now private the state still makes important decisions given that the government is still Electrica's largest single shareholder.

Actual state of energy sector

Legal framework

For achieving national goal of 24% as renewable energy for 2020, Romania adopted law 220/2008 promoting energy generation from renewable sources. Romania reached its objective to increase the renewable energy share to 24% of brute final energy consumption since 2014, reaching an actual level of 26.7%. A series of legal modification produced over law 220/2008, as it follows:

- Ordinance no. 24/2017 for a balanced approach for the revenues of small energy producers (as Renewable Energy Systems) and financial effort to assure clean energy.
- Law No. 122/2015 that allows certain measures in promoting electricity from renewable sources, allowing contracted energy delivery from 0.5 – 3.0 MW suppliers and green certificates rebalance. Prevents green certificates allowance for renewable energy sold at negative prices.
- Ordinance no. 57/2013 promotes a series of measures to prevent green certificates allowance in the case of uncontrolled increase of energy prices, as a way to protect final clients.
- Decision No. 994/2013 approving the reduction of green certificates number allowance of new hydroelectric plants, wind power plants and solar-photovoltaic parks.

- Law No. 134/2012 that assures priority access to electricity grid of certain categories of renewable energy producers. Changes the validity period of green certificates and supplements the allowance of green certificates for each MWh produces in biomass plants.

Energy efficiency

Energy efficiency represents our main engine in achieving European Union's objective regarding energy and climate change, as well as a fundamental pillar in creating Energetic Union.

Regarding energy efficiency, the legal framework is succinctly described below:

- Law No. 121/2014 regarding requirements of Directive 27/2012/EU and measures for energy efficiency in all economic and social activities.
- Decision no. 846/2015 regarding cogeneration on demand for usable thermal energy.
- Decision no.122/2015 for approval of National Action Plan for Energy Efficiency III, version 2014.
- Decision No. 1215/2009 containing criteria, conditions and aid scheme required to implement aid scheme in order to allow high efficiency cogeneration on demand for usable thermal energy.
- Decision No. 1461/2008 allowing procedures regarding warranty of electricity produce through thermal energy due to high efficiency cogeneration.
- Directive 2012/27/EU details a common frame for member state to promote energy efficiency.

Romania has set as target for 2020 the reduction by 19% of primary energy consumption, as envisaged in the scenario based on the reference model PRIMES 2007, that would save of 10 million toe in 2020, reaching 53 million toe along this period of time. As such, we achieve (and exceed) the 43 million toe limit enforced by the Article (3)1 of the Directive regarding energy efficiency, having just 30.32 million toe as final consumption.

Results of our commitment

During the period 2000 – 2015 Romania has an energy consumption under the European average, occupying a position well under other European countries with intense power consumption. This only shows our dedication for a responsible energy consumption and our striving to avoid energy waste, in the context that energy is the key provider for comfort in all places we go.

In order to **upgrade and build new capacities for electrical and thermal energy production**, during the period 2007-2013, investments concerning biomass, hydro-energetic resources (in plants with installed power ≤ 10 MW), solar, wind and biofuels have been supported by the completion of 53 projects. For these projects, payments were made of about 1.052 million Lei; from the finished projects resulted an installed capacity of approx. 225 MW, out of which 192 MW electrical power and 33 MW thermal power. During the 5-year sustainability period from the completion of the projects (2017-2021), the monitoring of the project output indicators is carried out.

The promotion of RES through the Environment Fund has been carried out through the *Programme on Installation of Heating Systems using Renewable Energy, including the Replacement or Completion of Classical Heating Systems* (the so called *Green House* programme). 8687 funding contracts were concluded and, to date, 2,176 systems were installed; the amount financed in 2017 was 13 million Lei. Also, 8 studies have been implemented and funded on the design and operation of a smart energy system in protected areas, as well as two geothermal plants, one in Oradea and one at Agrippa Ionescu Hospital from Balotești, were implemented and financed from the 2009-2014 EEA Financial Mechanism, run by AFM.

Measures to **support the production of energy from less exploited renewable resources** (i.e. biomass, biogas, geothermal) will be financed by ESIF through SO 6.1 from LIOP. To this end, on 17 May 2017, the call for projects for the *Production Sector* was launched, and 4 projects amounting 12.95 million Euro were submitted (1 project was rejected and 3 projects were under evaluation). The call for projects for the *Distribution Sector* was launched on 3 January 2018, and 2 projects amounting 4.81 million Euro were submitted (1 project amounting 2.75 million Euro was approved and contracted; the other was rejected).

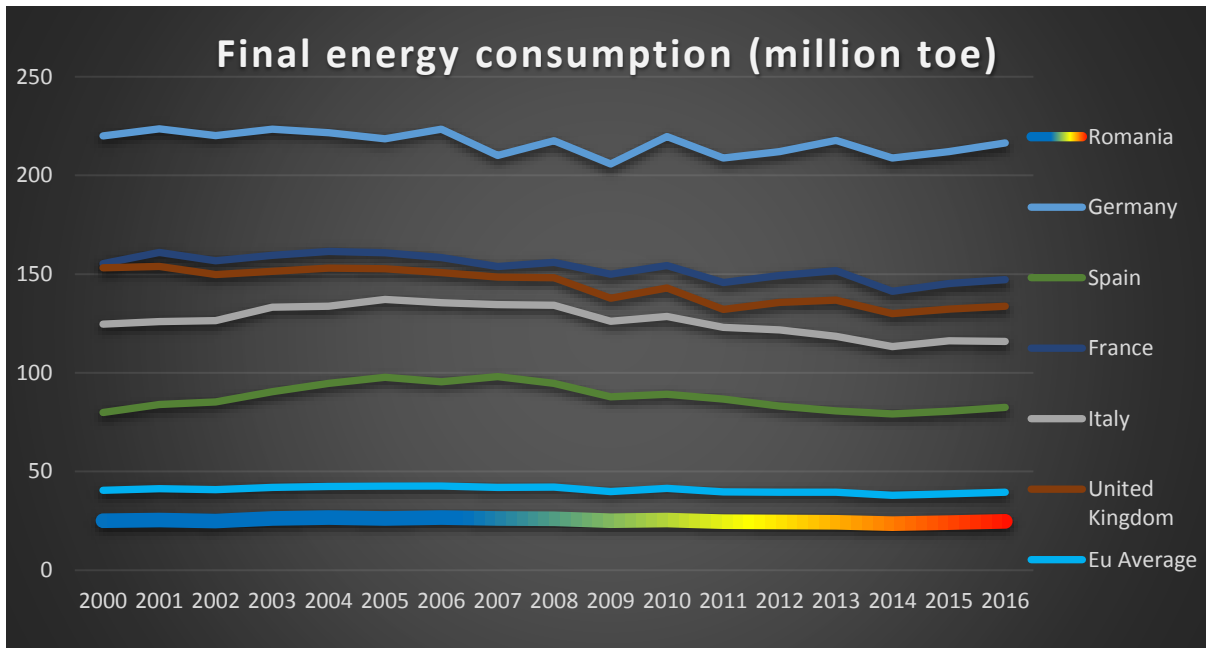


Figure 17. Final energy consumption. Data source: Eurostat, February 2018.

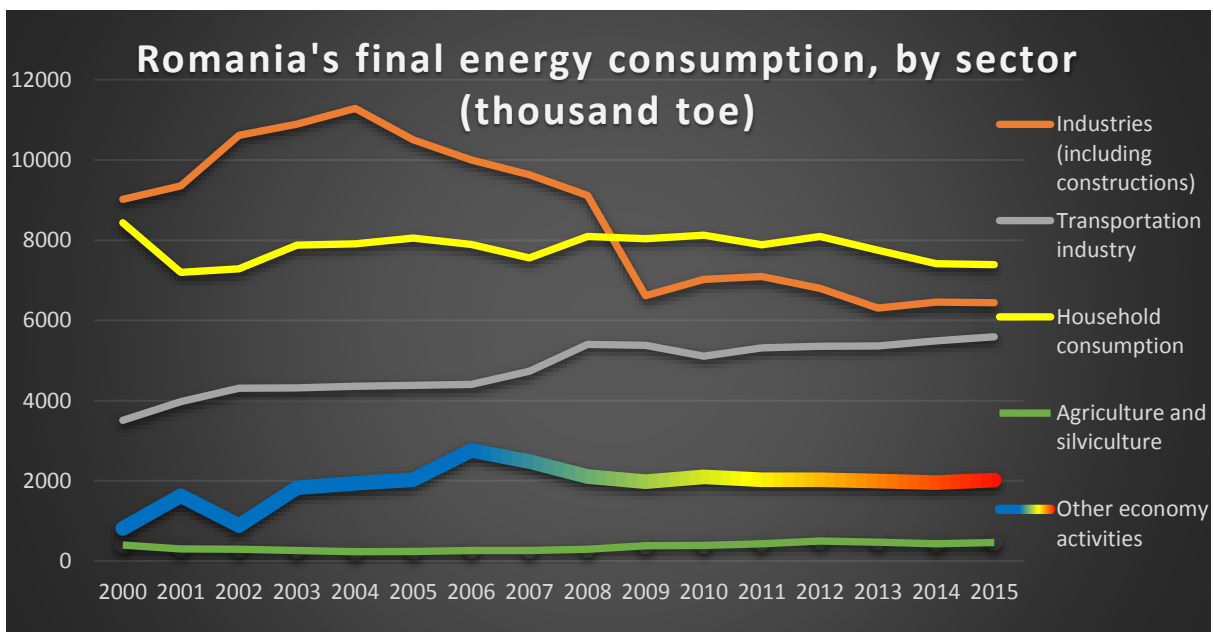


Figure 18. Romania's final energy consumption, by sector. Data source: Eurostat, February 2018.

We celebrate the greatest economy growth in European Union, and to pride ourselves we used our national flag colors to describe the positive trend line of "other economic activities", Romania being a veritable hub for IT&C sector, production and externalized services.

As it can be seen, industrial decline meant a negative trend line of internal energy consumption, becoming second after household consumption. Romania strives to dedicate many aspects that can bring the citizens' wellbeing, while externalizing industrial production to better equipped factories, throughout this transition period, when we establish private factories that are environmentally compliant. We hope that after this "winter season" of our brown economy – industry complex, this will rebirth in a totally green way, this kind of spring season being the jolt we need for a green friendship with our neighboring countries and with other countries where Romania dedicates its efforts to the export of democracy.

Action to ensure access to affordable, reliable, sustainable and modern energy for all

Energy distribution in a reliable way takes place using an infrastructure in continuous growth that assures safety and necessary quality for energy usage in a safe, un-discriminatory and stable way. If we refer to affordability, the quantity of energy produced, the cost per kilowatt and the fact that the household consumers are the first ranked by the quantity of energy consumed shows that energy is really accessible for all.

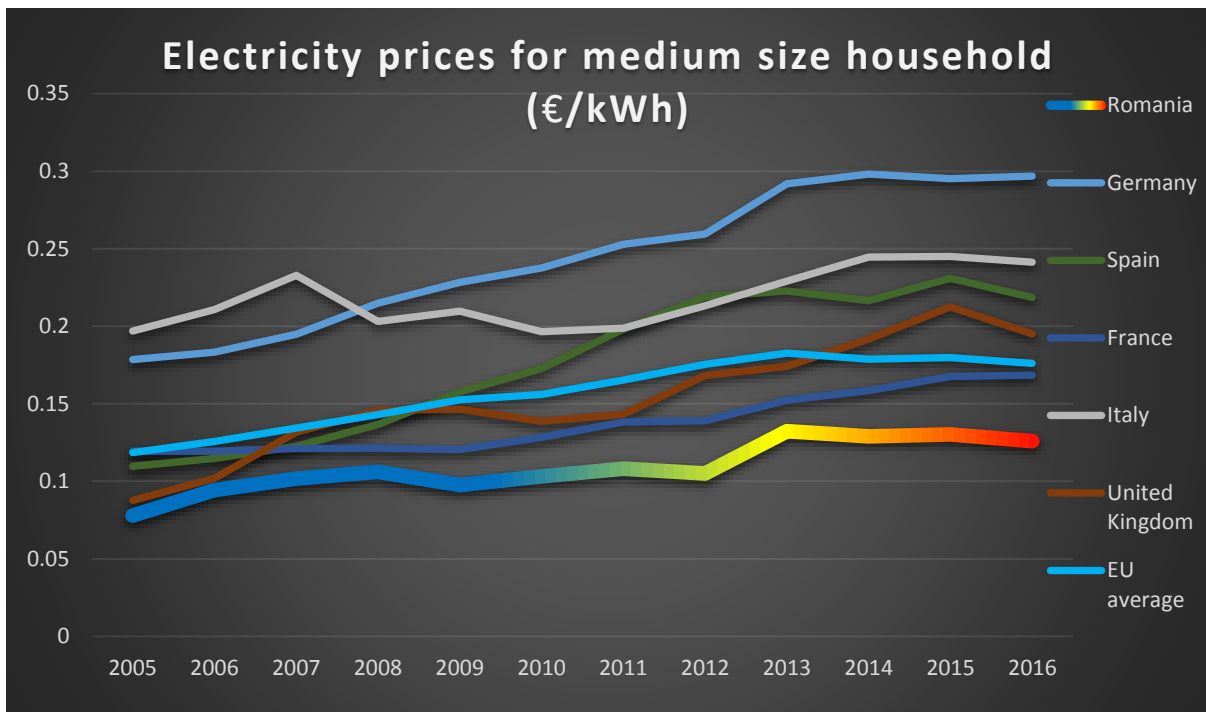


Figure 19. Electricity prices for medium size households. Data source: Eurostat, February 2018.

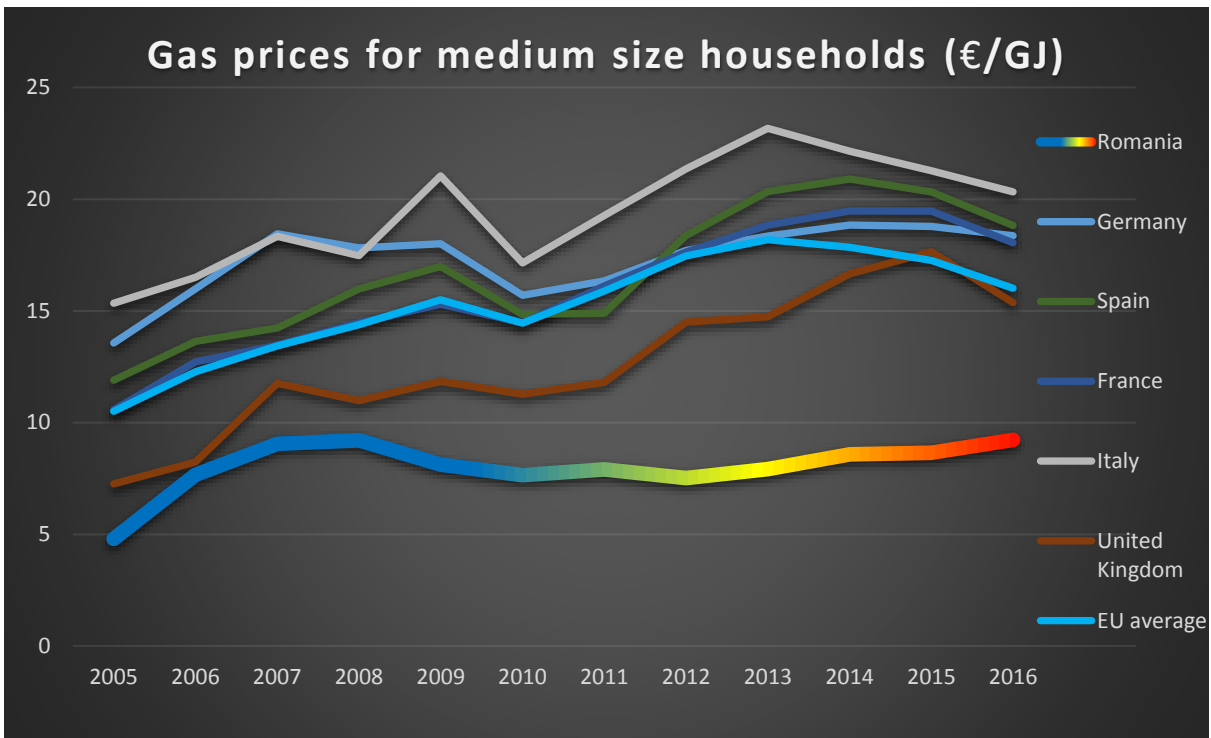


Figure 20. Gas prices for medium size households. Data source: Eurostat, February 2018.

