

# Resource efficiency and circular economy in Europe – even more from less

## An overview of policies, approaches and targets of Albania in 2018

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European Environment Agency  
European Topic Centre on Waste and  
Materials in a Green Economy



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## Acknowledgements

This country profile is based on information reported by the Eionet network and, in particular, the National Reference Centres on Resource Efficiency and Circular Economy. The information is current as of March 2019, when members of Eionet verified the content of this profile.



This country profile was prepared as part of the 2019 EEA review of material resource efficiency, circular economy and raw material supply policies, which aimed to collect, analyse, and disseminate information about experience with the development and implementation of these policies in EEA member and cooperating countries.

At the time of writing, a summary report is being finalised. The report reflects on trends, similarities and differences in policy responses, showcases selected policy initiatives from member countries and identifies possible considerations for the development of future policies.

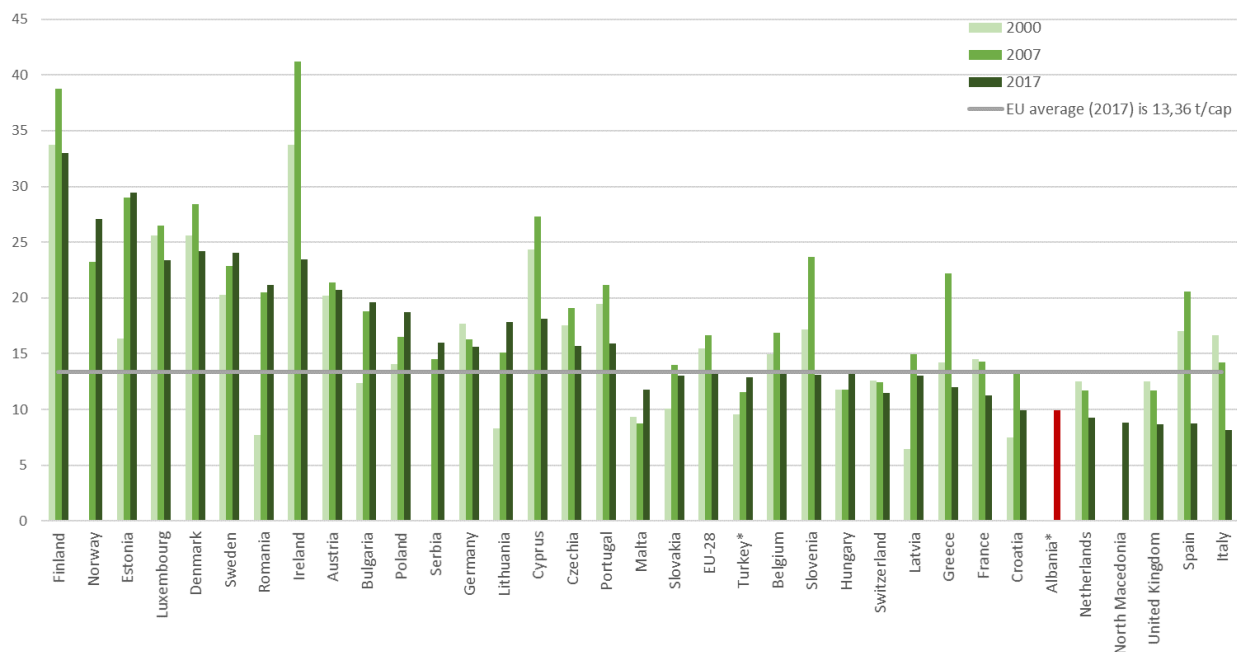
These country profiles were compiled and finalised by members from the European Topic Centre on Waste and Materials in a Green Economy, namely Bart Ullstein, Bettina-Bahn Walkowiak, Jeroen Gillabel, Margareta Wahlström, Jutta-Laine Ylijoki, Dirk Nelen, Theo Geerken, Veronique Van Hoof and Evelien Dils. The responsible EEA project managers for the work were Pawel Kazmierczyk and Daniel Montalvo.

## Albania, facts and figures

Note: data in this section was sourced from Eurostat databases, except where noted otherwise

	<p><b>GDP:</b> EUR 10.7 billion (0.07 % of total EU28 in 2016)</p> <p><b>Per capita GDP:</b> EUR 3,700 (purchasing power standard) (12.8 % of EU28 average per capita figure in 2016)</p> <p><b>Use of materials (domestic material consumption (DMC))</b>  28.6 million tonnes DMC in 2016 (0.4 % of EU28 total in 2016)  9.9 tonnes DMC per capita in 2016 (75.9 % of EU28 average per capita in 2016)</p> <p><b>Structure of the economy:</b>  agriculture: 21.7 %  industry: 23.9 %  services: 54.4 %</p> <p><b>Surface area:</b> 28.7 thousand square kilometres (km<sup>2</sup>) (0.7 % of total EU28)</p> <p><b>Population:</b> 2.9 million (0.6 % of EU28 total in 2016)</p>
	

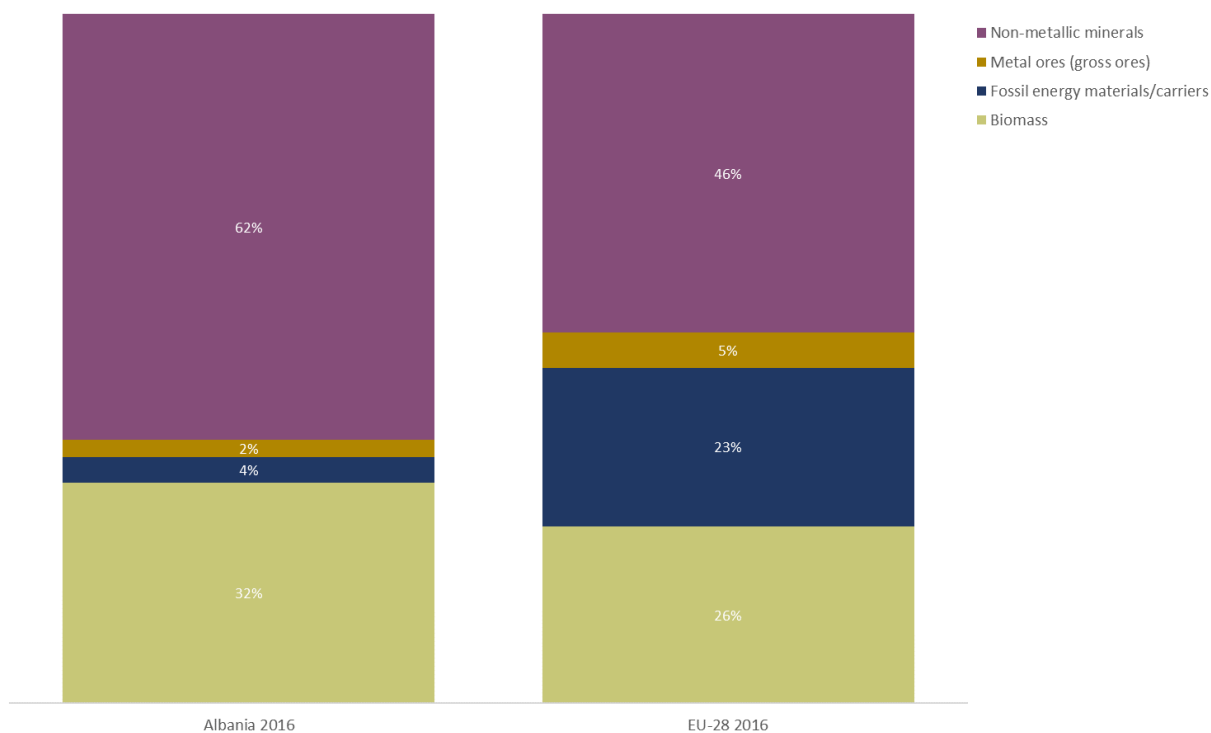
Use of materials (DMC) per person in Europe, 2000, 2007 and 2017\*, tonnes DMC per capita  
Source: Eurostat [env\_ac\_mfa]