Regarding the energy generated from renewable sources, we have an increase of renewable energy availability made possible through investments in photovoltaic and wind power plants. An important aspect for household consumers is the national program Green House (*Casa Verde*) governed by the Environment Fund Administration (*Administratia Fondului pentru Mediu*) that offers partial or full finance for solar panels installations.

As for the green energy aspects we can compare ourselves as shown in the following graph, with countries with financial power, vast territory, democracy as a tradition, workers influx (some of which are used for applying or spreading green technologies), good annual income and facilitated access to opportunities and technological advancements.

It becomes clear our real and founded dedication for achieve the internationally assumed renewable energy share and our dedication for a clean environment.

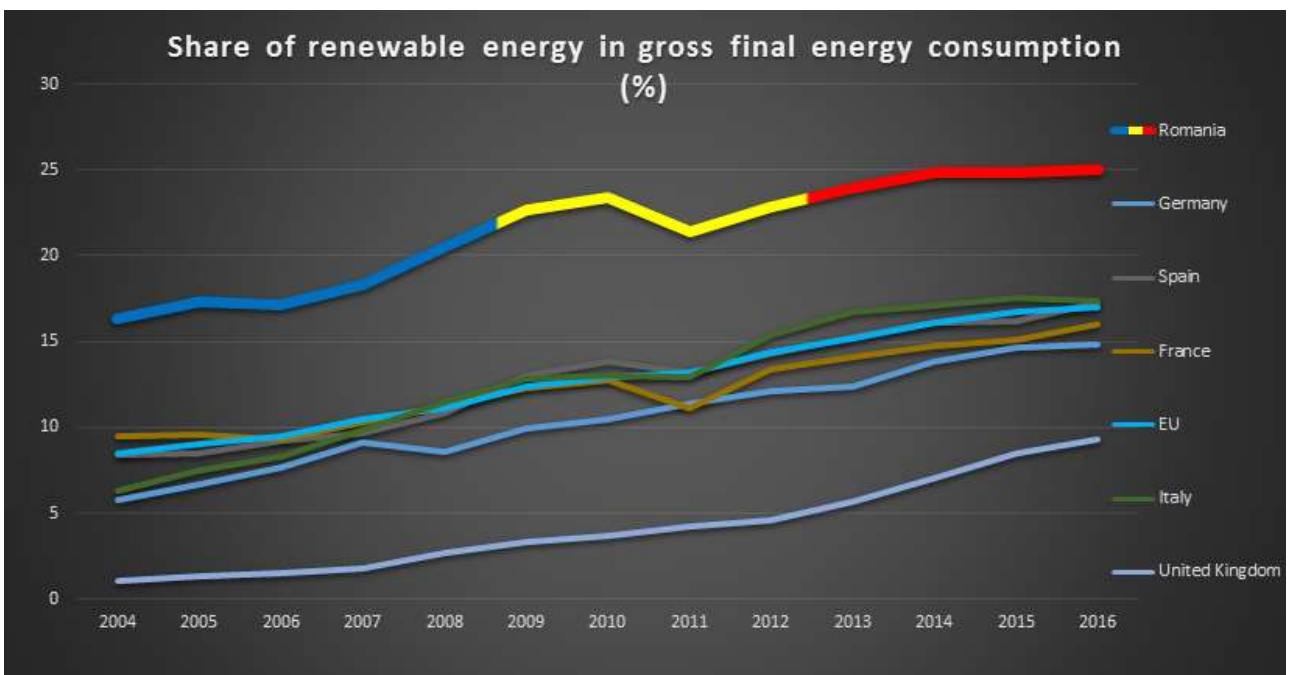


Figure 21. Share of renewable energy in gross final energy consumption. Data source: Eurostat, February 2018.

We pride ourselves for reaching 24% of renewable energy before many other partners from the EU and against the fact that Romania doesn't have the best geographical placing for solar light exposure and wind streams and despite the recoil of economic crisis from 2008, felt in energy field several years later (2011), being associated with a lower quantity of renewable energy delivered in our distribution network, a similar trend being observed in several other countries.

Further achievement of SDG 7

For further achievement of the energy aspects of Sustainable Development Goals, Romania plans the following lines of action:

- Increasing the share of renewable energy and fuels with low carbon count in transportation sector.
- A better consumer information regarding renewable energy sources.
- Promoting energy efficiency as a way of greenhouse gasses reduction, diminishing of energy cost and increase of energy safety.

Reaching our full potential, with applied sustainable development means, can save us true quantities of fuels and greenhouse gas emissions, with further development of green technology. All of this can drive a lower costs per kilowatt and lower impact on the environment.

Domains	Domain final energy consumption, in 2010 (%)	Reduction potential of final energy consumption (%)
Buildings	36	41.5
Transportation	22	31.5
Services	11	14
Industries	31	13

Saving potential by energy consumption domain. Data source: Ministry of Energy, 2016

Romania's Energy Crossroads; a review from Central European Policy Analysis

Central and Eastern European energy security has gained new vigilant urgency since the beginning of the Ukraine crisis, considering in particular the region's dependence on imported natural gas. Romania is in a somewhat privileged position since it has energy resources of its own and a strategic location at the crossing point between east-west and north-south energy transit routes.

To address these pressing challenges, the Center for European Policy Analysis (CEPA) initiated Romania's Energy Crossroads Program. Structured as a targeted 12-month effort, it builds on the momentum of CEPA's highly successful U.S.A. - Romania Initiative, focusing this time on Romania's need for durable energy security.

The program concentrated on improving resource and supply diversification to achieve energy security for Romania, with special emphasis on the oil and gas sectors, in a complicated regional environment. It aimed at:

- advancing policy options
- promoting best practices (domestic and regional) in energy sector governance
- improving the national legal and regulations framework
- developing measures to enhance transparency and accountability.

It sought to examine realistic ways to turn to good account Romania's potential role in the regional energy market of Southeastern Europe and its contribution to Central Europe's interconnector infrastructure. Drawing on a strong contingent of high-level expert contributors to the U.S.-Romania Initiative, CEPA managed to gather participants from the United States, Europe and Romania to meet regularly as part of a dedicated Energy Working Group to identify where Romania was succeeding on the energy front, where it was underperforming and what policy steps national leaders ought to consider as a result of that analysis.

The intention was to mobilize elite constituencies, which might not otherwise engage with each other, in a joint policy debate. Involvement in the program provided an opportunity to address critical issues that are of interest to the energy industry in Romania in a strategic context and to find the right way to present meaningful options to government officials and other decision-makers.

Strategic Policy Options for Improving Romania's Energy Security; Short-term versus Long-term Approaches in the Energy Sector

Energy security is defined by the International Energy Agency (IEA) as the uninterrupted availability of energy sources at an affordable price. In the short term, it focuses on the ability of the energy system to function normally and to react promptly to sudden changes in the supply-demand balance. In the long term, it deals mainly with timely investments to supply energy in line with economic developments and environmental needs.

In the short and medium term, Romania is in a relatively good position in terms of energy security compared to most of its neighbors in Central, Southeastern and Eastern Europe. Its low dependency on imported energy resources – combined with structural changes in the economy, leading to the downsizing and relative decline of energy-intensive industries – have helped Romania avoid major disruptions during Europe's recurring energy crises.

For the time being, Romania's main assets ensuring virtual energy self-sufficiency are:

- A reasonably well-balanced mix of primary energy resources (gas, oil, coal, renewables including hydropower, nuclear).
- Still significant, though declining, domestic production of oil, gas and coal (mostly low-grade); promising new hydrocarbon discoveries in offshore deposits on the Black Sea, shelf and onshore mature deposits requiring deeper drilling or other techniques.
- Safe and duly certified nuclear units equipped with Western technology and relying on domestic production of nuclear fuel.
- A relatively well-developed wind and solar (photovoltaic) sector, plus envisaged projects for other renewables (biomass, waste-to-energy, geothermal, micro-hydro) that are likely to meet Union (EU) targets by 2030.
- Broad compliance, with a few exceptions, with EU energy legislation and regulations prescriptions under the Third Energy Package, with good prospects for fulfilling the requirements of the planned Energy Union.

Yet these comparative, and temporary, may drive us into a false sense of security by obscuring the challenges and vulnerabilities that will inevitably arise in the future, hence the need for a regional partnership with our neighboring countries, in a sustainable development of energy production.

In the long term, considering the highly inertial nature of investments in the energy sector, Romania has to make quite a few hard choices not later than 2019 to keep abreast of the dynamic developments in world markets, technological innovation, mainstream options in EU energy policies and Romania's specific conditions and requirements. In addition to coping with the above-

mentioned weak points, Romanian authorities will have to consider further practical measures in the following areas:

- 1.** Making strategic decisions have to be made sooner rather than later about the main future sources of hydrocarbon supply and transportation to avoid one-source dependency and to secure reasonable pricing according to a pre-planned schedule that is correlated with the anticipated decline of national resources.
- 2.** Accelerated introduction of modern, cutting-edge technologies in power generation and use with due regard for environmental concerns (smart grids and smart metering, advanced power storage methods – e.g., high-capacity batteries, flywheel techniques), and development of alternative or unconventional sources of energy to reduce the cost of electricity and improve the competitive edge of Romania's exports to regional, EU and other markets.
- 3.** Dealing aggressively with energy poverty - both in Romania itself and in the wider region – through coordinated national support schemes for vulnerable consumers and other measures congruent with EU legislation and regulations.
- 4.** Rethinking the governance framework in the energy system to shield state-owned enterprises (SOEs) from political interference and to create a friendlier legal, regulations and fiscal environment for investment and business development. A proper implementation of Ordinance 109/2011, together with the continuation of the initial public offerings (IPOs) and secondary public offerings (SPOs) program assumed by the government with the international institutions, are critical steps to achieve these goals.
- 5.** Building long-term national energy strategy options in conjunction with actual progress made toward the E.U.-U.S.A. trade and investment partnership and rendering strong political support to that end.

SUSTAINABLE DEVELOPMENT GOAL 11

Make cities and human settlements inclusive, safe, resilient and sustainable

Human settlement evolution is a key and fundamental support for humanity and it needs a smart step in current years where it has to tackle the increasing number of population, fluctuant demographic due to travelling, frequent transit, virality of infectious agents, lack of space, cultural diversity, requirements for heating and cooling, pollution, general rates of consumption and the need for parking and traffic improvement. All of these can be done using smart approach, regardless of the community size.

Unlike the traditional community, modern developed society has to tackle the exponential demographics increase and the percentage of land occupation, increasing crime rates, certain shortages due to slow merchandise delivery in a fast moving merchandise economy and degraded environment.

Technology is most of the time the critical component of which many modern civilization is based on for daily processes, we can't imagine any modern society without technology.

Digital Single Market of European Commission proposed smart city as a community of networks and traditional services becomes efficient with the help of technology and communication, for protection of the environment, citizens and economics. It should integrate information technology and communications for efficient use of resource and infrastructure for assuring all city requirements

The purpose is to enhance the quality of life and avoid environmental decline by using smart technologies to ensure sustainable development of communities.

The certain objectives is to raise the general knowledge for smart cities, large scale implementation of smart and inclusive societies and helping local authorities to take the inclusive cities to a reality.

When it comes to a community, we should address the individual habits for small changes for a more intelligent and sustainable development and use of resources, some using technology:

- Selective sorting of waste
- Smart tap to avoid water waste
- No discarding of toxic chemicals in the environment
- Electronic recycle
- Protection of wild flora and fauna
- Replanting trees and improved social conventions
- Automotive usage reduction, reducing the consumption and pollution
- No noise emission by any means
- Modern means for in house lightning solutions and households electronics

Certain trends emerge when it comes to safe, inclusive and efficient cities:

- Respect for living forms and environment
- Respect for the community members, community and the law
- Sustainable use of available resources and recycling as a new resource
- Reduction of dependence of non-renewable resources

- Civic interest in community problems
- Sustainable development at all levels of the community.

Domains of application

Smart, inclusive and safe cities requires to involve multidisciplinary operational teams to implement technical solutions based on a strategy initiated and validated by urban planning specialists, who can generate results in the medium and long term, as it is necessary to understand "metabolism of a city", urban planning and planning electronic communications architecture, energy, environment, etc. Therefore, effective solutions taken from previous good practices have proven to be the result of an approach multidisciplinary and close collaboration between specialists in different fields such as: urbanists, architects, builders, engineers, service providers, responsible for public policy making, stakeholders and entrepreneurs, civil society, academia and, last but not least, citizens.

At local level there are a number of sectors, areas that cannot become "Smart" without proper development of communications infrastructure electronic systems to monitor and manage these areas. Between the most important of these areas or sectors are:

- Telecommunications (the basic element of the smart city concept);
- Smart grid;
- Transport infrastructure (mobility);
- Drinking tap water and sewage infrastructure;

Telecommunications, electronic communications made through physical environment (conductor cable, optical fiber) contributes to the interfacing of all equipment and applications that monitor and manage all of them other smart infrastructures. Similar radio-communications, respectively communications wireless, have a significant contribution to the interconnection of networks, services and infrastructures in geographical areas with less coverage telecommunication networks. At community level, communications networks must be developed so as to allow coverage with a granularity as high as possible, a better penetration of services and be appropriately protected and physically secured (underground canals, distributed networks antennas, etc.).

Green energy and the environment

It should be emphasized that the implementation of the concept of smart community brings immediate benefits, with a significant impact on the quality of life citizens and the environment, these two elements being, in fact, those the most important global indicators that we should monitor in to improve them. That is the only way we can help ensure a climate balanced on a long - term basis, allowing for the sustainable development of communities; the continuity of human society itself. Absolutely all the other elements in the area social and economic, are following these two main indicators: quality of life and the quality of the environment.

We need to intervene immediately to ensure and maintain for a long time balance with the environment, with nature, so we need to identify and to apply intelligent solutions in all areas of action, starting from infrastructure and energy and going to health, education and mobility.

Promoting projects aimed at using each building (or housing) as a host for solar panels for the production of hot water and photovoltaic panels for electricity generation is one of the more accessible methods for the gradual increase of the use and production of green energy. This approach is supported by funding projects from national funds, for the premises of decreasing green and green energy costs and to support the transition to "smart" technologies such as the control of indoor and outdoor lighting, control of ambient parameters (temperature, humidity, etc.), increase air quality in enclosures, control power consumption, etc., made locally or remotely.

Public safety

According to the article 3 of the Universal Declaration of Human Rights adopted by the Assembly General of the United Nations on September 10, 1948, Every Human Being has the right to life, liberty and security of his person. Article 22 provides that "Any person, in his capacity as a member of the company, is entitled to social security; every person is entitled through national effort and collaboration internationally (taking into account the organization and resources of each country), to achieve the realization of the economic, social and cultural rights indispensable to every person dignity and the free development of her/his personality. Also, the article states that "Everyone has the right to a standard of living to ensure them his health and well-being and his family, including food, clothing, housing, medical care, and necessary social services; every person is entitled for insurance against unemployment, illness, disability, widowhood, old age or in the other cases of losing the means of subsistence, as a result of circumstances independent of her/his will. Mother and child are entitled to help and protection special. All children, whether they are born in or out of marriage, enjoy the same social protection."

The disproportionate evolution of human society, economic or social crises, unhappy personal situations, etc., are issues that can lead, in the short or longer term, to escalations of people's safety and public order. It is the duty of public authorities to provide human communities with a state of order public, trust, security and personal security to ensure compliance human dignity and facilitate the free development of personal personality.

According to the National Strategy on Social Inclusion and Poverty Reduction 2015-2020 of the Ministry of Labor and Social Justice, children, elderly and citizens with disabilities represent the most vulnerable communities in Romania. From this perspective, this guideline covers general safety and security measures such as and, in particular, measures centered on vulnerable members of the human communities in Romania.

Modern technological evolution brings with it some risks and benefits increasing the level of public safety and security. Smart technologies, along with mobile technologies, allow for a wide range of services today intended for citizens. In this respect, the following categories of "smart" services (via use of "smart" technologies) are considered important to the community:

- Safety and security measures for children and young people inside and in proximity of educational establishments, playgrounds and other areas in frequently attended by children and young people;
- Measures on the security of the elderly in public and in the private sector, especially in difficult climatic conditions;
- Measures for early detection of potentially violent situations conflicting, or incidents such as traffic jams, crowds, unauthorized human traffic, auto traffic issues etc. and their notification to citizens, until legal settlement;
- Measures to facilitate the emergency service call in crisis situations or urgency occurring in the private environment or in the public environment;
- Early detection measures, where possible, and information early warning of citizens about climate or weather conditions special environment, emergencies, or other potential events accentuated pest;
- Automated traffic redirection measures for optimization movement of vehicles and persons.

e-Health

Continuous acceleration in the field of knowledge, innovation and technological development influences remarkably all areas of human existence and performance. Globalization, growth and demographic mobility create new relationships and needs social, biological, economic and cultural.

Particularities of the spatial development of the territory under the conditions of urban concentration of the population attracted by the economic force of new technologies creates the premises of some gigantic structures - the mega metropolis that needs to perform new functions correlation and multi-sectoral interdependence.

Migration continues from village to city determining urban agglomerations that resulting in major challenges, especially in the service area and assurance of quality of life. In the current demographic and economic context of Romania, the low cost of living cost has direct consequences on health and healthy life expectancy. Optimizing the use of available resources to ensure sustainable future development conditions is a challenge for all wise communities that want, know and can adapt to new challenges to the future. Familiarization with some approaches and achievements in the Romanian and international practice allows the identification of new perspectives for each community open to the future. Community creativity and mobilization capacity will be the tools to achieve the sustainable development performance, with direction and sense chosen by community members themselves. Most of the current models and programs of intelligent cities also mention projects to increase the performance of the health system and the quality of life. Telemedicine and services health. Health has become a major global problem, requiring a focus on national and community attention.

Smart Cities in Romania

The Ministry of Communications and Information Society launched the pilot project "**Alba Iulia** - Smart City 2018", which includes projects at different stages of implementation, related to the extension of the free WiFi network and intelligent public lighting, applications for reporting incidents, with a public-private partnership.

The municipality of **Oradea** started developing an integrated strategy for digitizing the city in July 2016, when it launched the "Oradea City Strategy for Informatics 2016 -2020", which will be phased in. With regard to transport, the purchase of new electric buses or trams is planned.

Through the Oradea City App application, users can find information about tourist attractions with audio guide, about the nearest hospital, ATM or pharmacy and can pay for public transport or parking. Information is also provided on the routes of different bus or tram lines or public parking system in the city. The Oradea City Report application for citizenship application allows citizens with civic spirit to submit various complaints about various incidents to public institutions and operators.

In 2011, the **Sibiu** City Hall has created and put in place an e-administration platform for more effective communication with the community. The platform can pay online taxes and fees, petitions can be filed, information can be requested. The platform also has a newsletter subscribed to over 15,000 citizens so far. Sibiu City Hall also issues electronic certificates of urbanism, extension of town planning certificates and extension of construction and dismantling authorization. The documents required to obtain these documents will also be submitted by citizens in electronic format. The service is provided through the <https://edirect.e-guvernare.ro> platform. Sibiu City Hall has promoted two projects that will install eco-efficient lighting in two parks in Sibiu. The first project, the installation of eco-efficient lighting in Sub Arini Park, is already under way and involves the installation of eco-efficient lighting fixtures and WiFi HotSpots. The project also includes a telegraphy system that allows centralized and remote monitoring of the system. The lighting system allows to adjust the intensity of light on time intervals, and in the playground lighting can work by triggering motion sensors.

The transportation efficiency if achieved by installing in the entire fleet of busses with GPS devices, coordinate at a dispatch center that monitors the timing, fuel consumption and allows the installation of electronic displays in stations that inform passengers about the arrival time of the next bus.

Visitors to Sibiu Zoological Garden have since July 2016 a virtual guide that will provide information on the 270 animals hosted here. The Virtual Guide is an interactive mobile application, available in Romanian, English and German, which provides the user with both text, photos and audio. The app can be downloaded from the Google Play Store or App Store. Alternatively, you can scan the QR code on the information boards at the two zoo garden entries. To facilitate the download and use of the application, the Sibiu Zoo provided a free WiFi network. Because this application uses "beacon" technology, when the visitor who installed the app will approach an animal-hosting space, it will be informed of where it is located and will receive information about the animals that it is can see around him.

Bucharest City Hall's plans for the medium and short-term implementation areas for the development of Smart City infrastructure in Bucharest are the Traffic Management System, the bike-sharing system, the public transport, online system for public administration and the Emergency Situation Management System.

Bucharest City Hall implemented a smart traffic management system in 2007-2009. It cost about 20 million euros, and at the time it was one of the most modern in Europe, with 170 intersections integrated. Based on the information received from traffic, the stoplight waiting time can be changed automatically to free up the intersections. The 280 video cameras transmit on the screens of the information center from 215 traffic lights in Bucharest, out of the total of 450 traffic lights that we have in Bucharest at the moment, and by the middle of next year, we want all 450 traffic lights to be integrated into this system. New fiber optic connections have also been made between the new center, the data center and the connecting nodes traffic and data processing and storage equipment, as well as traffic management applications, have been moved and installed in the Integrated Emergency Management Center.

New buses with WiFi. The year 2017 also brought renewal plans for the public transport vehicle fleet, the Mayor of Bucharest announced the launch of the tender for the acquisition of 400 buses, 100 trams and 100 trolleybuses, as well as an acquisition procedure for the installation of free wireless internet for travelers in public transport. Also, a procedure for acquiring an application for informing the passengers about the means of public transport, the waiting times, as well as the times for these routes.

Another measure of transforming Bucharest into a "smart" city will be the implementation of a municipality's own infrastructure to use LoRa Wan technology or a similar technology that will enable the building of intelligent objects networks with direct applications for parking systems, public, public lighting or alternative infrastructure.

Project for intelligent car parks will begin to set up 13 parking lots, which add up to 3,000 parking spots. In some of the 13 new car parks a smart-parking system will be implemented by the end of the year so that citizens can see on the mobile phone, based on an application, how many places are free, reserve their seats and pay.

An alert application, of a private initiative, was launched in 2015 called Civic Alert through which citizens can apply to various local authorities the problems occurring in the city, with country-wide coverage. Problems that may be signaled include: pits in traffic, traffic jams, irregularly parked cars, defective traffic lights, flooded streets, deforestation, illegal construction and criminality. When there is written answer required, it is sent by e-mail to the citizen who made the referral. When the problem is resolved it appears as such in the application issue tracking.

Improvements of Romania in SDG 11 statistics

Thanks to the modern means of housing and economic growth, Romania achieved to improve its rating regarding the living conditions.

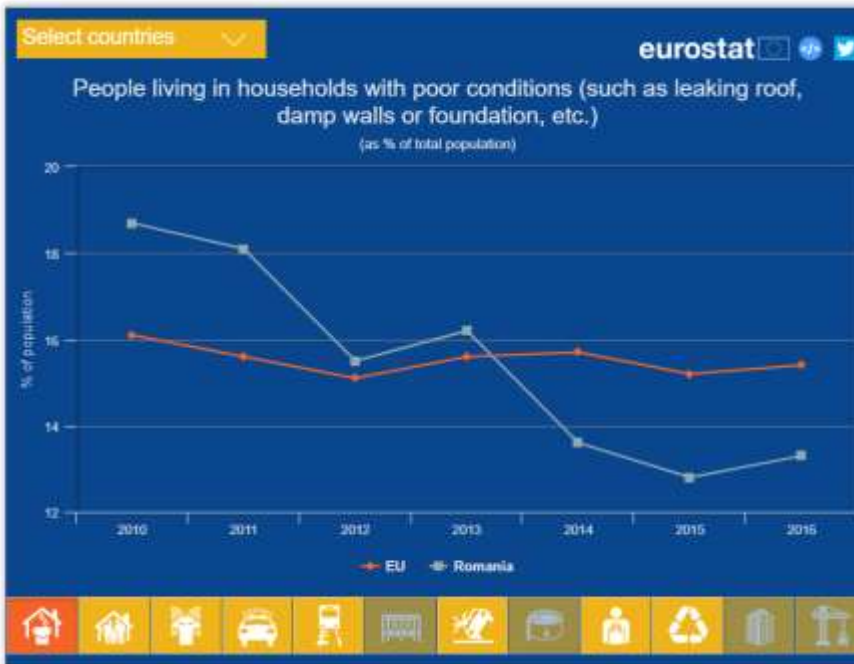
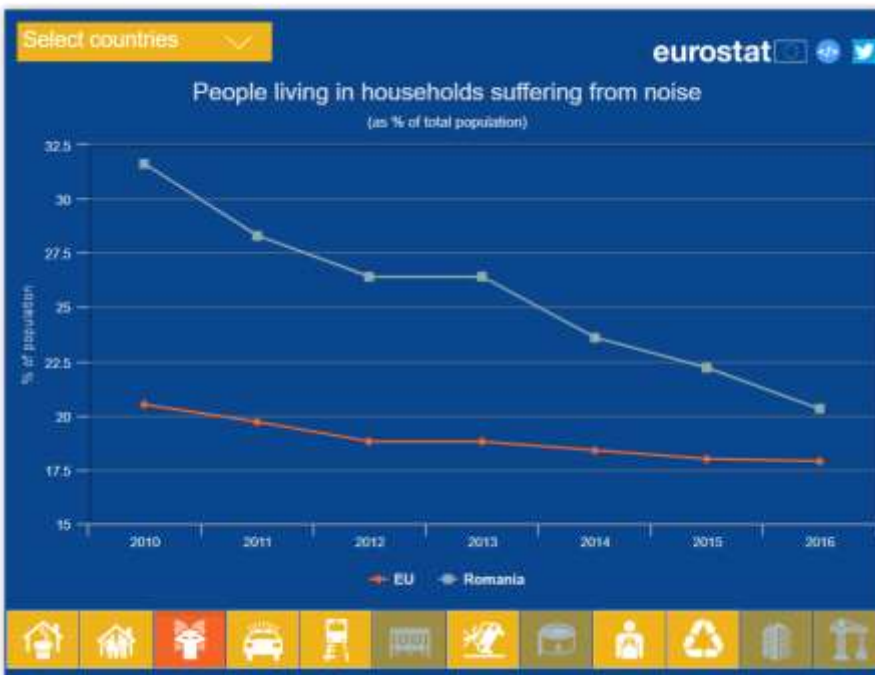


Figure 22. – People living in households with poor conditions, Source: EuroStat, SDG 11 Indicator, April 2018

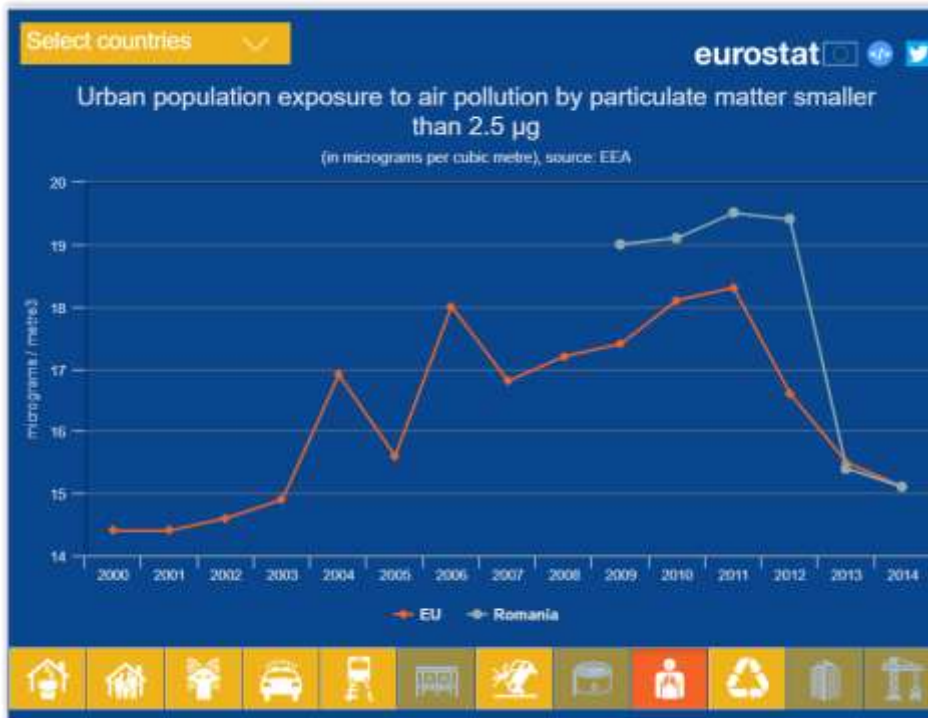


Noise and PM2.5 emission are some other tackling problems we strive to overcome. Noise is mostly generated by production industry, construction and transportation. Lowering noise emission is a complex problem to address, requiring massive investments in private owned industries, construction sites and automotive products.

Source: EuroStat, SDG 11 Indicator, April 2018

Figure 23 - People living in households suffering from noise

PM2.5 (particulate matter with a diameter of 2.5 μm or less) is a result of friction and heavy weight interaction between contact surfaces. Major sources of this are the transportations means, industry, combustion or fire, sandstorms or volcano activities.



Source: Eurostat, SDG 11 Indicator, April 2018

Figure 24 – Urban population exposure to air pollution by PM2.5

Civil Society Organizations contribution to sustainable communities

Targets	Habitat for Humanity Romania's contribution
11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums	<p>Key figures about Habitat for Humanity Romania since 1996:</p> <ul style="list-style-type: none"> - 69.000 beneficiaries of Habitat programs in Romania (50.000 through training and disaster risk reduction and response programs. 1900 direct beneficiaries who moved into new homes built by Habitat or moved into houses and buildings renovated by the organization)
11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations	<p>In 2005, Habitat for Humanity Romania initiated a Disaster Risk Reduction and Response (DRRR) program, in order to reduce disaster risk, through the analysis and control of risks faced by families in vulnerable communities. The locals are trained to recognize the risks faced by the community where they live, how they can prevent or reduce the damages and how to react in case of disasters.</p> <p>The Disaster Risk Reduction and Response program now counts 47,000 beneficiaries living in 42 communities, in 10 counties.</p> <p>In 2011, Habitat for Humanity Romania partnered with the Romanian General Inspectorate for Emergency Situations (IGSU).</p>

Future directions for our inclusive, safe and sustainable community

In the spirit of values and principles on the grounds of which the National Defense Strategy 2015-2019 "A strong Romania within Europe and the World" was set up, meeting its goals entails a joint effort at the level of the political class and the civil society, as well as the efficient use of our country's human, material and financial resources. It is desirable that the political class take on the

worded interests and objectives, by ensuring decision transparency and the judicious use of public funds, and that the civil society become involved in the development of the security culture and in the open debate of security issues.

Strategic consistency and coherence rely on the convergence of objectives and lines of action put forward by the National Defense Strategy, the Government Programme and the planning documents at the NATO and the EU level. This convergence must be pursued through setting up priorities and making objectives viable, budget planning and proper resource allocation.

This revision must take into consideration the new threats and the need to observe civil rights and liberties. In order to attain the objectives and to accomplish the directions shouldered by the current Strategy, institutions with competence in the field will elaborate the subsequent sector wide strategies, programs and activity plans.

Actions to have in consideration in order to achieve sustainable development of our cities and other settlements:

- Providing integrated solutions (social housing, education, health, insertion on the labor market) for the population living in disadvantaged and marginalized areas in cities;
- Ensuring access to utilities and basic services for the most vulnerable, living in precarious conditions inside or at the outskirts of urban centers;
- Increasing the public housing stock with social destination and/or provide rent allowances for low income persons and households;
- Ensure safe and secure and accessible housing for all people;
- Increasing the citizen's level of security by protecting their life, bodily integrity and ownership rights;
- Identifying and counteracting activities conducted by organized criminal groups;
- Preventing and fighting against tax fraud and other forms of economic and financial crime;
- Fighting against drug consumption and trafficking;
- Securing the border, particularly the external frontier of the European Union, in order to combat illegal migration, human trafficking and other risk bearing on national security;
- Increasing the responsiveness and management of the emergency situations;
- Ensure human resources, as well as material, financial and informational means needed for maintaining and developing the operational capacity of relevant institutions, based on a rigorous planning process;

The intelligence, counterintelligence and security dimension

These dimensions are an important context facing refugees or other asymmetrical challenges of other non NATO, UN or EU authorized action should follow:

- defending constitutional order and values;
- identifying and signaling acts of corruption;
- drawing attention to systemic dysfunctions in ensuring vital services for the population, as well as flaws in major public systems;
- identifying and signaling dysfunctions, risks and threats regarding: energy security; the management of EU funds; the functioning of financial markets; population food safety; environment safety; regional and transport infrastructure development objectives;

- identifying interferences that can affect economic and financial decision-making at a strategic level and combating large-scale tax fraud acts;
- ensuring mechanisms to prevent and counteract cyber-attacks targeting informational infrastructures of strategic interest, associated with promotion of national interests in the field of cyber security;
- identifying and counteracting asymmetric and hybrid actions;
- identifying and signaling deficiencies in the optimum functioning of critical infrastructures;
 - preventing and fighting terrorism;
- knowing, preventing and eliminating risks and threats generated by hostile intelligence actions, securing counterintelligence protection of national interests, as well as of classified information;
- identifying and counteracting organized cross-border crime carrying out activities with a high economic and social risk, and preventing their access to the state's decision-making mechanisms and national economic resources;
- knowing the objectives, resources and lines of development of clandestine arming programs concerning conventional weapons or weapons of mass destruction and carrying vectors, as well as counteracting illegal transfers of strategic products.