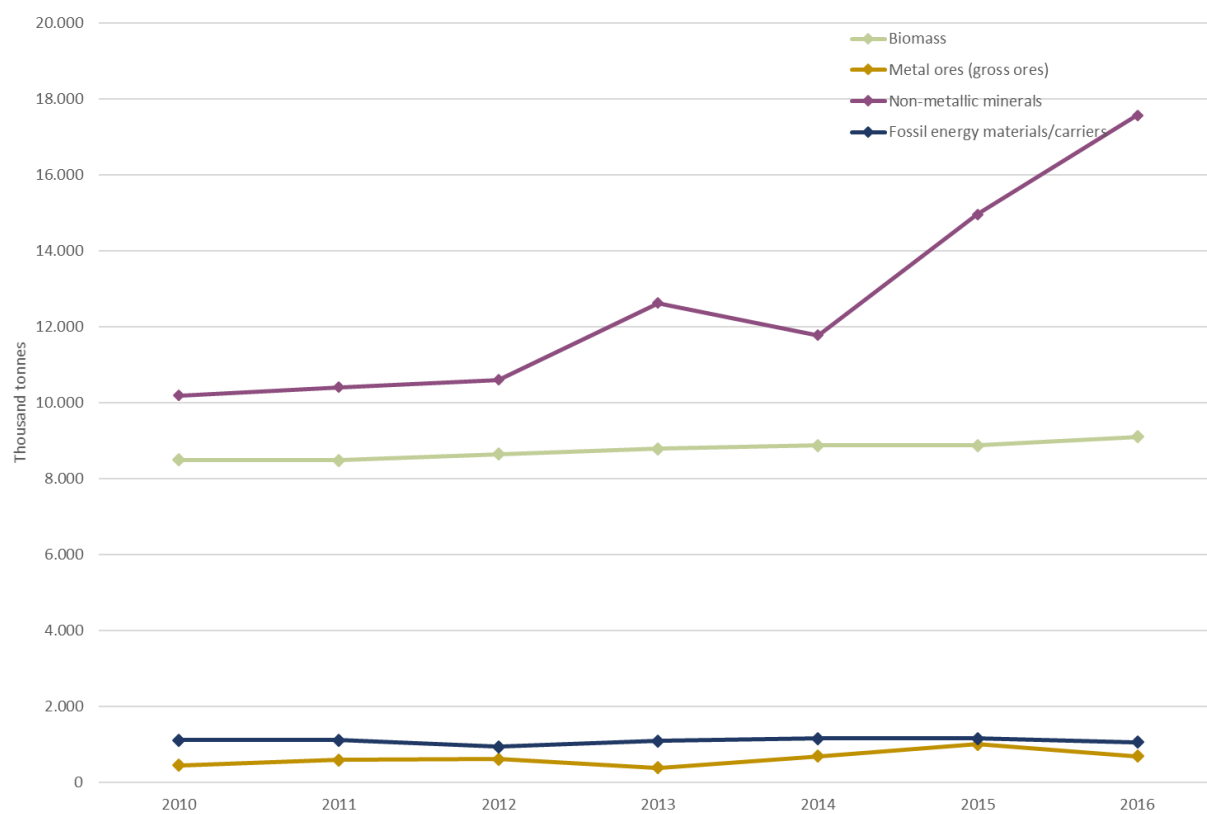
\*2017 data for Albania and Turkey are not available. The latest data (2016) are therefore used.

## Albania & EU-28. Domestic Material Consumption by material category, 2016

Source: Eurostat [env\_ac\_mfa]

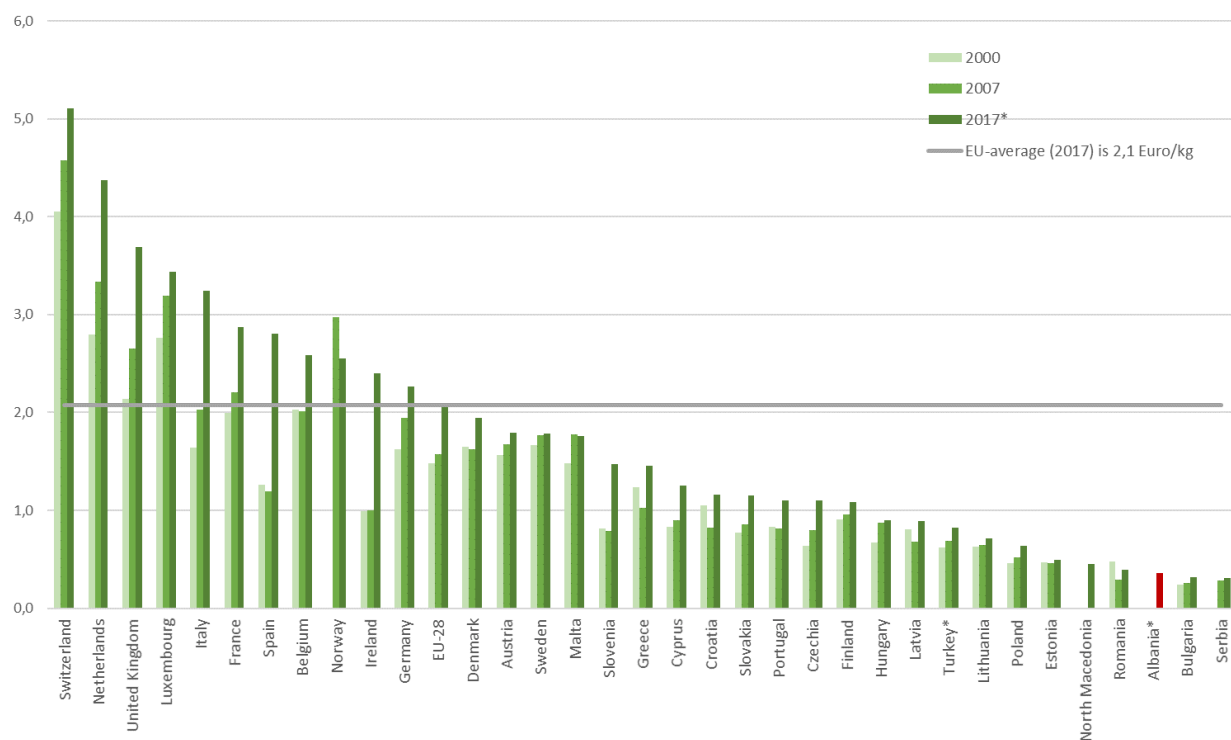


\*2017 data for Albania are not available. The latest data (2016) are therefore used.