Economic and energetic dimension

Energy and economy goes most of the time hand in hand, without it no modern civilization cannot face its daily household and industrial metabolism and crisis situations, general lines of action should circumvent the following lines:

- ensuring the competitive framework and competitiveness by reducing affect the sound functioning of the business environment;
- ensuring transparency of local markets and their capacity to function correctly with external markets;
- ensuring energy security by effective adjustment and streamlining of the primary energy resources consumption structure, increasing energy efficiency, developing projects aimed at ensuring diversification of access to resources, increasing the interconnectedness and competitiveness capacity, including by the implementation of the Energy Union's objectives;
- promoting policies that reduce the development gap between the country's various regions;
- developing and streaming infrastructure networks;
- consolidating national natural and financial capital;
- preventing and counteracting factors generating risks to the population's food safety and environmental security.

The crisis management dimension

The way a nations prepares for surprise events defines the nation's future and resilience, Romania aims at:

- upgrading the national integrated crisis management system;
- preparing institutions and the population for crisis and civil emergency situations, including through mobilization training and drills, as well as through international cooperation;
- preparing decision-makers to take action and make decisions during crisis situations;

- ensuring material and human resources required by institutions with competence in crisis management, in line with a planning process;

The educational, healthcare, social and demographic dimension

Current challenges regarding Romania's security call for the development of a creative intellectual system where **education, healthcare and social factor** should prevail.

In this field will primarily aim at:

- drawing up a large-scale national education project, aimed at ensuring, projects and achievements;
- motivating scientific research, in correspondence with the education system, as a key process in comprehending the nature of current threats and challenges;
- fostering the security culture, including through continuous education, aimed at promoting values, norms, attitudes or actions allowing for the assimilation of the national security concept;
- boosting the responsiveness of the public healthcare system in case of pandemics or emergency situations;
- shaping the healthcare system by placing the patient at the center of this system;
- linking labor market policies to healthcare and education policies, in order to support sustainable development processes;
- adopting coherent measures aimed at reducing the degree of deterioration of demographic situations and at scaling down development gaps at territorial level.

Means of Implementation

For the *National Programme for Local Development* (PNDL) the second stage was set (through *GEO No 6/2017 amending and completing some pieces of legislation and establishing some measures on carrying out investments financed under public funds* - article III), aiming at first a balanced distribution of funds from the state budget by counties, based on indicators (*The demographic and administrative-territorial data of counties and the financial capacity of the administrative-territorial units*, according to *GD No 624/2015 on the approval of the selection criteria of the investment objectives to be financed through the National Programme for Local Development, approved by GEO No 28/2013*), and afterwards, the allocation thereof within the counties, in several steps, taking into consideration guiding principles for the selection of projects. The correlation of funding sources, the avoidance of duplication of funding and the harmonization of technical selection criteria for investment projects remain in the attention of MDRAP in the coming period.

The model of allocation of the amounts approved by the annual budget law for the financing of PNDL, used in 2017, was established in line with the priorities of the *Programme for Government*, with the EU requirements, and the obligations assumed by the *Accession treaty of Romania to the European Union* regarding the compliance with the European directives and the WB recommendations on the prioritization criteria of public investments, taking into account the current economic and social realities.

This allocation model was adapted according to one of the models proposed by WB (in the report elaborated within the project *Coordination of Strategies and Programs for EU and State-Funded Investments in Romania's Infrastructure*, financed from EU funds) aiming at increasing the share of funding for social objectives (i.e. schools, medical care facilities) for equipping rural areas and at increasing the share of funding for county roads, essential for the local road transport network as they connect all localities to functional urban areas. Moreover, for the county roads there is no

other source of financing except for ROP, which provides insufficient funding when compared to the needs identified by the WB experts at the national level.

In the area of **territorial development**, it is envisaged the participation of Romania, through MDRAP, at the elaboration process of the *EU Urban Agenda* (composed of 12 Action Plans drafted within 12 Partnerships established on different themes); on this basis, the public policy on urban development at national level will be defined. The estimated deadline for elaborating this public policy project is Q4/2019. In February 2018, a first version of the Action Plan corresponding to the Partnership on *Jobs and Skills in the Local Economy*, having as coordinators MDRAP, the city of Rotterdam (Netherlands) and Jelgava (Latvia) was drafted. The draft Action Plan will be finalized and subject to the public consultation in the summer of 2018.

SUSTAINABLE DEVELOPMENT GOAL 12

Ensure sustainable consumption and production patterns

Achieving SDG12 requires a strong national **framework for sustainable consumption and production that is integrated into national and sectoral plans**, sustainable business practices and consumer behavior, together with adherence to international norms on the management of hazardous chemicals and wastes.

Romania has contributed to the adoption of the 10-year Framework of Programmes on Sustainable Consumption and Production Patterns (10YFP) leading the international process that agreed *ad referendum* the document, respectively the 19th Session of the UN Commission for Sustainable Development (CSD19) one year before the adoption of 10YFP at Rio+20 Conference in 2012. On reaching the 12.1 target, Romania, as member of 10YFP Bureau for 2 mandates from 2013 to 2017, chaired *the First 10YFP multi-stakeholder Regional Meeting for Eastern Europe*, held on 27 October 2014, in Geneva, Switzerland and organized the Second Multi-Stakeholder Meeting of the 10YFP for Eastern Europe, 9-10 February 2016 in Bucharest.

Romania submitted under the Batumi Initiative on Green Economy (BIG-E) to develop a National Action Plan on sustainable consumption and production (SCP). The first step on elaboration of this plan was to develop an efficient institutional framework for sustainable development among all relevant public institutions in Romania and set up the coordination at the highest political level – Prime Minister Office, the mapping of existing policies and actions on SCP at national level, an effective input on relevant policies and strategies on SCP and green economy issues, as well as the engagement of relevant stakeholders on SCP.

The plan will be developed by national authorities with the engagement of relevant stakeholders in line with the objectives of the National Sustainable Development Strategy (NSDS), which is under review for including 2030 Agenda for Sustainable Development and its 17 SDGs and set up SDGs priorities at national level. The National Action Plan on SCP will follow the revised NSDS and will be supervised on implementation by targets under the responsibilities of specific ministries and institutions with close cooperation with private sector and other relevant stakeholders.

The commitment will result in the achievement of eco-efficient management of resource consumption, the development of an attractive business environment, and the improvement of the quality of products and services. It will stimulate technological upgrade, encourage the renewal of processes and products, develop research and innovation activities and improve the capacity of both public authorities and companies.

After the Batumi Conference (June 2016) the development of a national plan on SCP was discussed within the Inter-Ministerial Committee that works under the Government Decision 741/2011 with all relevant institutions and stakeholders, followed by a process of mapping relevant strategies and policies on SCP, being part of the complete mapping on all 17 SDGs. One of the topics of discussions was the non- financial reporting of the large companies under the Directive 2014/95/EU. Also in 2016 was initiated the process of implementation of the Law on Green Public Procurement –No. 69/2016 (adopted in April 2016) and took place a range of consultation with all stakeholders (public institutions and private companies) on establishing the criteria of auctions for developing national plan on GPP.

After the changes of Government in 2017, was established a dedicated structure at the level of Prime-Minister Office – the Department for Sustainable Development under the coordination of a State Counsellor reporting directly to the Prime-Minister. Under the new coordination at the Prime-minister Office and in close cooperation with the Inter-Ministerial Committee lead by Deputy Prime-Minister, Minister of Environment, in September 2017, it was decided the reviewing of the NSDS to

include 2030 Agenda for Sustainable Development and its 17 SDGs together to the elaboration of the Voluntary National Review of Romania to be present at the High Level Political Forum in 2018, SDG12 being one of the goals under the review of HLPF 2018. The Inter-Ministerial Committee established an Open Working Group under the Inter-Ministerial Committee for drafting the VNR.

The core objectives are: the assessment of the consumption and production patterns on finding solutions to reduce the consumption of material resources and to decouple the dynamic of the gross domestic product (GDP) from the consumption of material and energy resources and its negative impact on the environment.

Based on current NSDS (under review), the National Objective for the 2020 Horizon is: *To decouple economic growth from environmental degradation by reversing the ratio between resource consumption and creation of value added; to move closer to the average performance levels of the EU in terms of sustainable consumption and production.* The National Objective for 2030 is: *To come close to the average level attained at that time by the other EU Member States in terms of sustainable production and consumption.* At the level of year of 2008, the estimations indicated that the application of adequate economic policy instruments could result in a 3-4% annual increase in physical and energy resource productivity during the period 2008-2030.

Based on the recent study of the Romanian Academy (2016) the forecast regarding the indicator GDP/Domestic Material Consumption shows a negative trends on use of material resources in Romania for the period 2000-2007, as the majority of EU countries has recorded a significant positive trends and for the period 2007-2014, Romania registered a slight increased trend on this indicator. On 12.2 target (*"By 2030, achieve the sustainable management and efficient use of natural resources"*), the trend since 2015 is positive, in line with EU trend.



Figure 25 - Resource productivity (in euro per kg, Romania & EU). Source: Eurostat SDG12, May 2018

The approach of developing the national action plan on SCP was to identify the multi-layered nature of SCP among all policies, such the drafting process of the Strategy on Green Jobs (Ministry of Labor) having a direct impact on implementation of SCP practices in Romania.

Other goals on mainstreaming SCP are:

- To improve the capacity of public authorities to implement the legislation on green public procurement, through clear commitments on eco-efficiency and environmental protection standards in all tender documents;
- To expand gradually the product labelling in accordance with EU norms, to reflect the environmental performance of selling goods and services. We organized coherent information campaigns to inform the consumers and to promote the eco-efficient products and services, including those resulting from organic farming;
- To establish a diverse economic context in Romania by stimulating green investments in the context of promoting sustainable consumption and production, innovation, resource efficiency and resource efficiency and energy efficiency;
- Close cooperation among and within various institutions, actors and clusters on SCP issues.

On reaching the target 12.7 in 2016 was setup the legislative framework for Green Public Procurement. The **Law on Green Public Procurement** (GD No. 69/2016) provides to elaborate a guide that includes minimum criteria for environmental protection for goods and services, the standard specifications and the need for a Multi-annual Action Plan on Green Public Procurement at the national level, with mandatory annual targets for green procurement for public administration. The guide will be approved by a Joint Order by the Deputy Prime-Minister, Minister of Environment and the President of the National Agency for Public Procurement. This guide is in the final stage of the consultation process and the next step is to draft the National Action Plan on Green Public Procurement, including specific annual targets for green public procurements. Complementing the actions on GPP, Ministry of Environment is a beneficiary partner in LIFE14GIE/IT/000812 project, in cooperation with Basilicata, Sardinia Lazio Regions (Italy) and Ecosistemi Foundation. The project started on January 2015 and will be finalized in June 2018. Life project GPPBest - Best practices exchange and strategic tools for GPP, implemented by the Romanian Ministry of Environment, and Basilicata Region, Lazio Region, Sardinia Region and Fondazione Ecosistemi, represents an unique opportunity to learn more from the Italian partners in terms of GPP's implementation, to share information regarding the environmentally benefits of the GPP in order to improve our skills for policy planning. The main goal of the project (for Romania) is to support the Ministry of Environment of Romania for fulfilment of commitments on GPP.

On target 12.6, regarding the **Non-Financial Reporting** for large companies, there are 24 companies submitted Non-Financial Reports on EU Directive 2014/95 (<http://www.csrreport.ro/director-raportori>) and there are a number of 90 Reports on Sustainability of companies (CSR) from all publication years (1999-2018) <http://database.globalreporting.org/SDG-12-6/Country-Tracker/RO>.

Regarding the implementation of the Regulation of the European Parliament and of the Council (EC) no. 66/2010 of 25 November 2009 on the **EU Ecolabel** in Romania, there are categories of products or services that have been awarded the European Ecolabel: interior paint, printed paper, absorbent paper, textiles, lubricants, detergents, soaps, tourist accommodation services.

"Developing the product labeling according to their ecological performance" was one of the objective of the NSDS. A number of 79 products and 3 services were eco-labeled between 2009 and 2017 and 27 licenses were granted. In 2017 there are 19 eco-labeled products (for the rest of the products there was no renewal of the application for the European Ecolabel following the expiry of the validity period of the evaluation criteria).

The state of accelerating the process of encouraging the voluntary participation of organizations and economic operators in the frame of **EU Eco-Management and Audit Scheme (EMAS)**: from 2009 to 2017, a total of 15 organizations were registered in EMAS, out of which at the level of the year 2017, 10 organizations are registered in the EMAS National Registry. Four of the registered

organizations have been discharged either as a result of non-compliance with the EMAS Regulation either as a result of requests from the organizations to reorganize their activities and one of the organizations has requested collective registration at the level of the European Union.

Means of Implementations

Programmes financed from Environment Fund (under the coordination of Ministry of Environment) which contribute to develop a green economy in Romania:

-**“Rabla +” Programme** - destined to promote purchases of electric cars and the developing of an electric infrastructure;

-The **Green House Program** - launched in 2011 to improve air quality, water and soil by reducing pollution caused by burning of wood and fossil fuels (used to produce heat and hot water) and encourage the use of clean renewable energy source;

- **Motor vehicles scrapping Programme - “Rabla” (Jalopy) Programme** - National car fleet renewal programme - began in 2005 and has been implemented each year. The age of the car it had to be of minimum 12 years (2005-2008), 10 years since 2009 and 8 years starting 2014;

- The initiative of the Ministry of Agriculture and Rural Development and the Ministry of Environment to create a working group comprised by 20 national authorities, institutions and organizations to set up the National Action Plan to reduce food waste and the elaboration of the National Strategy for the reduction of food waste.

The Law on Green Public Procurement aims to develop the internal market of green goods, services, works and encourages the development of clean and environmentally friendly technologies. Additionally to the environmental protection and sustainable development, the law is promoting sustainable consumption and production and resource efficiency:

- Improvement of the capacity of both public authorities and companies, to implement the legislation on green public procurement, and to encourage the national and local public authorities to initiate, in cooperation with business associations, chambers of commerce and industry, universities, will increase the level of social awareness and corporate responsibility regarding sustainable production and consumption.
- The achievement of the eco-efficient management of resource consumption that will maximize resource efficiency by promoting a sustainable pattern of production and consumption.
- Increase resource efficiency which will lead to a lower depletion rate of the categories of primary resources that will further on and reduce the costs, improve competitiveness and achieve sustainable economic growth.
- Development an attractive business environment that can enhance investment flows, which will stimulate technological upgrading and encourage continued renewal of processes and products (in Romania, public procurement represents 20% of GDP, more than the EU average (16%). Romanian public administration can focus on choosing environmentally friendly goods and services by reducing its impact and save resources, by contributing to the implementation of SDGs).
- Consideration of the impact of products on the environment throughout their life cycle (from design, manufacturing, assembly, marketing, distribution, sale and use down to recycling and disposal).
- Development of research and innovation activities that will focus on the sectors where the expected effects are the most significant in terms of ecological progress and competitiveness (organic foodstuffs, water-management technology, energy efficiency, urban transport, construction business, selective waste collection, recycling and disposal, biofuels, etc.) .

- Increasing the number of products/ services that have been awarded the European Ecolabel: interior paint, printed paper, absorbent paper, textiles, lubricants, detergents, soaps, tourist accommodation services.