# Resource productivity (GDP/DMC), 2000, 2007 and 2017\*

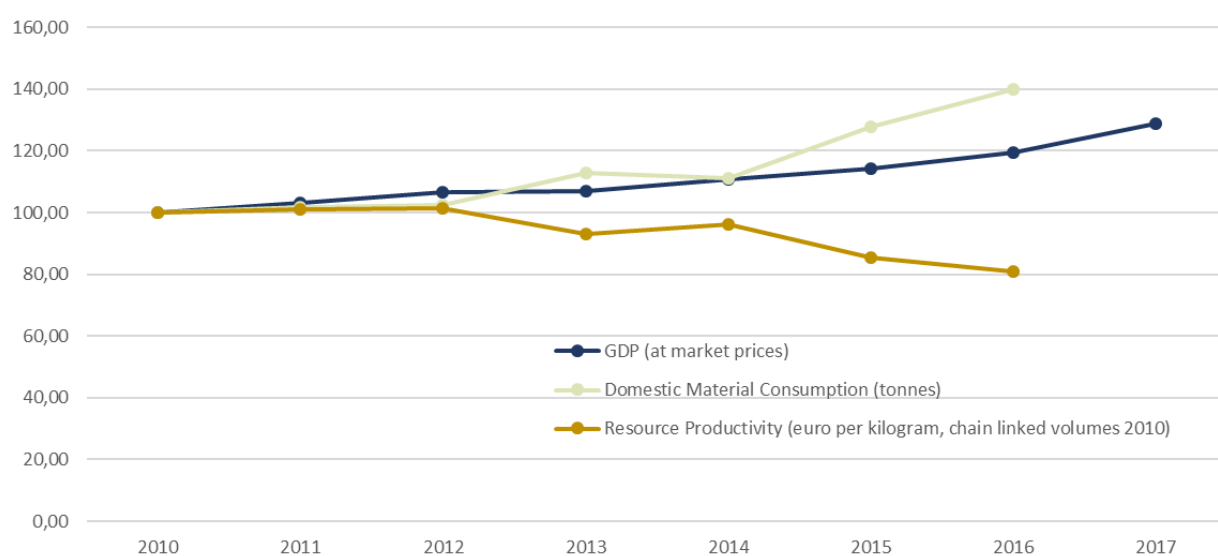
Source: Eurostat [env\_ac\_rp]



\*2017 data for Albania and Turkey are not available. The latest data (2016) are therefore used.

## Albania. GDP, DMC and resource productivity trends, 2002-2017, index 2010=100

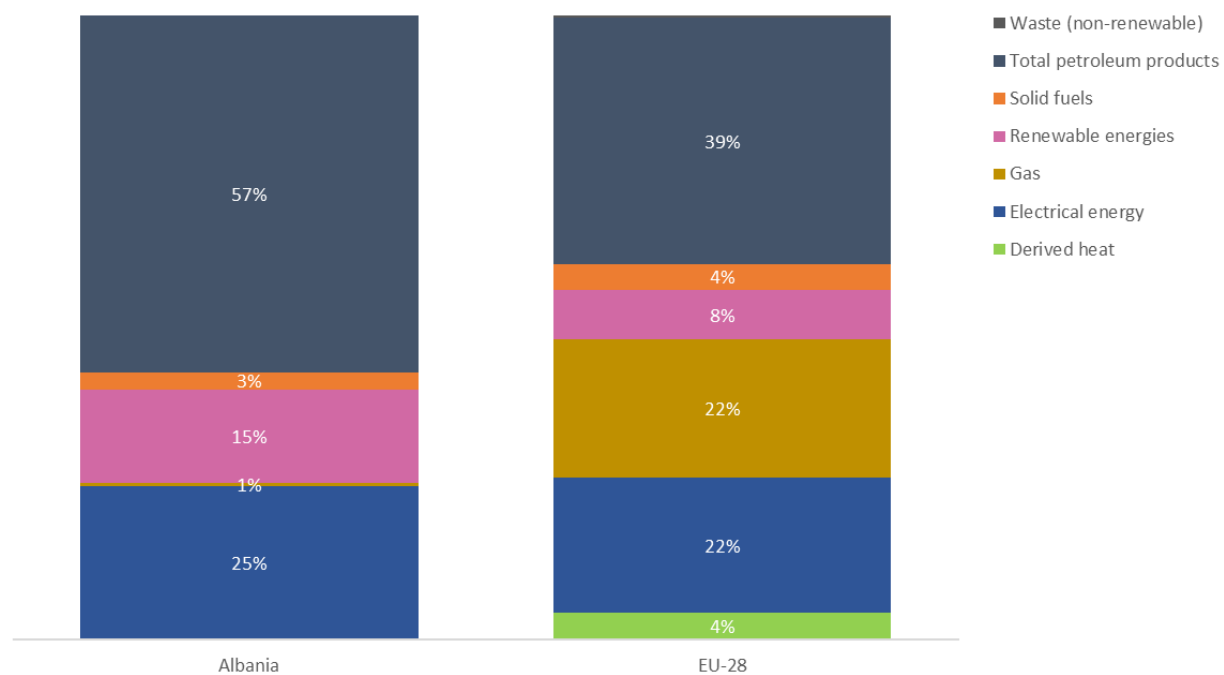
Source: Eurostat [env\_ac\_mfa], [env\_ac\_rp], [nama\_10\_gdp]





### Albania & EU-28. Primary energy consumption by energy product, 2016.

Source: Eurostat [nrg\_100a]





## Policy framework

### Driving forces for material resource efficiency and circular economy

Albania is working towards a reliable and sustainable energy sector, developed on the basis of using all energy options to meet the country's demands and create added value for Albanian citizens, in alignment with the principles of environmental, economic and social responsibility. To achieve ongoing development of the energy system, timely and efficient investment is needed. In this respect, the government of the Republic of Albania plays a key role in creating a stimulating environment for investment into energy infrastructure, especially new production capacity, and in decreasing the risks for investors both in its activities and through a transparent, unambiguous and firm strategic energy policy framework.

The objectives of Albania's energy policy are competitiveness, security of supply and sustainability. The policy vision consists of rules and policies notably regarding competition and state aid, including in the mining sector; conditions for equal access to resources for prospection, exploration and production in the hydrocarbon sector; the internal energy market, opening up the electricity and gas markets; and the promotion of renewable energy sources and energy efficiency.

The promotion of renewable energy and energy efficiency in Albania addresses requirements for transposing the *acquis* on renewable energy, high-efficiency cogeneration based on useful heat demand, improvement in the energy efficiency of buildings, energy services and various other initiatives. Where applicable, energy-using products must fulfil eco-design requirements and household appliances must carry energy labelling. An enforcement body is required, in particular for labelling and minimum efficiency standards.

To promote renewable energy and energy efficiency, Albania is working to combine renewable energy efficiency and renewable energy policies, making them part of a whole-energy strategy based on European Union directives (2001/77, 2003/54/EC, 2003/55/EC; etc.). Currently, the National Energy Strategy (2007–2020) includes not only a strategy to develop classic (fossil) resources, but also strategies for renewable energy and energy efficiency. Their inclusion in the National Energy Strategy is accompanied by an outline of all the steps to be taken for their application. The aim of including all energy sources in energy-demand planning is closely linked not only to the use of alternative sources, but also to the objectives of the Albanian energy system for the development of clean energy sources. Albania has ratified and signed several agreements closely related to the use of alternative and environmentally sound sources and is working to develop the legal framework needed to promote these resources.

### Dedicated national strategies or roadmaps for material resource efficiency and a circular economy

There is no dedicated resource efficiency strategy or action plan in Albania. The following related policies, however, are in place .

1. **National Strategy of Energy 2017–2030.** `
2. **Law No 7/2017 Stimulating the use of energy from renewable resources (similar to EU Directive 2009/ 28/CE/EP).**  
Key objectives of this law are:
  - encouraging energy production from renewable resources for a sustainable development;
  - reducing imports of organic fuels and emissions of greenhouse gases, and environmental protection;
  - encouraging the development of a market for electricity from renewable sources and its regional integration;
  - increasing diversification of the use of energy sources and security of energy supply in Albania.
3. **National Action Plan for energy from renewable resources 2018–2020.**

The key objective is to define the measures needed to fulfil the national objectives on energy produced by renewable resources for cooling, heating and transportation.

**4. And a full package of laws/dcms/regulations on energy efficiency and use of renewable resources**

Specific circular economy issues are still under development as part of an ongoing new drafting process of the National Strategy of Integrated Management of Wastes in Albania. The Ministry of Tourism and Environment is currently working on it.

#### Overview of dedicated national or sectoral strategies for raw materials

There is no dedicated national or sectoral strategy for raw materials *per se* in Albania, but they are mentioned in others. There is also no national list of raw materials critical for Albania similar to the one published by European Commission, nor available information.

Raw material issues will be included in the new revised National Strategy on Integrated Management of Wastes.

#### Policies which include elements of material resource efficiency

The Ministry of Energy compiled a new Energy Efficiency Plan. The objective is to reduce final energy consumption by 7.5 per cent –190 kilotonnes of oil equivalent (ktoe) – by2020. This objective is divided between the residential sector (50 per cent), transport (40 per cent) and industry (10 perc cent). The Energy Efficiency Plan has been mainstreamed and is based on Albania’s intended nationally determined contribution (INDC) to the Paris Agreement.

Albania adopted the Law on Energy Efficiency in November 2015, which transposed the provisions of the Directive 2006/32/EC and some key provisions of Directive 2012/27/EU. This includes requirements to set a 2020 indicative energy savings target; adopt an energy efficiency action plan (EEAP) and monitoring it; develop an exemplary role for the public sector; and introduce energy audits, obligation schemes and the promotion of a market for energy services.

It also envisages the establishment of an energy efficiency agency and an energy efficiency fund. The Energy Efficiency Agency was formally established by the government in December 2016, while the process of establishing the fund is ongoing.

Albania has not adopted the 2nd and 3rd Energy Efficiency Action Plan (EEAP) and the set of secondary legislation to implement the Law on Energy Efficiency. The country thus fails to comply fully with Directive 2006/32/EC and Directive 2012/27/EU. The case of non-compliance with Directive 2006/32/EC is currently subject to an infringement procedure (Case ECS-10/13).

The Intersectional Environmental Strategy <sup>1</sup> (National Strategy of Integration and Developments, November 2007) was designed and published by the former Environment, Water Resource and Forest Ministry with assistance under the EU CARDS Programme 2005.

The 2011–2018 National Plan of Action for Energy Efficiency<sup>2</sup> (NEEAP) entered into force in 2011. This strategy is adopted at the national level. The NEEAP is based on the following EU directives: Directive 2006/32/EC on energy end-use efficiency and energy services, Directive 2002/91/EC on the energy

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<sup>1</sup> [www.mjedisi.gov.al/](http://www.mjedisi.gov.al/)

<sup>2</sup> [www.encharter.org/](http://www.encharter.org/)

performance of buildings (amended by 2010/31/EP), Directive 92/75/EC (as amended by Directive 2010/30/EP).

The Renewable Action Plan 2015–2020 was adopted on 20 January 2016.

According to this Plan, Albania expects to derive 38 per cent of its energy from renewable sources by 2020.

- I. Consumption of renewable energy resources of 38 per cent in 2020; (page 4 of 67 pages of the National Action Plan for Renewable Energy – Resources in Albania – 2015–2020).
- II. Renewed: National Strategy for Sustainable Tourism Development<sup>3</sup> 2018–2022 (draft) January 2018, published by the Ministry of Tourism and Environment (former Ministry of Environment, Forest and Water Resources).

Parliament of Albania passed the Law on Promotion of the Use of Energy from Renewable Sources.	February 2017
The second progress report on the promotion of renewable energy for the years 2014–2015 was submitted to the Secretariat.	January 2017
Albania adopted a new Law on Energy Performance of Buildings, including provisions for incorporating renewable energy technologies in newly built or renovated buildings to transform them into nearly zero-energy buildings.	November 2016
Albania's Council of Ministers adopted the National Renewable Energy Action Plan. The English version was submitted to the Secretariat and is now on-line.	March 2016

Albania has significant renewable energy resource potential from hydro, wind and solar energy. The country currently relies on hydropower for almost all of its electricity, which creates difficulties when water flows are low. The government recently adopted new electricity market laws and is undergoing a process of opening that market to competition. An attractive feed-in tariff is already in place for small hydropower, but the government is still in the process of determining the incentive mechanism for encouraging more near-term investment in renewable energy technologies. Several very large and high-profile wind-farm deals are in development and should provide political pressure to speed the government decision process.

### *Solar energy*

Albania is located in the western part of the Balkan Peninsula, on the eastern coast of the Adriatic and Ionian seas. It is situated between latitudes 39°38'–42°38' and longitudes 19°16'–21°04' east. Thanks to this geographical position, Albania is within the Mediterranean climate belt and enjoys hot dry summers with long days of sunshine and mild winters with abundant rainfall. The country thus has considerable potential for solar energy: most areas of Albania are exposed to more than 1,500 kilowatt hours per square meter (kWh/m<sup>2</sup>) per year, varying from 1 185 to 1 690 kWh/m<sup>2</sup>. Active exploitation of solar energy is achieved in systems that absorb this energy through flat collectors. Hot water generated can be used for space heating when the temperature is high, but it is used largely for domestic hot water needs. This technology has proved to be the most viable for the exploitation of solar energy, and various countries such as Greece, Israel and Turkey provide hot water for the residential and service sectors using it.

There is also a possibility of using photovoltaic (PV) systems to transform solar energy directly into electrical energy without going through intermediate stages, but the cost of one energy unit produced this way is around USD 0.27–0.32 per kWh. Donors are carrying out a pilot project on exploitation of PV systems for irrigation pumps and potable water.