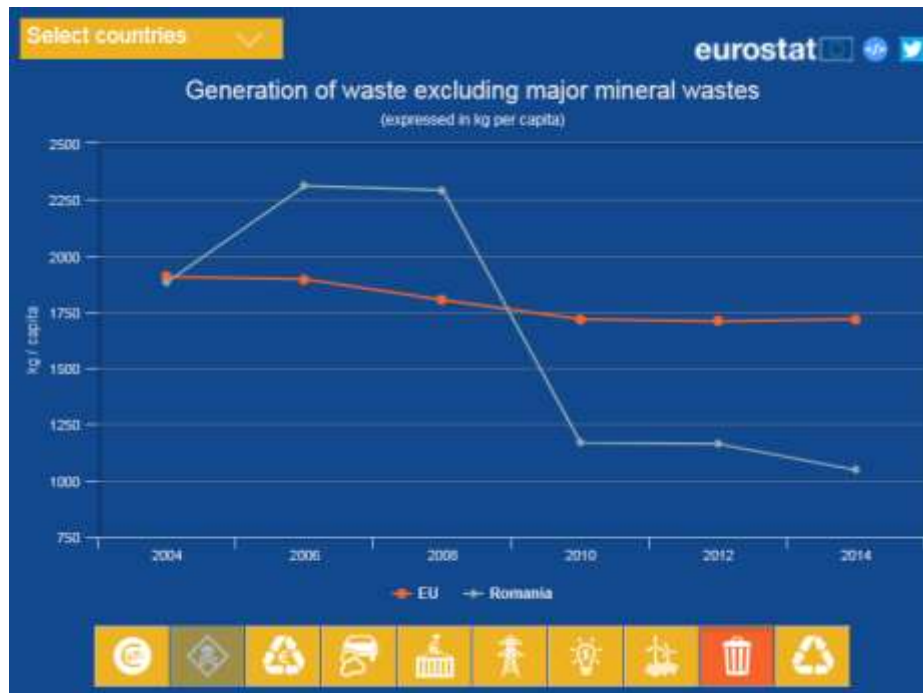


Figure 26 - Generation of waste excluding major mineral wastes (in kg/ capita) - Romania & EU).
Source: Eurostat SDG12, May 2018

In order to support Sustainable Consumption and Production patterns, Romania focuses in particular on **improving the management of waste, including hazardous waste**. To this end, the *National Waste Management Plan*, which also includes the *National Waste Prevention Plan*, was approved by GD No 942/2017. Environment Fund Administration (AFM), with the support of the Competition Council, works on the development of the state aid scheme and the financing guide, for the implementation of the *Waste Management Programme, Including Hazardous Waste*. In addition, AFM took steps towards identifying funding priorities in waste management, compared to the deficit areas of the sector. In this regard, meetings were held with several relevant stakeholders such as the representatives of the most important associations among collectors and recyclers, ANPM, the private sector and civil society. As a consequence, a legislative proposal emerged that is under public debate.

At the same time, 18 phased development projects of integrated waste management systems were funded on SO 3.1 from LIOP, the EU funding for this area amounting to 208.2 million Euro, out of which 17 projects totaling 205.2 million Euro were contracted. By the end of 2018, the implementation of these projects will lead to an additional recycling capacity of 800,875 tones/year.

SUSTAINABLE DEVELOPMENT GOAL 15

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

The biodiversity of Romania can be described as unique and rich, comprising all levels of ecological systems. Essentially, this is the main reason why we should forge a regional partnership in order to stop the decline of biodiversity in its tracks, by tackling species extinction and ecosystem degradation due to the anthropic impact.

The Program of Environmental Protection through Biodiversity Conservation (part of Romania Governing Program 2018-2020) addresses the fundamental role of habitat played in biodiversity conservation, main habitat targeted being represented by forest ecosystems.

Romania's surface coverage of forest is about 6.565 million hectares, representing 27.5%, compared to a 32% European average. The direct threats for forests are represented by terrain conversion, infrastructure development, the development of human settlements, hydro-technical constructions, overuse of natural resources, inadequate use of unsustainable resources, invasive species, climate change and extensive contamination due to pollution.

Due to the complexity posed by the number of threats, the national strategy for biodiversity protection does not represent a simple way of action, rather a mix of actions consistent of four pillars: 1. decline the degeneration of genetic resources, species, ecosystems, complex of ecosystems (landscape) and degraded ecosystem restoration, 2. Biodiversity protection policy integration in all sectoral politics, 3. Promoting traditional and innovative clean technologies as measures to support sustainable development and a smaller toll on biodiversity, and the 4th pillar is represented by further implementation of information technology and education applied in use of biodiversity conservation.

This process is ongoing and given the fact that any trends regarding biodiversity or ecological state of improvement requires at least a ten years scale of time (depending on the species or ecological level we address), primarily (at a yearly scale of time) we observe the improvement of air and water quality (due to actions taken in energy, building and transportation industry), in order to help biodiversity.

Regarding nature protection and biodiversity conservation, Romania is characterized by a large coverage of protected natural areas. In March 2018, 45 management contracts and a number of 320 custody contracts were in force. At national level, there are 613 Natura 2000 sites, out of which 442 Sites of Community Importance (SCI) and 171 Special Protection Areas (SPA). At the same time, for the protection and restoration of biodiversity, for SO 4.1 from LIOP, at the end of March 2018, 38 projects had been contracted, totaling 208.27 million Euro.

Actual state of biodiversity

Romania is a country with rich biodiversity (ecosystems, species and genetic diversity) and a high percentage of natural ecosystems - 47% of the land area of the country is covered with natural and semi-natural ecosystems.

Since almost half of all forests in Romania (13% of the country) have been managed for watershed conservation rather than production, Romania has one of the largest areas of undisturbed forest in Europe. The natural integrity of Romanian forest ecosystems is indicated by the presence of the full range of European forest fauna, including 60% and 40% of all European brown bears and wolves, respectively.

Europe's largest wetland, the Danube Delta, also lies predominantly in Romania. Major grasslands, caves, and an extensive network of rivers, add to the ecosystem richness. Important for Romania as well as for all Europe, is that the territory of Romania is a meeting point between biogeographic regions - between arctic, alpine, west and central European, pannonic, pontic, balkanic, sub-mediterranean and even eastern colchic, Caucasian and turanic-iranian regions.

The high level of geographic diversity in Romania and the consequence of its location as a biological meeting place, has produced a floral diversity that includes over 3,700 species and a fauna diversity estimated to be more than 33,802 species. These figures include a large number of endemic and subendemic plants (228) and animals (1,000) specifically adapted to local conditions and only found in Romania. Species that once thrived in many parts of Europe are now only found in Romania or found in Romania in large or significant populations. Although rich in biological resources and important as a corridor for the movement of species (biogenetic material), Romania has suffered the consequence of human activity.

Pollution, the damming of rivers, hydrological works, industrial agriculture, overexploitation of natural resources, among other factors, have all taken their toll in decreasing biodiversity. Highly sensitive mountain ecosystems are also particularly threatened by inappropriate forms of tourism and associated infrastructure development. This trend is likely to increase if appropriate measures to reduce the effects of pollution and of economic pressures connected with the overexploitation of natural resources will not be undertaken.

Taking into account these significant problems, Romania has an active governmental and non-governmental commitment to reverse the trends of biodiversity loss and one of the way is the "in situ" conservation through protected areas network.

In order to ensure "in situ" special protection and conservation measures for the assets from the natural heritage, a differentiated regime of protection, conservation and use was established, according to the following categories of protected areas:

a) Protected Areas of National Interest, assigned based on IUCN criteria:

1. Scientific Reserves – 79, occupying an area of 100,574 ha;
2. National Parks – 13, occupying an area of 315,857 ha;
3. Natural Monuments or Feature – 190, occupying an area of 18,220 ha;
4. Nature Reserves – 671, occupying an area of 136,537 ha;
5. Natural Parks – 14, occupying an area of 737,428 ha;

b) Natura 2000 Sites: Sites of Community Importance and Special Protection Areas: assigned according to the EU obligations:

1. Special Protection Areas – 171, occupying an area of 3,649,300 ha;
2. Sites of Community Importance – 435, occupying an area of 4,031,100 ha;

c) Protected Areas of International Interest:

1. Biosphere Reserves, assigned based on the criteria established by the MAB/UNESCO Committee – 3, occupying an area of 664,446 ha: Danube Delta (1991), Retezat (1979), Pietrosul Rodnei (1979);

2. Wetlands of International Importance (Ramsar Sites), assigned based on the criteria established by the Secretariat of Ramsar Convention – 19, occupying an area of 1,156,448 ha: Danube Delta (1991), Small Island of Brăila (2001), Mureş Floodplain (2006), Dumbrăviţa Fishing Complex (2006), Techirghiol Lake (2006), Iron Gates Natural Park (2011), Comana Natural Park (2011), Tinovul Poiana Stampei (2011), Olt-Danube Confluence (2012), Bistreţ Lake (2012), Iezer-Călăraşi Lake (2012), Suhaia Lake (2012), Blahniţa (2013), Braţul Borcea (2013), Calafat Ciuperceeni-Dunăre (2013), Canaralele de la Hârşova (2013), Ostroavele Dunării Bugeac-Ortomac (2013), Confluenţa Jiu-Dunăre (2013) and Dunărea Veche-Braţul Măcin (2013).

3. UNESCO Sites (World Natural and Cultural Heritage), assigned based on the criteria established by the Paris Convention – 1: Danube Delta (1991).

The area of the protected areas on National interest, in relation to the country area, is 7% and the total area of Natura 2000 sites, in relation to the country area, is 25%.

Management of the protected areas

Starting with 2017 the management of the protected areas network is coordinated by the National Agency for Natural Protected Areas. The management of the protected areas is carried out differently, depending on the category they are classified in. The measures provided in the management plans are drafted so that they take into consideration the economic, social and cultural exigencies, as well as the regional and local particularities of the area, with priority for the objectives which lead to the designation on the protected area.

The Biosphere Reserves, National Parks, Natural Parks and, if necessary, the Geoparks, Sites of Community Importance, Special Areas of Conservation and the Special Protection Areas are managed by specially established management structures, with legal personality. Scientific Reserves, Nature Reserves, Monuments of Nature and, where appropriate, the Geoparks, Sites of Community Importance, Special Areas of Conservation and the Special Protection Areas are managed by taking into custody.

A special situation is the „Danube Delta” Biosphere Reserve, which has a special management established by Law No. 82/1993 as further amended and supplemented, under the direct control of the central public authority for environmental protection.

According to the legal provisions in force, for the lands in the natural protected areas, held as private property or leased, the owners or lessees must receive compensations for complying with the restrictive measures established by the management plan of the protected area. Currently, these compensations were established for the forests included in the T1 and T2 functional types. The compensations value, established according to the calculation methodology in the Government Decision no. 861/2009 is approx. 16,000,000 RON/year. There are still 30,000 ha of forest in the private property of natural and legal persons included in the T2 functional type, for which there are also restrictions of wood mass exploitation. For these areas, the compensations value is estimated at 6,900,000 RON/year.

Overview

As a consequence of its geographical setting and the evolution of human society in the region, Romania has a unique and high level of biodiversity and intact ecological systems. The vast reed beds of the Danube Delta, the high density of large carnivores, and the extensive forests of the Carpathian Mountains are some of the more significant and best known aspects of the biological riches of Romania. Even more important is the country's role as a meeting place of ecological elements from differing bioregions and as a corridor for the movement of species and biodiversity widespread land.

Biodiversity, geography, geology and climate

Romania is located in Central Europe at an equal distance between the North Pole and Equator and at an equal distance between the Atlantic and Ural Mountains. The elevation of the country varies significantly - the Danube Delta is located at sea level and the highest peaks of the Carpathian Mountains rise to over 2500 m.

Overall Romania has a temperate climate with significant regional aspects. Some regions have high humidity and low thermal amplitudes, dryer continental climate exists in other areas creating higher thermic amplitudes, while in the south and west the influence of the sub Mediterranean warm and dry climate is felt. The average annual temperature is 8-10°C, with frosty winters (-3° to -4°C) and warm summers (21 to 22°C), and an average annual precipitation of between 400-600 mm.

In Romania there is a large part of the existing soil types in Europe and varying levels of relief brought about by underlying volcanic, sedimentary, and metamorphic rocks. The biomes that existed on the territory of the country, prior to human intervention, consisted primarily of forests (77%), steppe grasslands (16%), aquatic ecosystems and wetlands (5.8%) and alpine and subalpine ecosystems (1.2%).

Romania as biological middle place

It is important to note that Romania is a meeting point between biogeographic regions - between the Arctic, Alpine, Western and Central European, Pannonian, Pontic, Balkan, sub-Mediterranean and even Eastern Colchic, Caucasus and Turan-Iranian region. Therefore, biodiversity contains elements that are eastern (Caucasian - Pontic), northern (Boreal), southern (Mediterranean and Balkan) and western (Continental and Pannonian).

It is important that Romania is a meeting place of each of these ecosystems and a territory through which many species have spread their distribution. The largely unbroken Carpathian mountain chain and the Danube River and its tributaries are particularly important in providing a corridor for the spread of biodiversity.

The steppe xerophyllous, halophyllous, psamophyllous grassland ecosystems and the xerophyllous bush ecosystems have a direct linkage in the east with the steppe ecosystems from Moldavia and Ukraine.

The silvosteppe ecosystems can be found in the east in Moldova, in the south in Bulgaria, in the west in Hungary and Yugoslavia. The xerotherme broad-leaved forest ecosystems reflects the presence in the north of similar ecosystems from Bulgaria and Yugoslavia. The mesophyllous broad-leaved forest ecosystems have very strong linkages with the forests from the peripheral hills from the Pannonian Plains in Hungary, from Slovakia, the Czech Republic, Poland, the mountainous Ukraine and also from the Yugoslavian and Bulgarian mountains.

The boreal spruce and larch forest ecosystems are common in the entire Carpathian chain and can be found in Ukraine, Poland, Slovakia but also in the mountains from the Balkanic Peninsula. The alpine and subalpine grasslands and bushes have linkages both to the north in the Carpathian chain from the neighboring countries and in the mountains from the Balkanic peninsula.

In most cases while the forest and grassland ecosystems from neighboring countries are similar in general structure they differ in abundance and composition of elements of flora and fauna.

Ecosystems Diversity

The extensive range of ecosystems types in Romania is largely the result of the influence of climate, elevation and geology. Of major importance in affecting ecological conditions are the Carpathian Mountains, 60% of which are in Romania. In total 17 major terrestrial ecosystem formations exist including all the major ecosystem types existing in. There is also a rich diversity of aquatic

ecosystems including river floodplains, glacial lakes, coastal wetlands, bogs, and mountain rivers in 22 ecoregions identified in Romania.

In the more humid regions, at lower altitudes (up to 300 m), broad-leaved forest are predominant. In the less humid climate there are the steppe grasslands, and in the mixing zone between the two regions there is a zone of silvosteppe containing a mix of forests and grasslands.

The elevation change brought about by the Carpathian mountains brings an abundance of biogeographical zones which include four main types; the nemoral - with broadleaved forests, boreal (horizontal) with coniferous forests, subalpine (vertical), and alpine (vertical). This latter one contains grass and small bushes.

A rich hydrological network and rainy aspects of climatic conditions contributes to the enhancement of biodiversity. Over 1000 km of the Danube River and numerous tributaries flow through Romania. Where the river empties into the Black Sea is the 580,000 ha Danube Delta (113,000 ha permanently covered by water) that has been formed.

This is the largest delta in Europe and an important sanctuary for biodiversity and a dwelling place for important species.

Romania also has a large portion of the Black Sea coast (228 km) and associated sand dune and coastal ecosystems. The over 8,000 caves, located primarily in the south-west of the country, add to the richness of the ecosystem diversity.

Species Diversity

Romania is rich in species diversity and in the quantity and quality of populations of various threatened and endangered species. In total about 3,700 species of higher plants exist in Romania. Among them, 23 species are declared as natural monuments, 74 species are extinct, 39 species are endangered, 171 species are vulnerable and 1,256 are rare species (according to the Red List of Higher Plants of Romania, elaborated by the Romanian Academy 1994).

Grassland species include 37% of the total species represented. About 600 species of algae and a total of over 700 species of marine and coastal plants exist. Only about 600 of these species are associated with human cultivation. A very high percent of the species of plants (4%) are endemic. In total there are 57 endemic taxa (species and subspecies) and 171 subendemic taxa (with their territory mostly in Romania).

Seventy-five percent of the endemic and subendemic species are found in the Carpathian Mountains. *Andryala levitomentosa* (Nyár.), for example, can only be found in the Bistrita Mountains, *Dianthus callizonus* (Schott & Kotschy) only in Piatra Craiului, *Astragalus peterfii* (Jav.) only in Cluj county, *Draba dorneri* (Heuff.) in Retezat mountains, and *Diantus spiculifolius* (Schur.), *Helictotrichon decorum* (Janka) (Henrard) can be found in the entire Carpathian chain. The main endemic centres for plants are the Mountains of Rodna, Bistrita-Ceahlau, Bucegi-Piatra Craiului, Retezat-Godeanu, parts of these mountain massifs being declared as national parks.