If the solar panel systems in Albania were developed similarly to Greece, the potential production of hot water would be equal to 360 gigawatt hours (GWh) or 75 megawatt hours (MWh) of installed capacity. These figures correspond to a total surface of solar panels of 300 000 m<sup>2</sup> (or 0.3 m<sup>2</sup> per family), while the solar panel penetration in countries such as Israel and Greece is actually greater than 0.45 m<sup>2</sup> per family.

<sup>3</sup> <http://mjedisi.gov.al/wp-content/uploads/2018/02/Strategjia-e-Turizmit-18-22-draft-1.pdf> (Albanian)

Solar water heaters are proven technologies to supply domestic hot water to the service sector (for example, hospitals and hotels), industry and households. However, low electricity prices and non-payment are obstacles. Nevertheless, solar panels are already available on the market and significant volumes have been installed. In 2010, a total of 10 700 m<sup>2</sup> were installed (60 per cent by the service sector and 40 per cent by households), bringing total installations to 52 000 m<sup>2</sup> (equivalent to around 70 gigawatt hours (GWh) per year or 1 per cent of electricity consumed by households in 2009). The United Nations Development Programme (UNDP) is supporting a programme (2011–2015) to install 50 000 m<sup>2</sup> of solar panels based on grants and fiscal incentives.

#### *Wind energy*

There are major plans for developing wind energy in Albania in the next few years with significant investment in a proposed 2 000 MW generation capacity from wind. It is an ambitious goal, because at present there is no wind power capacity. According to a study, wind speeds are around 6 meters per second. The good areas in Albania for wind farm locations include the coastal lowlands, in the hills of Northern Albania and mountains of Southern and Eastern Albania. The basic aim of our calculation is to guide the transmission operator OST in the assessment of new potential capacity at appropriate grid connection points.

In our energy production analysis, we have studied the 11 wind farms that have been licensed in Albania. According to the estimates, Albania has excellent wind potential, with wind speed values exceeding 8–9 meters per second in many areas. A number of interesting areas, especially along the coast and on the ridges of the mountains, with particularly strong winds in the southern part of the country have been identified. Their overall exploitable wind potential has been estimated taking into account the main constraints preventing the development of wind power plants.

#### *Geothermal energy*

Geothermal energy resources in Albania are estimated to be the warm-water sources of underground soil, which have a sufficient temperature to be used as an energy source. Albania has two ways of using geothermal energy:

- 1) thermal sources with low enthalpy and a maximum temperature up to 80°C – these are natural resources or wells located over a large area from the south, near the border with north western Greece;
- 2) deep vertical wells for geothermal energy, including a large number of oil and abandoned gas wells that can be used for heating purposes.

#### *Building incinerators*

Despite the low level of generated and processed waste, the government has ambitious plans for building three incinerators with high processing capacities through concessional public-private partnerships. The Elbasan waste disposal concession (Albtek Energy), the total cost of which was ALL 5.3 billion, is already operational. The processing capacity will be around 120–140 tonnes per day according to the official statement in the contract.

The Fier Incinerator (Fier) will cost a total of ALL 3.97 billion, and will have a processing capacity of around 180–200 tonnes per day. This project has not started yet due to ongoing protests by villagers in the village of Verri, who object to the incinerator being built as they fear air pollution and agricultural impacts.

The third project is the Tirana Waste Treatment (Integrated Energy B.V. Sh.p.k), which will cost a total of ALL 31.17 billion and have a processing capacity of around 550–800 tonnes per day. Construction has not yet started.

#### *Waste reduction and waste prevention initiatives – relevant to circular economy*

**Decision no. 1104, dated 28.12.2015 on the approval of the requirements for preventing the discharge of waste generated by ships and surpluses from cargoes at sea**

This decision concerns the determination, establishment and approval of requirements for the prevention of waste or cargo surplus discharge from ships, with the aim of protecting the marine environment from ships using the ports of the Republic of Albania.

It also sets the “ecological tariff for waste”, a compulsory payment by any vessel that covers the costs of ship-generated waste, including handling and disposal by operators licensed or contracted by the General Marine Directorate.

**Decision no. 232, dated 26.4.2018 on some amendments and additions to decision no. 177, dated 6.3.2012, of the Council of Ministers on packaging and their wastes**

This decision aims to:

- a) prevent the negative impact of packaging and packaging waste;
- b) prevent the production of waste from packaging by increasing its reuse, recycling and other forms of reclamation; and
- c) reduce the quantities of packaging waste that is eventually disposed of.

The decision establishes rules for the production and import of all types of packaging and its waste management, and defines the entities responsible for its management. Since entry into force of this decision, the sale or use of unbiodegradable plastic bags has been forbidden to.

**Decision no 660, dated 31.10.2018 on approval of requirements for metals waste management**

This decision sets the requirements for metal waste management – for landfilling and its treatment – with the aim of preventing or minimising negative impacts on the environment.

**Law no. 7/2017 on promoting the use of renewable energy sources**

Article 1 of the Law on the Promotion of the Use of Renewable Energy Sources aims to reduce the import of fossil fuels and emissions of greenhouse gases and consequently promote the protection of the environment. Article 3 of the Law supports the production of energy from biomass, defined as the biodegradable parts of biological waste and suitable municipal waste. Article 10 promotes the construction and operation of energy production facilities with capacities of up to 2 MW using renewable sources, including waste, which could benefit from subsidised energy-purchase tariffs that could be generated by the capture and processing of landfill gases, anaerobic composting, incineration, etc.

**Draft National Strategy on Waste Management 2018-2033 (30 January 2018, not approved yet)**

The strategy regulates the management of different waste streams in the Republic of Albania from generation to final disposal on the basis of an integrated approach that will be structured in accordance with the country's real opportunities and in line with the best European standards, in order to reduce and avoid negative impacts on human health, and encourage environmental protection and adaptation to climate change.

*Deadlines for recovery and recycling of some waste streams*

Waste streams	Deadline	Percentage (% of weight)	
		Recovery	Recycling
Packaging waste	2018–2033	-	22.5 % of plastic; 60 % of glass; 60 % of paper and paperboard ; 50 % of metals; 15 % of wood
End of life vehicle waste	2018 – 2023	85 %	80 %
End of life vehicles (ELVs)	after 2023	90 %	85 %

Waste electrical and electronic equipment (WEEE)	2023	45 % of WEEE	50–70 %
	2033	65 % of electrical and electronic equipment or 85 % WEEE waste	
Waste tyres	2033	65 %	50 %
Waste used oils	by 2033	80 %	-
Waste batteries and accumulators	2023	-	25 %
	2033		65 %

The draft strategy states that during the second implementation phase, 2023–2028, the ministry responsible for the environment will prepare the National Waste Prevention Plan and the National Biodegradable Waste Management Plan and compile waste prevention policies at the individual generator and/or group of generators level(s).

### Recycling Industry in waste management

There is a developed and active recycling industry in Albania. The Albanian Association of Recyclers (AAC) reports that there are about 38 private recycling companies with a processing capacity of around 498,480 tonnes per year. Due to a lack of raw material, this industry only uses 26.8 % of its production capacity, 133,592 tonnes per year, which represents about 10 % of solid urban waste generated in Albania.