Although Romania has a high level of plant diversity it is particularly important as a centre of population density for a variety of threatened and endangered animals. Of greatest significance is the high density of bears, wolves and lynx. The populations of these animals (which have been extirpated from most areas of Europe) are the highest of any country in Europe, thus we should consider as a international effort to save this sanctuary.

Originally wolves, bears and lynx were distributed over most of the European continent. However given the growth in human populations, human settlements, and livestock raising, the large carnivores were vigorously persecuted. In Western Europe, large carnivores were, with a few exceptions, decimated about 150 years ago. About 40% of the European wolf population is found in Romania. Wolf (*Canis lupus*, L.) populations exist in only four distinct areas of Europe.

Lynx populations (*Lynx lynx*, L.) were eradicated from Western Europe about 100 years ago. Reintroduction projects in Switzerland, Slovenia and the Czech Republic brought the species back into some areas of Central Europe in the seventies and eighties. The only healthy lynx populations in Europe, however, are in the Carpathians (1,000 - 1,500 individuals), Fennoscandinavia (more than 1,000) and in the Dinaric mountains (several hundreds).

The Romanian population of lynx could therefore play an important role in preserving this species. Brown bear (*Ursus arctos*, L.) has also its population center in Romania. Brown bears live today in four distinct European populations: Carpathians (about 6,000 individuals), Fennoscandinavia (about 1,300) and Dinaric Mountains (about 2,000). 60 % of the European brown bear population lives in Romania. All three large carnivore species are a symbol for wild and natural habitats.

Because of their ecological position at the top of the food pyramid they have a strong impact on the health of the ungulate community. A healthy ungulate population has in turn a large influence on plant communities and overall ecological health. The maintenance of a stable and healthy population of large carnivores in Romania provides a base for the repopulation of these species in other areas in Europe. A strategy for large carnivore protection in Europe is currently being developed by the World Wide Fund for Nature (WWF) and involves Romanian participation. In addition to large mammals, Romania has over 33,802 other species, sub-species and varieties of animals, out of which 33,085 invertebrates and 717 vertebrates.

The vertebrates comprise a number of 191 species of fish, out of which 9 are endangered, 20 amphibian species, out of which 9 are endangered, 30 species of reptiles, out of which 6 are endangered, 364 species of nesting and migratory birds out of which 2 have disappeared and 6 are endangered and 102 species of mammals, out of which 2 have disappeared and 2 are endangered. Only 24 vertebrate species are declared as Natural Monuments, benefiting of total protection.

Almost all the European population of Red-Breasted Goose (*Branta ruficollis*, Pallas), for example, winters in Romania and a major portion of the European population of the world threatened Dalmatian Pelican (*Pelecanus crispus*, Bruch) nests in the Danube Delta. Included in the insect fauna are 227 species specifically adapted to the underground life in caves - 97% of which are endemic. Of the total Romanian fauna over 1,000 species are considered endemic although the geographical distribution of many species is only poorly known.

Similar to the situation for plants, many animals are represented in Romania by subendemic species. This includes red deer (*Cervus elaphus montanus*, L.), wild boar (*Sus scrofa attilla*, L.), European hare (*Lepus europeus transsilvanicus*, Pallas), chamois (*Rupicapra rupicapra carapatica*, Blainville), Willow Tit (*Parus montanus transylvanicus*, Conrad).

The main centres for the endemic fauna are located in the mountain massif of Rarau-Giumalau, Haghimasul-Mare, Fagaras, Paring, Cernei, Semenic, Almaj and Bihor.

The Danube Delta and Black Sea coastal areas also have a particularly high level of endemic or subendemic species including 7 endemic fish species, 4 endemic mollusks, 21 endemic insects, subendemic sponges and a large number of worm and crustacean species.

Genetic Diversity

In addition to being rich in species, Romania has a very high level of genetic diversity among many species because of varying habitat conditions. There are for example a large number of genotypes of Norway spruce, pine, beech, and oak. These genotypes have varying growth rates and resistance to disease and pests.

Picea abies (L.), *Larix decidua* (Mill.), *Pinus nigra* (J.F.Arnold) are all represented by Carpathian races and there are distinct climatic types of *Quercus robur* (L.), *Picea abies* (L.) and edaphic types of

Quercus robur (L.), *Q. Petraea* (L.), and *Fraxinus excelsior* (L.). There is also generally a high level of intraspecific variation among insects within Romania.

Human Influence on the ecological systems

Human activities have historically significantly modified the Romanian landscape. These modifications have reduced the abundance of certain elements of the ecosystem (most notably steppe grasslands) and also added new components. Today arable land comprises 39.2% of the surface of the country and a large area of mesophyllous, hygrophylous and xerophyllous secondary natural grasslands have been formed - primarily in the mountains and hills.

The forests are now about one-third of their previous extent as a result of human activity. Although the forests have been reduced in area, they have retained a high level of natural species composition and quality. The area of wetlands has also been reduced to about half of its previous extent. The loss of wetlands has been particularly dramatic along the Danube River where many wetlands have been converted to agricultural use.

Economy and biodiversity

All of the 58 species of autochthonous trees and at least 30 species of shrubs have an economical importance producing wood, resin, fruits, flowers, leaves and bark with medicinal character or representing honey sources. The spruce trees reach heights of 60 m and grow almost 10 cubic meters of wood annually/ha.

The beech grow in height up to 45 m and the pedunculated oak 40 m. Testing on the main tree species (spruce, fir, oak, common ash, maple, poplar and willow) has identified important genetic variation that is valuable in ensuring resistance to disease and pests. Of the 1,300 species of grassland plants, 175 have nutritional value, 70 species are medicinal and 180 are melliferous (important for honey).

Of the forest and grassland animals 12 species of mammals and 7 species of birds have economic importance as game species. This includes partridge, a variety of duck and geese, wild boar, red deer and brown bear. Twenty-nine species of freshwater fish have economic value including pike, carp, zander and perch. For many local populations the utilization of biological resources continues to be important for their nutritional well-being and economic health.

Threats for biodiversity

Although Romania is rich in biodiversity (particularly the large size and quality of valuable ecosystems and the quantity of some species) the country has suffered a progressive loss of biodiversity as a result of human activity. In particular, agriculture, industrial development, transportation and the expansion of cities have profoundly affected the biological diversity, both generally and locally.

Pollution

Industrial pollution decreased in the first years of the economic transition process due to significant reductions in industrial output.

Agriculture runoff is also a major pollutant factor in some areas. Part of the interior waters which could sustain a rich biological diversity is polluted and Danube brings from the upstream countries a pollution level with negative impact upon the river's biological diversity, as well as for Danube Delta and Black Sea. The high nutrient load of the Danube River has caused eutrophication in the Danube Delta lakes where macrophyte, mollusks, benthic and fish species have consequently been reduced.

Changes to the Hydrological Regime

Among the most significant ecological changes that have taken place in Romania has been the alterations to the course of rivers and the building of hydro-technical works. In most instances these actions have had major negative consequences for aquatic biocenosis and caused the loss of natural ecosystems and terrestrial habitats, as well as the loss of equilibrium of ecological systems on a large scale.

The embanking of the Danube and the building of the Portile de Fier dam has also had a major impact in destroying spawning areas and the breeding success of many fish species. Together with pollution this factor has led to a reduction of sturgeon population and carp.

Building of dams on the Danube catchment area have reduced the sediment load to the Black Sea coast and caused the partial loss of some psamophyllous habitats. Reservoirs associated with dams in other areas have also reduced forest and grasslands surfaces.

Resource Extraction and Use and Land Use

Since 1989, given the economic difficulties experienced by many Romanians, the tendency has been to exploit as much as possible the natural resources available in order to generate quick incomes. There has therefore been considerable illegal extraction and gathering of forest resources, including the cutting of small fir trees, mushroom collection, medicinal herbs, aquatic animals, poaching and others. In grasslands there has been a continuous deterioration due to the number of grazing animals without a consideration of carrying capacity or organization of grazing cycles and rotations. Similarly there has been considerable overexploitation of fish resources and exploitation of peat in some boreal habitats.

Surface mining operations (brown coal in the north of Oltenia, Sulphur in the Calimani Mountains, and bituminous shale in Banat) have caused the loss of some important forest and grassland habitat.

Soil resources have also been diminished historically in Romania as a consequence of erosion from farming and agriculture practices. Estimates are that about 40% of the agricultural area is affected by erosion with an average rate of 16.5 t/ha/yr. The total area of agriculture in Romania is 14,797,500 ha, silviculture utilizes 6,680,200 ha - out of which 6,245,800 ha are forests and the grassland surfaces are of 4,872,100 ha, from which 3,378,400 are pastures and 1,493,700 ha are hay fields.

Of major significance for biodiversity richness and useful natural resources is the total surface of water bodies of 888,300 ha. Irrigation of agricultural land (about 3,200,000 ha in 1989) has also brought about increased salinity on large areas, due to intensive agricultural activities and the effort for high yield of crops per ha before year 1989. Overgrazing in some areas is also reducing soil resources (e.g. contribution to erosion, especially on slopes).

Sustainable Development, the only way for future

Although, as it has been noted, there are a considerable number of damaging practices and activities affecting biodiversity in Romania the possibilities for reducing damage to biodiversity are large.

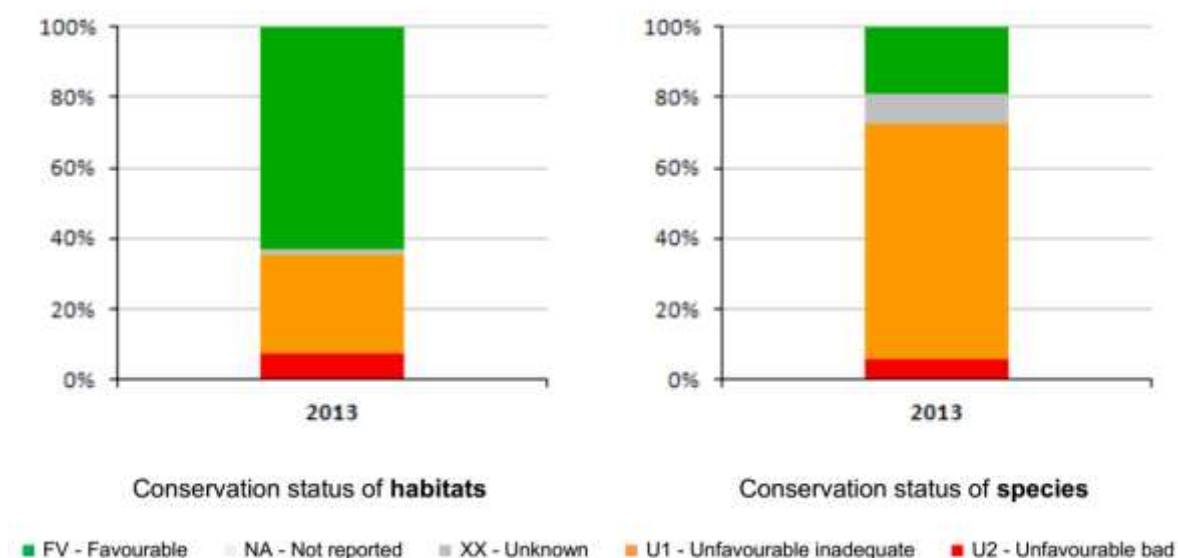
Traditional harvesting and grazing practices in Romania present an opportunity to support a sizeable rural population which lives within the limits of the available biological resources. Tourism could be developed to provide such communities with additional sources of revenue while offering incentives to retain or revive traditional practices that are sustainable or to develop new means for

using natural resources sustainable. There is a great potential to develop ecological tourism activities in many of Romania's natural areas.

Romania faces many changes due to market economy dynamics. As the country's economic wealth grows in the future, new environmental pressures and challenges will arise. The private ownership of land, rises in personal consumption and the manufacture of consumer goods bring both new threats as well as new opportunities for the protection of biodiversity. Although there has been considerable human modification to the Romanian environment the potential exists for Romanian development to proceed in a manner that protects the country's valuable biological resources and at the same time improves the country's economic wellbeing.

Overall assessment of conservation status of habitats and species

These figures show the percentage of biogeographical assessments in each category of conservation status for habitats and species, respectively. The information on which these figures are based are presented in the table below the figures (real values).



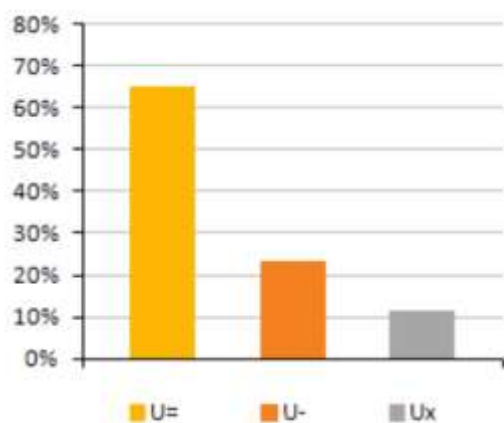
Year of assessment	HABITATS					SPECIES				
	FV	NA	XX	U1	U2	FV	NA	XX	U1	U2
2007										
2013	105		2	47	12	108		48	383	31

Figure 27 – Conservation status of habitats and species; Source: National Summary for Article 17 – Romania, 2007-2012.

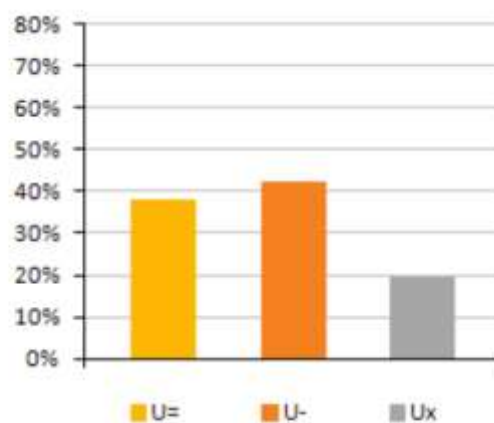
Improving/deteriorating trends of habitats and species with an unfavourable conservation status

These figures show the proportion of unfavorable assessments (U1 & U2) which are categorized as improving, deteriorating, stable or unknown.

Figure 28 – Overall trends in Conservation Status of habitats and species;



Habitats – overall trend in Conservation Status



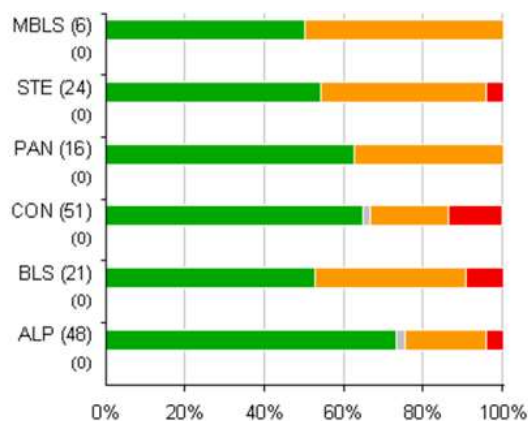
Species – overall trend in Conservation Status

U (+) = unfavourable (inadequate and bad) improving, U (=) = unfavourable stable, U (-) = unfavourable declining, U (x) = unfavourable unknown trend

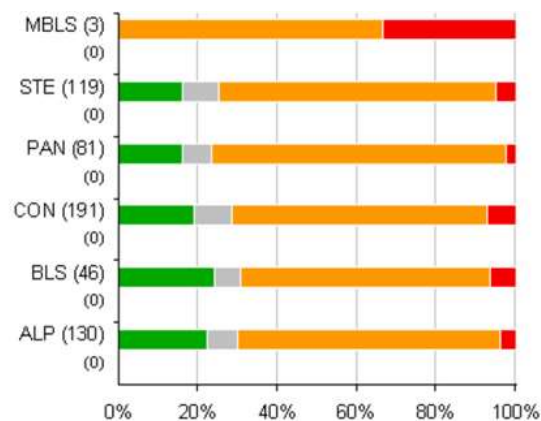
Source: National Summary for Article 17 – Romania, 2007-2012.