### Potential for thermal energy recovery

In Albania there are six companies that use thermal energy in the production of lime and cement. These companies can use non-recyclable waste such as paper/paperboard, plastic, tires, wood and textiles as fuel feedstocks.

### Potential for incineration with the recovery of electricity

The Albanian government has planned the construction of three incinerators, one in Elbasan with a capacity of 150 tonnes per day, one in Fier with a capacity of 240 tonnes per day, and the third in Tirana with a capacity of 920 tonnes per day. Together, the processing capacity of these plants is estimated at about 1,310 tonnes per day or 478,150 tonnes per year, about 45 % of the total municipal solid waste (MSW) generated in the country.

### Treatment of municipal solid waste

Municipalities are responsible for the treatment and disposal of MSW and the management of waste treatment facilities. The collection, final treatment and disposal of MSW's are recognised as an important issue.

Only three sanitary landfills are in operation in Albania, in Bajkaj (Saranda), Bushat, and Sharra (Tirana). Landfill sites have been built in Maliq and Elbasan and one in Vlora city is in the project phase.

## Institutional setup and stakeholder engagement

The activities of the National Agency of Natural Resources (AKBN<sup>4</sup>) include the development and supervision of the rational use of natural resources, based on government policies, and the monitoring of their use in the mining, hydrocarbon and energy sectors.

The scope of activity of the AKBN consists of:

- proposal, consultation and cooperation with relevant government structures for drafting its policies and strategies in the areas of mining, hydrocarbons and energy;
- implementation of government policies in the fields of mining, hydrocarbons and energy;

<sup>4</sup> [www.akbn.gov.al](http://www.akbn.gov.al) (Albanian)



- c) provision, within the scope of its activity, of governmental opposition to studies and projects in the fields of mining, post-mining, hydrocarbon and energy activities submitted by state or domestic or foreign private entities. Special cases may require specialised assistance;
- d) promotion of mineral resources, hydrocarbons, hydro and renewable energy sources;
- e) negotiating hydrocarbon and mining agreements and following the implementation of their development plans;
- f) preparation of documentation and practices necessary for issuing permits and authorisations, in accordance with the law, enabling access to hydrocarbon deals and conducting hydrocarbon operations under the related agreements;
- g) follow-up of the implementation of the related hydrocarbon agreements;
- h) supervision of mining, post-mining, hydrocarbon and energy activities;
- i) monitoring exploited areas, mining risks and closure of mining activity;
- j) monitoring concession contracts for hydropower plants;
- k) exclusively administering all primary data from the hydrocarbon sector and data related to mining and post-mining activities;
- l) proposing measures to increase the use of energy in the energy cycle;
- m) design and publication of annual energy balances at national and regional levels in accordance with the formats of EUROSTAT and the International Energy Agency.

Ministry of Tourism and Environment: [www.mjedisi.gov.al](http://www.mjedisi.gov.al);

National Environment Agency: [www.akm.gov.al](http://www.akm.gov.al);

Energy Charter Secretariat: [www.encharter.org](http://www.encharter.org);

REC Albania: [www.albania.rec.org](http://www.albania.rec.org);

Instat Albania: [www.instat.gov.al](http://www.instat.gov.al);

Ministry of Energy and Industry: [www.energija.gov.al](http://www.energija.gov.al).

Large industrial stakeholders include:

Colacem S.p.A: <https://www.colacem.com/ww/en>

Titan group: <https://www.cemnet.com/global-cement-report/country/albania>;

Kurum International: <http://see-industry.com/industrial-statiieng.aspx?br=42&rub=225&id=590>;

TAP (Trans Adriatic Pipeline);

Bankers Petroleum Albania Ltd: [www.bankerspetroleum.com/albania](http://www.bankerspetroleum.com/albania).

### **National Environment Agency**

- Pursuant to Law No. 10431 on environmental protection, dated 9.6.2011; Law No.10463 on integrated management of solid waste, dated 22.9.2011 and DCM No. 687 on approval of rules for maintaining, updating and publication of waste statistics, dated 29/07/2015; and Decision No. 99 on the approval of classification codes of Albanian Waste, dated 18.02.2005 as amended; and Law No.115/2014 on administrative-territorial division of local government units in the Republic of Albania, the National Environment Agency creates and manages an environmental information system as one of its most important functions.
- This system serves the protection, integrated management and monitoring of environmental policy implementation. One of the most important components in the system is environmental waste and its integrated management.
- The National Environment Agency is launching databases/software on the collection of waste data which will give a clear overview of the management and collection of waste throughout the Republic of Albania.
- This database will contain waste statistics according to the new territorial divisions and includes all waste streams according to the Albanian waste classification codes. In addition, it will contain data on the total amount of waste deposited in landfill, the amount treated in incinerators and the total number of ELVs for each region.
- By 31 January each year, local government units will provide data on waste streams to the National Environment Agency,.



- At the national level, the National Environment Agency processes and analyses data on the total amount of waste collected and registers them in a statistical database. Waste data are presented in a state of the environment report and reported to the Ministry.
- The Information and Statistics Directorate will maintain and manage this database using software installed on the Pollutant Release and Transfer Register.

### Approaches to resource efficiency and circular economy policy evaluation

After adoption of laws and approximation with EU legislation, Albania will implement them and hise concerned with the improvement of energy efficiency. Instruments to measure implementation and compliance, however, need to be established. Assistance will be provided by the EU Delegation in Albania to support and facilitate the country in adapting new legislation and new rules as a way to integrating with Europe.

## Monitoring and targets

### Targets for resource efficiency and circular economy

#### *Indicative target*

The national indicative target of final energy consumption must be allocated to the various sectors so that the effectiveness of proposed measures can be monitored at a more disaggregated level. Different authorities and organisations have jurisdiction to implement energy efficiency improvements in different sectors.

The sectoral allocation of the national target is primarily based on the following:

- the potential for efficiency improvement in different sectors;
- the level of policy intervention in each sector;
- the proportion of final energy consumption of individual sectors;
- a least-cost concept of different energy efficiency measures for different sectors (it is much better to promote the least-cost measures than the higher-cost ones).

As mentioned, the transport, residential and service sectors have the largest share of final energy consumption. However, the allocation is not made solely on the basis of these percentages but also on the estimated impacts of the proposed measures. The intermediate energy-saving target levels for each sector are shown in the table.

*Energy-saving target by sector*

Sector	Share of target (%)
Transport	31
Industry	25
Residential	22
Services	19
Agriculture	3
Total saving potential	100

Defining state policies for improving energy efficiency:

- define activities, measures and the provision of energy services to improve energy efficiency;
- anticipate management related to energy efficiency and financial mechanisms for its growth and improvement.

#### *Biomass*

Energy generated from biomass, forest residues, urban waste, agricultural residues and animal waste, could be important in Albania's future. In 2009, Albania used 212 kilotonnes of oil equivalent (ktoe) of

energy produced from biomass, about 14 per cent of total final consumption. The energy potential of burning urban wastes from the main Albanian cities in 2010 was calculated as approximately 1 460 GWh 2010 (annual figure).

#### *Solar*

Albania's Mediterranean climate – hot dry summers and mild rainy winters – is ideal for economic domestic hot water production from solar panels.

The biggest solar potential exists in the western part of the country, with a direct normal irradiation (DNI) value of 7.22 kilowatt hours per square metre (kWh/m<sup>2</sup>) per day and a global horizontal irradiation (GHI) value of 5.4 kWh/m<sup>2</sup> per day. There is great solar potential throughout the country and particularly in the coastal region.

#### **Indicators to monitor progress towards a resource-efficient circular economy**

A resource-efficient circular economy is not yet being implemented in Albania, hence the indicators that associated with it cannot yet be monitored.

A circular economy, according to the well-accepted definition, “keeps materials in use for as long as possible, maximising their value and reducing waste”. A linear economy harvests, then uses, then disposes. A circular economy, which harvests, then uses, then reuses, then reuses, etc., is a new term in Albania, not so familiar with use efficiency and strategies relating to energy.

Nonetheless, resource-efficiency is becoming familiar as an official term as well as amongst non-governmental organisations (NGOs) and other entities involved in energy projects in Albania.

The energy-balance indicator is calculated using Eurostat's methodology, but in a synthesised form rather than in the detail. Indicators are mainly published online but also in publications such as the Renewable Energy brochure ([instat.gov.al](http://instat.gov.al)). They can be found on the websites of the Ministry of Energy and Industry ([www.energija.gov.al](http://www.energija.gov.al)), National Agency of Natural Resources ([www.akbn.gov.al](http://www.akbn.gov.al)), Environment Ministry ([www.moe.gov.al](http://www.moe.gov.al)), Energy Charter Secretariat ([www.encharter.org](http://www.encharter.org)), and REC Albania ([www.albania.rec.org](http://www.albania.rec.org)).

With respect to the Energy Efficiency Directive, Albania missed the first reporting deadlines as follows: 30 March 2017 for Article 4; 1 January 2017 for Article 5; 15 March 2017 for Article 7; and 30 June 2017 for Article 24(1).

Also of relevance:

- plans for implementation of the Paris Agreement and its coherence with the EU climate and energy *acquis*, and domestic climate and energy policies – short and long-term prospects, including the United Nations Framework Convention of Climate Change (UNFCCC) and EU *acquis* implications in terms of Intended Nationally Determined Contributions (INDC) assessment and review, from a ‘fair and ambitious’ perspective;
- ratification of the Paris Agreement in 2016;
- preparation/adoption and implementation of strategic policy documents on climate change, energy and the transport sector, consistent with the EU climate and energy *acquis*;
- adoption of national legislation aligned with the EU package on energy and climate change;
- establishing/increasing institutional capacities at the national and local levels for implementation of a regulatory framework.

## Examples of innovative approaches and good practice

### Examples of good practice and innovative approaches

On 12 November 2015 the Albanian parliament adopted the new law on Energy Efficiency, containing a number of important provisions:

- obligatory schemes for big consumers above 3 million kWh;
- establishes new energy efficiency;
- establishes a new Energy Efficiency Fund;
- stipulates energy audits and energy service companies for buildings, processes and transport;
- envisages energy managers for big consumers.

Roles and responsibilities of the Energy Efficiency Agency:

- implements National Plans at the municipality level;
- approves every project that will be funded by the Fund;
- issues licenses and a register of energy auditors;
- designs and monitors the National Plan for Energy Efficiency;
- monitors the efficiency obligations of big consumers.

The Ministry of Infrastructure and Energy in Albania announced on 16 October 2017 that it has received 10 new expressions of interest for the construction of solar PV parks in the country.

The interest expressed by various companies for the construction of these plants have been considerable throughout the summer 2017 after the approval of tariffs that the government will apply. The price of EUR 100 per megawatt hour (MWh) for the purchase of electricity and various support schemes have provoked considerable interest in renewable resources, although so far, all requests have been for solar PV plants and none for wind farms.

The Fier and Lushnja areas have also received numerous applications – five in the latest announcement alone, but dozens more since August 2017. Along with the high level of irradiance throughout the year, the good flat terrain is a factor that has caused the Myzeqeja region to emerge in the demands of private investors.

In the Darëzezë area in the Fier region, the Solar Renewable Energy company is seeking to utilise 3.6 hectares of land to install a 2 MW plant. The value of the investment is EUR 1.7 million.

Even in the Seman Fier region, the 3AD Energy company wants to use 2.34 hectares to set up a 1.75 MW PV park. The investment here amounts to EUR 2.3 million.

In the Lushnja region area of Plug, a temporary joint venture of three companies seeks to invest EUR 3.9 million. This joint venture has asked the Ministry of Energy and Industry for the use of a 10-hectare area to install a 5 MW power plant.

Also in the Lushnja region, the temporary association of the Favina 1 Sh.a. and Artyka 2 Sh.p.k. companies has expressed an interest in building a 2 MW PV park. This adds a EUR 2 million investment in the region.

The Favina company also wants to invest EUR 2 million in Fier to set up an 8 hectare 2 MW plant and the Favina 1 company wants to make a similar investment in the Korça region. In Korça, a similar investment is required by the Hidrocentrali Qarr & Kaltanj, as well as Rej Sh.a. companies.

In Pilur in the Himara region, the Max Energy company wants to utilise 3 hectares of land to install a 2 MW PV park. This investment will be of about EUR 1.92 million.

In Durres, Solar – Expert Society wants to utilise just over 1 hectare to set up a 1.98 MW plant. The investment will be EUR 2.7 million.

The Solarium Society wants to build a 1.99 MW PV park in Vora near Tirana, utilising 2.53 hectares. Here, too, the investment will be EUR 2.7 million.

The total investment for this block of interests, published by the Ministry, totals EUR 23.2 million and will increase the country's power capacity by 22.7 MWh.

The Albanian energy regulator ERE has set a regulated tariff for PV projects with a capacity of up to 2 MW and wind power projects not larger than 3 MW.

The ERE has established that the regulated tariff for solar for 2017 will be EUR 100 per MWh, while for wind power it will be EUR 76 per MWh. According to ATA, solar and wind projects of this size will be entitled to the tariff once the Ministry of Energy has reviewed and approved them. However, criteria for the selection of the projects remain unclear. They are likely to be treated as small and medium hydropower projects, which, under the current regulation, can sell power at the regulated tariff to the Albanian public power utility OSSH under a 15-year contract.

The announcement of the new tariff explains the increasing number of PV projects of up to 2 MW submitted to the Ministry of Energy over the past months. These projects, therefore, are very unlikely compete in the upcoming solar auction recently announced by the government, as previously reported. The auction, which is being planned with the support of the European Bank for Reconstruction and Development (EBRD), will probably select larger solar facilities such as the 50 MW PV project proposed by Novoselë Photovoltaic PowerPlant Sh.p.k. for Novoselë, a village in the Vlorë County, southwestern Albania in August 2016, or the 50 MW solar facility that a consortium formed by local companies Solar Gamma Sh.p.k., Alfa Energy Sh.p.k., Beta Energy Sh.p.k., Delta Solar Sh.p.k. and Solaris Sh.p.k. hopes to build in Malik, a municipality in Korçë County in eastern Albania. Overall, the government expects to install between 30 MW and 50 MW through the auction.