Overall assessment of conservation status of habitats and species by biogeographical and marine region

These figures show the percentage of assessments in each of conservation status category by biogeographical and marine region, for habitats and species, respectively. Please note that some habitats reported as terrestrial in 2001-2006 have been reported as marine in 2007-2012 (e.g. estuaries). Some species (e.g. seals, marine turtles) which in some cases were reported for both marine and terrestrial regions were only reported for one region in 2007-2012.



Conservation status of **habitats** in biogeographical and marine regions



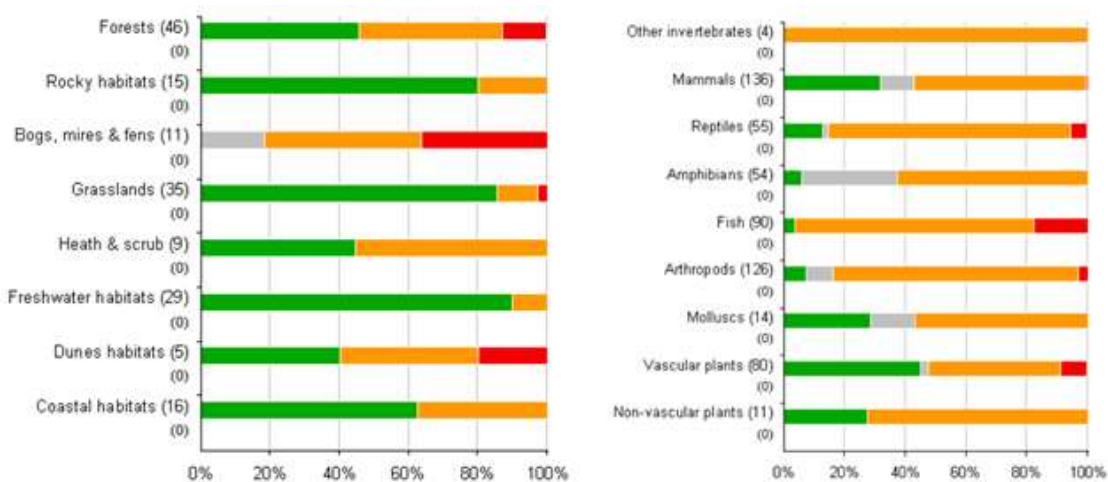
Conservation status of **species** in biogeographical and marine regions

Figure 29– Conservation status of habitats and species in biogeographical and marine regions

Source: National Summary for Article 17 – Romania, 2007-2012.

Overall assessment of conservation status by habitat category and species group

These figures show the percentage of biogeographical and marine assessments in each conservation status category by habitat category and by taxonomic group, for habitats and species, respectively. The figures show the proportion of assessments in each conservation status class for 2007-2012 (upper bar) and 2001-2006 (lower bar). The information (number of assessments) on which these figures are based are presented in the tables below each figure (real values).



Group	Year of assessment	HABITATS				
		FV	NA	XX	U1	U2
Forests (46) (0)	2007					
	2013	21			19	6
Rocky habitats (15) (0)	2007					
	2013	12			3	
Bogs, mires & fens (11) (0)	2007					
	2013			2	5	4
Grasslands (35) (0)	2007					
	2013	30			4	1
Heath & scrub (9) (0)	2007					
	2013	4			5	
Freshwater habitats (29) (0)	2007					
	2013	26			3	
Dunes habitats (5) (0)	2007					
	2013	2			2	1
Coastal habitats (16) (0)	2007					
	2013	10			6	

Group	Year of assessment	SPECIES				
		FV	NA	XX	U1	U2
Other invertebrates (4) (0)	2007					
	2013				4	
Mammals (136) (0)	2007					
	2013	43		15	77	1
Reptiles (55) (0)	2007					
	2013	7		1	44	3
Amphibians (54) (0)	2007					
	2013	3		17	34	
Fish (90) (0)	2007					
	2013	3			71	16
Arthropods (126) (0)	2007					
	2013	9		11	102	4
Molluscs (14) (0)	2007					
	2013	4		2	8	
Vascular plants (60) (0)	2007					
	2013	36		2	35	7
Non-vascular plants (11) (0)	2007					
	2013	3			8	

Figure 30 - Percentage of biogeographical and marine assessments in each conservation status category by habitat category and by taxonomic group, for habitats and species. Source: National Summary for Article 17 Romania, 2007-2012.

Frequency of main pressures and threats

This section provides information on the relative importance of pressures and threats reported for habitats and species. The figures show the percentage of biogeographical assessments reported as being affected by one or more pressures or threats categorized as of 'high importance'. The information for the number of pressures and threats on which these figures are based are presented in the tables below the figures.

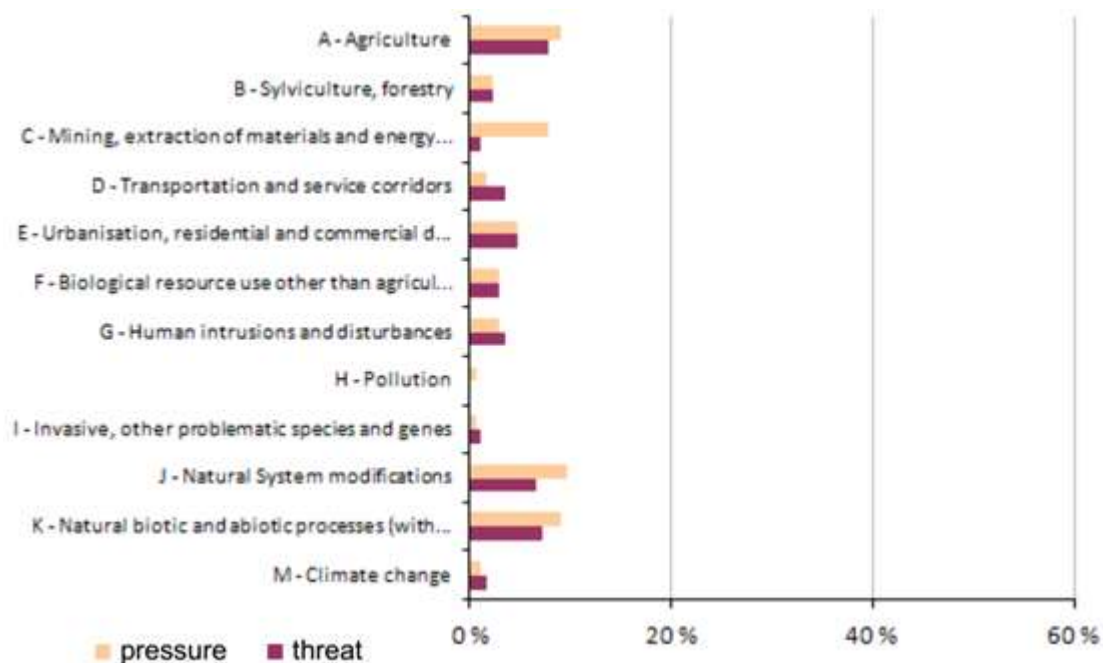


Figure 31 - Habitats assessments; Source: National Summary for Article 17 – Romania, 2007-2012.

Forest ecosystems

Sustainable forest management is a priority in forestry legislation and the entire system of technical rules for forest management in Romania, being equivalent to the observance of the forestry regime - a unitary system of technical forest, economic and legal norms regarding the management planning, culture, exploitation, protection and safeguard of the forest land in order to ensure sustainable management.

In accordance with the provisions of the Forest Code, forest management - ensuring administration or providing forest services, are compulsory for all forests, irrespective of the type of ownership, and they are ensured by forest districts, which are forest management structures with professional forestry staff.

Promoting the preservation and sustainability of forests is based on functional zoning, in line with the environmental, economic and social functions that forests must meet.

Thus, there are several subgroups and 56 functional categories, corresponding to different protection functions, which are assigned to specific management modes, with appropriate wood harvesting treatments, which are conditional on the functions attributed to the forest, the restrictions being greater for intense protection functions of the forest.

It is ensured:

- Maintaining the integrity of the national forestry land, being forbidden to reduce the total area of forests, except for the cases provided for by the law, regarding the removal of some areas from the national forestry land;
- Sustainable forest management through a complex system of regulations and forestry technical norms;
- Strengthening the role of forests in carbon sequestration and mitigation of climate change effects;
- Maintaining and improving the state of forest health through forestry works and pest control;
- Regeneration of forests, with emphasis on natural regeneration;
- The necessary measures to prevent and extinguish forest fires;

There are actions for:

- the implementation of forestry legislation and the strengthening of governance and the capacity to guide and control compliance with the forestry regime;
- preventing, reducing and stopping forest degradation due to illegal logging and timber trade associated with it.

For this purpose:

- The legislative framework has changed and developed the institutional framework;
- The Information System for Timber Flow Control and for Tracking the Wood Source (SUMAL) was set up in 2008 and further developed after 2014 with several innovative IT applications. The development of SUMAL aimed at increasing the effectiveness of control as part of public policies to reduce crime in the forestry field, to prevent and combat illegal activities, by controlling the origin of the wood and ensuring its traceability.
- The penalties for the offenses committed in the forestry field have been tightened by the amendments to the Law No. 46/2008 - Forestry Code and Law No. 171/2010 regarding the establishment and sanctioning of forest contraventions;
- Mechanisms have been created to collaborate with the other state institutions that can contribute to the success of the effort to combat illegal logging.
- The development and promotion of forestry legislation is done with the involvement of the public through non-governmental, professional organizations.

Also, in order to ensure the sustainable management of forests, the legislative framework provides for the allocation of sums from the state budget for privately owned forests of natural and legal persons and administrative-territorial units with an area of less than or equal to 30 ha, in order to benefit from forestry services;

Particular attention is being paid to the conservation of forest biodiversity and the management of forests in protected areas is ensured in order to meet the objectives of conservation and protection of species and habitats;

In this respect:

- Compensation is paid to forest owners for losses due to restrictions imposed by forestry arrangements for wood harvesting, due to the fact that forests have fulfilled their protective functions.
- A legal framework has been developed that establishes the criteria and indicators for the identification of virgin and quasi-virgin forests in Romania and an appropriate procedure has been put in place for the development of studies necessary for the identification of these forests. Thus, the identification and protection of particularly valuable forest ecosystems is ensured by including them in the *National Catalogue of Virgin and Quasi-Virgin Forests*, which currently includes a forest area of more than 14 thousand ha, the inventory process of such forests being underway of deployment;
- Romania has joined 10 other European states in a multinational project *Beech forests - Joint Natural Heritage of Europe*, aiming to enclose secular beech forests on the UNESCO World Heritage List. Thus, our country owns 39% of the total area of sites that are the subject of the recent UNESCO World Heritage List (July 2017), "Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe", with 12 sites totaling 24 thousand ha and 64.5 thousand ha area of the buffer zone.

As regards the forestry sector, efforts are being made to combat desertification, ecological reconstruction of degraded land and soil and mitigate the effects of drought, by creating anti-

erosive forest plantations and forest protection belts. For this purpose, the legislative framework has been created and national financial mechanisms and EU rural development programs are being used. At the same time, in order to facilitate the realization of the National System of Forest Protection Belts, there have been improvements of the legislative framework.

In the period 2009-2016 an area of 7,912 ha of degraded land was forested and forest protection belts were installed on an area of 568 ha, on land from forest land and outside forestry land (Source: National Institute of Statistics - Activity Statistics from forestry).

The amount settled by the Ministry of Waters and Forests from the state budget (including the amelioration fund) for afforestation of degraded land during the period 2009-2017 is 106.7 thousand Lei (23 thousand Euro) and the one for forest protection belts, including for feasibility studies and technical projects during the period 2011-2017 is 1,755.18 thousand Lei (379.2 thousand Euro).

Also, since 2009, the Environmental Improvement Program has been implemented through afforestation of degraded land, managed by the Environment Fund Administration and financed by the Environment Fund. Under this program, over the period 2010-2017, 134 projects were approved. The value of the completed projects is 19,760,756.49 Lei (4,269.1 thousand Euro), and the financing for 69 projects that are in progress is 56,407,384.78 Lei (12,186.2 thousand Euro).

Partnership with other associations

WWF (World Wide Fund for Nature) has an intense process of biodiversity restoration programs that addresses multiple species of animals and forests. Among the success of restoration programs we can count the program for restoration of sturgeon (*Acipenser* sp and *Huso huso* – Linnaeus) in Danube river, the program to release in wilderness some individuals of european bison (*Bison bonasus* – Linnaeus) in various forests and the action to protect virgin forests in various county spread across Romania, just to name a few.

SUSTAINABLE DEVELOPMENT GOAL 17

Strengthen the means of implementation and revitalize the global partnership for sustainable development

The successful implementation of the 17 Sustainable Development Goals depends on a comprehensive funding framework that goes beyond official development assistance commitments. Alongside public and private funding, political actors will also be expected to make a greater contribution to achieving the goals.

The competencies and mandate of the Ministry of Foreign Affairs in implementing the Agenda 2030 are only related to its external action role. As such, it also holds specific competencies with regards to Global Objective no. 17: Partnerships for achieving the objectives "from the perspective of the national development cooperation and humanitarian aid policy".

As the national coordinator of the national policy for cooperation for development and humanitarian aid, the Ministry of Foreign Affairs holds the legal and policy frameworks agenda setting responsibility. Through its Development Assistance (ODA) contributions, Romania supports partner countries in implementing Agenda 2030 according to their identified needs. In 2016, Romania's development assistance mainly supported global objectives 2, 4, 7, 16 and 17.

Beginning with 2015, the MFA publishes the International Aid Transparency Initiative (IATI), which is the first Member State within the EU 13 group to deliver this report. As such Romania has made significant progress in implementing the Common Standard on Transparency, established by the Busan Document. At the same time, although it is not an OECD / DAC member Romania is one of the few states that prepares and submits the national annual report through the MFA, abiding by OECD/DAC standards, which has contributed to strengthening Romania's relationship with the Development Assistance Committee /OECD.

Approximately 20 ministries and public institutions in Romania contribute annually to the national program on cooperation for development, and to the elaboration of a detailed analysis, which is included in the national reports on assistance for development submitted by Romania. In the past few years the main development assistance recipient states have been the Republic of Moldova, Serbia, Ukraine, Albania, Georgia, Armenia, Turkey, Egypt, Tunisia, Jordan, Syria and Morocco.

The legal framework for development funding within the national development cooperation policy is set out in: a) Law No. 213/2016 governing the financing of international cooperation for development and humanitarian assistance from the state budget, the programmatic and institutional framework, as well as the funding and implementation framework in the field of international development cooperation and humanitarian assistance policy; and b) Decision 1006/2016 on the establishment, organization and operation of the International Development Cooperation Agency.

Target 17.2

Romania has become a donor after its EU accession in 2007. Romania has also committed that the official assistance for development will reach 0.33% by 2030. In 2016, Romania's ODA amounted to 0.14% of the GDP.

In 2016 the Romanian Agency for International Cooperation for Development (RoAid) was established, under the coordination of the Ministry of Foreign Affairs. RoAid is responsible for

implementing development and humanitarian programs and projects. The new legislative framework adopted in 2016 seeks to streamline the delivery of assistance for development to ODA recipient countries and strengthen cooperation with strategic partners (responds directly to indicator 17.14).

Target 17.3

Through its cooperation for development policy, Romania aims to contribute to the fight against extreme poverty and to support the development of sustainable democratic institutions in developing countries by sharing its own experience.

So far, Romania has provided official assistance for development to recipient states mainly through bilateral and multilateral financial contributions. Multilateral contributions have been provided in the form of contributions to the EU budget, earmarked contributions to international organizations (UNHCR, UNDP, WFP, UNRWA, UNEA, EBRD etc.) and common funds (Green Climate Fund etc.). Bilateral contributions were granted in the form of projects /programs to public institutions of the recipient state or to civil society, loans and grants (e.g. Republic of Moldova), scholarships (80 states), budget support, transfer of assistance and technical expertise.

Another way of transferring expertise is to send Romanian experts to provide direct technical expertise. One such example is the sending of an expert from the MIA to lead the EU Civil Protection Mechanism response to Hurricane Matthew (Haiti).

An innovative tool promoted by Romania is the Mobility Fund for Government Agents that facilitates the rapid transfer of Romanian expertise, especially in the areas of transition to democracy, governance, reform of the judiciary, public administration reform, food safety, agriculture and climate change, disaster and crisis management and child protection. Since the setup of the Mobility Fund, 52 expert transfer missions have been funded in countries such as Moldova, Georgia, Serbia, Tunisia, Egypt, Armenia, Iraq, Bosnia and Herzegovina, Ukraine, Belarus, Azerbaijan and Afghanistan.

Targets 17.6 and 17.9

In the past decade, Romania has taken action to enhance the global partnership for sustainable development by building south-south and triangular cooperation partnerships. Some of the fields of expertise in which Romania has been an active player such as international standards of food safety and food processing, agricultural techniques are areas in which both technical know-how and technological expertise have been transferred. Some of the examples of triangular cooperation include In this respect, both knowledge and technologies specific to the domains of expertise in which Romania acts (international standards of food safety and food processing, agricultural techniques, soil erosion techniques and desertification, etc.) have been transferred. Some examples of projects implemented through triangular cooperation are: Romania - Mexico - Egypt in the field of electoral assistance; Romania - USA - Republic of Moldova in the agriculture sector; Romania - Republic of Moldova - Egypt in the field of food safety.

Public information campaigns on development assistance have been carried out in priority states such as Moldova, Ukraine, Belarus, Georgia, Armenia, Azerbaijan, Egypt, and Afghanistan.

Targets 17.14, 17.15

In the framework of the multi-annual strategies related to the national cooperation for development policy, Romania has increased the coherence of its policies for sustainable

development by enhancing coordination mechanisms between the state institutions that are active in the field of official assistance for development.

The Multiannual Strategic Program on International Cooperation for Development and Humanitarian Assistance 2018-2021 seeks to increasingly involve a range of actors working in the field of development cooperation, such as government institutions, non-governmental organizations, media, academia and the private sector to coordinate action at national level.

Target 17.17

Romanian civil society actors have been an important partner in the field of cooperation for development. The role of civil society representatives as actors and active promoters of development goals is recognized and appreciated. Romania recognizes the role of civil society in identifying the needs of partner countries and their specific development, in promoting informal education among young people and in the wider contribution they bring in the areas of education for development and awareness-raising on development issues.

The Ministry of Foreign Affairs has built a strong partnership with the Federation of Romanian Non-governmental Organizations for Development (FOND), alongside which a number of important initiatives have been implemented, some of which have been recognized at European and regional level, and which contribute to strengthening the region's relations (The Romanian Development Camp, the Black Sea NGO Forum).

To reach this indicator we aim to further support the dialogue with NGOs and the academic environment and strengthen their capacity to implement development projects in partner countries. The private sector is involved in a number of development projects in in Romania's partner countries, in order to implement the sustainable development objectives of Agenda 2030.

For further details, see the Annual Reports on Romania's Development Assistance at <http://www.roaid.ro/page/publicatii-84> .

The main results of the partnership between the Ministry of Foreign Affairs (MoFA) and the Federation of Romanian Nongovernmental Organizations for Development (FOND) include the successful implementation of joint projects aiming at **engaging more civil society organizations and other relevant stakeholders in the context of development cooperation and the Agenda 2030 for Sustainable Development**.

For example, *the Romanian Development Camp* (initiated by the MoFA in 2008 and organized jointly with FOND since 2010) is an annual event reuniting more than 100 participants yearly representing various national stakeholders (line ministries, local authorities, academia, CSOs, private sectors). The main objective is to provide a facilitated space for dialogue and debate for all the actors present, resulting in recommendations and input for the policy-makers on development issues. For instance, the 2014 edition focused on facilitating a national consultation on lessons learnt from the Millennium Development Goals and recommendations for the new agenda. The 2015, 2016 and 2017 editions had as an overarching theme the new Sustainable Development Goals (raising awareness on the new global agenda, monitoring the implementation process, focusing on emphasizing the importance on policy coherence for sustainable development) and invited as speakers all the major actors involved in the implementation of Agenda 2030 at national level (including the Ministry of Environment). Another important objective is to foster the exchange of best practices on different projects within this global framework. During the last three editions, the Romanian Development Camp gathered more than 350 people from various countries, including partner countries, over 15 training sessions and workshops specially designed for the participants.

It also facilitated new development projects and partnerships, due to the innovative activities initiated during the event.

In the beginning of 2016, the Federation of Romanian Nongovernmental Organizations for Development (FOND) organized the first training on Policy Coherence for Sustainable Development - PCSD. The purpose of this training was to introduce the concept of policy coherence for sustainable development (PCSD) and improve understanding of how to apply it in practice in a national setting for the implementation of the Sustainable Development Goals (SDGs). The training, part of a project funded by the European Commission and co-financed by the MFA, was attended by participants coming from line ministries and CSOs. A second three-year European project “Coherent Europe for Sustainable Development: Action for Policies that Will Make a Difference” (where FOND is one of the partners), started in the 2017 and continues the work began in 2016. The activities and research included in this project will involve various stakeholders engaged at national level in order to strengthen the national capacity on monitoring the implementation of target 17.14 – policy coherence for sustainable development.

In addition, the Federation of Romanian Non-governmental Organizations for Development (FOND) also supports and facilitates the discussions on the Sustainable Development Goals at regional level with CSOs from the Black Sea region. FOND initiated in 2008 the Black Sea NGO Forum (funded by the MFA and the European Commission), which gathers yearly more than 100 CSOs from all the countries from this region: Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Republic of Moldova, Turkey, Ukraine, Romania, Russia, and other EU member states active in the wider Black Sea region. The main aim is to foster regional dialogue and cooperation (especially by supporting the creation of regional thematic networks). The current regional strategic framework of the forum (adopted by participants in 2015 in Tbilisi, Georgia) has among its 10 priorities, also sustainable development. The last three editions of the forum included the SDGs as one of the main issues addressed on its agenda.

FOND members have been also involved in implementing SDG 17

World Vision Romania (WVR) established partnerships with the Ministry of Education, private companies that support quality education and with other NGOs working in the educational and child protection area. WVR is a member of the Global Partnership to End Violence Against Children, where Romania is a Pathfinding country.

A series of partnerships are concluded with the local rural communities, so that the resources are shared and the impact is maximized for community development programs, where adults and children, including the most vulnerable children are contributing, sharing ideas and implementing activities.

As a response to 17.16 target, *New Horizons* has exported the IMPACT and SKYE methodologies in 24 countries, giving training to 450 club leaders (teachers, youth workers, informal and formal community leaders) who worked with approximately 4400 children and youth aged 12-26 (members of the clubs). Through these partnerships, *New Horizons* share its expertise in working with children and youth in Romania, and supports partners to adapt Romanian model to their context. The main target included 11 new countries in the interval 2016-2017 (Sri Lanka, Georgia, Palestine, USA, Nepal, Germany, Poland, Czech Republic, Kurdish Iraq, Nepal and Burundi).

In Romania, *New Horizons* established partnerships with the Ministry of Education, private companies that support quality education, and with other NGOs working in the educational area. Internationally, *New Horizons* established partnerships with 4 different civil society actors, and

“exported” the IMPACT and SKYE model in 24 countries. The partnerships prepare pupils (12-18) and young adults (18-26) to become global citizens, and get actively involved in their communities and in solving global issues. Also, they open up new channels of communication between schools, communities, teachers, on one side, and between NGOs working in education, schools and private sector, on the other hand.

Strengthening the means of implementation and revitalizing the Global Partnership for Sustainable Development

Strengthening the means of implementation and revitalizing the Global Partnership for Sustainable Development require a holistic and global approach that takes into consideration appropriate national solutions. The success of the 2030 Agenda for Sustainable Development depends on every country and relevant stakeholders doing their part and dialogue is crucial. It is through dialogue that SDG 17 will be implemented.

It is within this spirit that the Department for Sustainable Development is currently revising Romania’s National Sustainable Development Strategy by involving in the consultation process all relevant actors from public institutions to NGOs, academia, the private sector and youth organizations. While this document is a national strategy, besides the potential of sharing good practices, the strategy bridges the link between the ‘national’ and the ‘global’ levels of Sustainable Development.

To implement the Sustainable Development Goals successfully, there is need for policy coherence. Romania’s solutions are: ensuring and maintaining the commitment of all political actors, providing the appropriate strategic umbrella through the national strategy, and developing a functional public institutional framework by guaranteeing the proper coordinating mechanisms and dedicated groups of experts at the national, regional, and local levels. At the same time, Romania is seeking to develop the ‘Critical Mass’ needed to make Sustainable Development a reality by convincing and inspiring Romania’s citizens to participate actively in this endeavor.

2019 will mark an important year for Romania. During the year’s first half, Romania will hold the Presidency of the Council of the European Union – and sustainable development will play an essential role. During the 2019 HLPF on the auspices of ECOSOC, the European Union will present its Voluntary Review and Romania will have a major responsibility in its preparation. On the occasion of Romania’s Presidency of the Council of the European Union, on the 9th of April 2019, Romania will host a ministerial meeting in Bucharest on the topic: “Agenda 2030: Partnerships for sustainable development”.

FOLLOW-UP

In Romania, the implementation process of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals and the adaptation to the national particularities are achieved through the reviewing process of the National Strategy for Sustainable Development. The revised strategy is based on the premise that sustainable development provides a framework for thinking that, once acquired by the citizen, will help create a more equitable society defined by solidarity and able to cope with the changes brought by the current global, regional and national challenges. The three pillars of sustainable development: economic, social and environmental are addressing these issues.

From the economic point of view, a long-term economic growth, beneficial to all Romanian citizens should be guaranteed. Although the economy of a country is often measured by numbers and not taking into account the human potential, the transformation of the economy into a sustainable one, requires a new course of action focused on innovation, optimism and resilience of the citizens. Such an approach will create an entrepreneurial culture where the free market is both an advantage and an environment where the citizens can reach their highest potential.

From a social point of view, we need a cohesive society, able to benefit from improved educational and health systems, from fewer inequalities between men and women, between urban and rural areas. This will lead to the promotion of an open society, where citizens will feel both valued and supported. It takes an improved resilience of the population, so that the citizens are able to fulfill their dreams in a fair and just institutional framework within their own country. At the same time, the state should help in increasing the human potential of citizens by addressing health-related and educational issues, issues that can be tackled through public policy, leading to a higher standard of living for everyone.

The importance of **environmental** awareness has increased significantly in recent years, with regard to both natural and man-made ecosystems. Achieving a sustainable society can be made by cultivating a sense of belonging and community that ensures social inclusion and loyalty to nature.

At the European level, in the preparation process for the presidency of the EU Council in the first half of 2019, Romania proposed sustainable development as one of the top priorities on the European Union's policy agenda. We are committed to work with EU member states as well as with all countries on advancing the implementation of the 2030 Agenda for Sustainable Development both internally and externally. Also, we consider of utmost importance the **environmental dimension of sustainable development**, the interlinkages with relevant UN fora, especially United Nations Environment Assembly of the United Nations Environment Programme (UNEA), its outcomes and resolutions on advancing and implementing the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals.

In 2019, will start the elaboration of the Third Environmental Performance Review (3rd EPR) of Romania, carried out by the United Nations Economic Commission for Europe (UNECE) experts' mission in Romania.

This process will substantially contribute to the localization of the SDGs, focusing on the environmental dimension of sustainable development. We estimate the 3rd EPR to be completed in 2020, thus we consider the future submission of the Voluntary National Reviews of Romania to be in 2023 and 2029.

List of figures

Figure 1. Population decline at national level.

Figure 2. National population distribution, in 2010. Figure 3. Income gender gap

Figure 4. The National Health Strategy – priority areas and strategic objectives

Figure 5. Maternal mortality rate in Romania, 2000 – 2015

Figure 6. Infant Mortality – overall and by component, Romania 2000 – 2016

Figure 7. Trend of the new cases of HIV/AIDS reported in Romania

Figure 8. Standardized mortality rates by cardiovascular diseases in males and females, Romania versus EU (age 0-64 years)

Figure 9. Standardized mortality rate by cancer 0-64 years, Romania versus EU

Figure 10. Recorded alcohol consumption per capita Romania – overall and by type of drinks

Figure 11. Drinking water supply network and volume. Source: Romania's Statistical Yearbook 2015

Figure 12. Volume of drinking water supplied to the users. Source: Romania's Statistical Yearbook 2015

Figure 13. The links between the Matrix of SDGs and Template of PoW Report

Figure 14 – Elements defining the Project Strategy for Energy of Romania for 2016-2030, with an outlook to 2050

Figure 15 – Five key strategic goals and five key areas of strategic intervention

Figure 16 – Evolution of the existing electricity generation capacities, without investment in new capacities.

Figure 17. Final energy consumption. Data source: Eurostat, February 2018.

Figure 18. Romania's final energy consumption, by sector. Data source: Eurostat, February 2018.

Figure 19. Electricity prices for medium size households. Data source: Eurostat, February 2018.

Figure 20. Gas prices for medium size households. Data source: Eurostat, February 2018.

Figure 21. Share of renewable energy in gross final energy consumption.

Figure 22. – People living in households with poor conditions

Figure 23 - People living in households suffering from noise

Figure 24 – Urban population exposure to air pollution by PM2.5

Figure 25 - Resource productivity (in euro per kg, Romania & EU).

Figure 26 - Generation of waste excluding major mineral wastes (in kg/ capita) - Romania & EU).

Figure 27 – Conservation status of habitats and species;

Figure 28– Overall trends in Conservation Status of habitats and species;

Figure 29– Conservation status of habitats and species in biogeographical and marine regions

Figure 30 - Percentage of biogeographical and marine assessments in each conservation status category by habitat category and by taxonomic group, for habitats and species.

Figure 31 - Percentage of habitats assessments; Source: National Summary for Article 17 – Romania, 2007-2012.

List of terms

ANPM = National Environmental Protection Agency
AFM = Environment Fund Administration (Administrația Fondului pentru Mediu)
BIG-E = Batumi Initiative on Green Economy
CEPA = Center for European Policy Analysis
CSD = Commission for Sustainable Development
CVD = Cardiovascular disease
ECEC = Early Education and Care
EMAS = Eco-Management and Audit Scheme
VNR = Voluntary National Review
ESL = early school leaving
ETS = Energy Transfer System
GD = Government Decision
GDP = gross domestic product
GEO = Government Emergency Ordinance
GPP = Green Public Procurement
i.e. = lat. id est, eng. that is
IEA = International Energy Agency
ILO = Internal Labor Offer
ILO= total number of employees
IPO = Initial Public Offering
ISPA = Instrument for Structural Policies for Pre-Accession
ITE = initial teacher education
ITE = Initial Teacher Education
ESD = Education for Sustainable Development
LIOP = Large Infrastructure Operational Program
LLL = life-long learning
LTC = Long term care
MDRAP = Ministry for Rural Development and Public Administration
MEAs = Multilateral Environmental Agreements

MoH = Ministry of Health
MoNE = Ministry of National Education
NDP = National Development Plan
NEL = Law of National Education
NFSP = National Framework Strategic Plan
NHIH = National Health Insurance House
NSDS = the National Sustainable Development Strategy
OEWG = Open Ended Working Group
p.e. = population equivalent
p.p. = percentage point
PHARE = European Economic Restructuration Program
PNDL = National Programme for Local Development
PoW = Protocol of Waters
RBMP = River Basin Management Plan
RES = Renewable Energy Source
ROP = Regional Operational Programme
SACET = District Heating Supply Systems
SCP = Sustainable Consumption and Production
SD= Sustainable Development
SDG= Sustainable Development Goal
SOP = Sectorial Operational Program
SPO = secondary public offerings
TOE = tonne of oil equivalent
UNEA = United Nations Environment Assembly
UWWTD = Urban Waste Water Treatment Directive
VET = Vocational Education and Training
WB = World Bank

The following is an attempt to name all of those who contributed directly with inputs/or comments during one phase or another of this review's preparation. We apologize for any omission, which if they occurred are completely unintentional.

National Coordination: The Inter-ministerial Committee for the Coordination of the Integration of the Environmental Protection into sectoral Policies and Strategies at the National Level: Ministry of Environment; Ministry of Regional Development and Public Administration; Ministry of Internal Affairs; Ministry of Foreign Affairs; Ministry of National Defense; Ministry of Public Finance; Ministry of Justice; Ministry of Agriculture and Rural Development; Ministry of National Education; Ministry of Labour and Social Justice; Ministry of European Funds ; Ministry of Economy; Ministry of Energy; Ministry of Transport; Ministry for Business Environment, Commerce and Entrepreneurship; Ministry of Health; Ministry of Culture and National Identity; Ministry of Waters and Forests; Ministry of Research and Innovation; Ministry of Communications and Information Society; Ministry of Youth and Sports; Ministry of Tourism; National Agency for Natural Protected Areas; Environmental Fund Administration; National Environmental Protection Agency; National Institute of Public Health; National Meteorological Administration, National Environmental Guard, National Agency for Mineral Resources, National Commission for Prognosis.

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