#### TAP Albania

This high-level event, organised under the auspices of Ilham Aliyev, the President of the Republic of Azerbaijan, brought together the Vice President of the European Commission for the Energy Union, Maroš Šefčovič, as well as several ministers and government officials from the Trans Adriatic Pipeline (TAP) host countries and beyond. They underlined TAP's key contribution to diversifying and securing Europe's energy mix and reinforced their commitment to the timely implementation of the project.

Schieppati, TAP managing director, presented TAP's achievements and progress as of end of January 2018, as follows:

- TAP remains on track to deliver world-class health and safety performance across Greece, Albania and Italy. The TAP teams have collectively worked over 23 million man-hours and driven approximately 65 million kilometres without a major incident.
- TAP's contractors have cleared approximately 92 per cent of the project route in Greece and Albania, 700 km out of 765 km. Furthermore, more than 67 per cent of the welded steel pipes have already been laid in the ground (backfilled), while almost 400 km, more than 51 per cent, have been reinstated.
- In Italy, works are ongoing in the micro-tunnel area. Following completion of the temporary road and preparation of the area, the digging of a micro-tunnel pit is currently under way.
- All 55 000 pipes have been received in Albania, Greece and Italy.
- More than 5 800 people are currently working for the project across TAP's host countries – of which more than 85 per cent are employed locally.

- TAP has implemented a wide range of social and environmental investment (SEI) programmes in the communities along its route. In total, TAP will invest more than EUR 55 million in SEI in Albania, Greece and Italy.

By the creation of the Energy Efficiency Action Plan, Albania expects to save 30–50 ktoe/year. The first NEEAP in Albania is in the initial phase of implementing the national energy efficiency policy. Any remaining gaps in the legislative and institutional framework for energy efficiency must be eliminated during this phase.

Certain steps and activities must be carried out to address gaps:

- adoption of the legal framework for energy efficiency;
- strict implementation of the legal framework on energy efficiency, the Energy Efficiency Action Plan and Building Codes;
- incentives and financial supports for investments in energy efficiency;
- energy service company penetration in the domestic market;
- awareness campaigns.

It must be taken into consideration that energy savings in the first years are expected to be lower since this will serve as a preparatory phase, with a target of 3 per cent in the short term rising to a goal of 9 per cent in the longer term.

#### Resource efficiency and circular economy policy initiatives from subnational to local level

Integrated Energy B.V., based in the Netherlands, was declared the winner of the Concession of Landfill Construction, Incinerator and Rehabilitation of Existing Dumpsites in Tirana contract. Its duration will be 30 years and the value offered by the company is about EUR 128 million.

According to the feasibility study of December, various technologies and installations foreseen for the integration of the Tirana Waste Treatment Area (ZTMT) are planned and scaled to address the management and treatment of solid waste (urban waste and residues) generated in the district of Tirana. ZTMT is designed to accommodate and handle 550–800 tonnes of waste per day at the start of operation (Year 1) but is likely to receive higher amounts within the duration of the contract and if there is an increase in waste generation in the district of Tirana.

The proposed project consists of the construction of four main facilities:

- a waste-to-energy wastewater treatment plant (IPMU) producing electricity;
- landfill facilities for urban waste, after processing in the waste-to-energy plant and for inert waste;
- a recycling and stabilisation plant for urban waste;
- a wastewater treatment plant.

The urban waste-to-energy wastewater treatment plant will have four separate processing lines, each with a capacity of 230 tonnes per day. The four lines will be built in stages, with the first scheduled to begin work in the 18th month of the contract. The second line is scheduled to begin work in the 36th month, and the third in the 50th month. The last line is scheduled to begin work before the 72nd month. The total capacity on completion of the plant will be 920 tonnes per day.

At the same time, the construction of a landfill system is planned to guarantee the disposal of all waste after the final closure of existing landfill sites. The new landfill sites will be built according to current EU standards and Albanian legislation.

## Other resources

### Examples of policies which go beyond “material resources”

There are initiatives for crude oil sub-products, liquid gas, electrical energy, minerals (chrome, copper and coal), fuel wood, timber wood, charcoal etc.

The harvesting of timber/lumber wood in Albania has been banned for 10 years, with the Forest Cutting Moratorium approved in parliament in February 2016 and entering into force a few weeks later. Fuel wood is allowed, with its management transferred to 61 municipalities who plan and harvest forest plots according to population needs.

Mineral material resources such as chrome, copper and coal have in the past been extracted and processed in Albania, mainly in the northeast, reaching a peak under the communist regime in the decades prior to 1990.

Regarding waste-derived secondary materials such as scrap metals, recyclable materials and construction and demolition materials, only scrap metal is currently collected, but as a private business not supported by government structures.

The large metal businesses do not show much interest in recycling the scrap metal left behind by industrial processes and discharge it close to nearby rivers where it is of concern to riverine flora and fauna. Other collection activities, for example of paper and plastic, are not yet under way.

## The way forward

### Reflections on future directions of policies on resource efficiency and circular economy

Resource efficiency in the near and distant future needs to meet objectives for recycling waste or returning it to the energy-producing cycle. The waste produced by the iron-working industry is going to become a threat due to its storage on river banks and in open fields of enormous amounts of post-production waste. Action plans and strategies include the recycling of waste natural resources, but large funds and human resources are required to implement them, as well as political will.

Indeed, the residues from the industries that produce and process iron for the construction sector have reuse potential, but there needs to be a processing site where they can be deposited and recycled, avoiding dumpsites close to rivers where they become a potential risk to local fish species, and also threaten to accumulate in the Adriatic sea.

Following the example of other Mediterranean countries with many sunny days, the potential for solar energy is very high in Albania. Non-governmental and other environmental organisations do not share the government's opinions and strategies, which is obviously normal, but both sides have to listen each other, and interest groups must also listen before taking action and regulations enter into force.

The filters used by heavy industry, accidental eruptions of oil wells, the constructions of small hydro-energy plants in protected areas and the lack of a recycling industry have all caused discord between environmental associations, government administrations and foreign entities.

Permits issued to build small hydro-energy plants in protected areas are becoming a potential source of discord between guesthouse owners, the community and the constructors.

In May 2017, 27 residents of the Valbona Valley, from the villages of Rragam, Valbona, Dragobi and Cherem, supported by the Association for the Conservation of the Albanian Alps (the Land Association), submitted an objection to the construction of two hydropower stations in the Valbona Valley National Park to the Tirana Administrative Court – the court decided to suspend the work.

The request to the Administrative Court was the latest step taken by the Valbona Valley residents in the nearly two-year effort to ban the construction of hydroelectric power plants inside the National Park.

Through this indictment, residents requested that the court declare the absolute invalidity of the concession contract as well as construction permits, environmental permits and permits for the use of water reserves. Two companies had begun efforts to obtain concessions for hydro-power construction in the Valbona Valley before the year 2000.

According to the residents of Valbona and the Land Association, the Ministry of Economy and Industry, the Ministry of Environment, the National Environment Agency, the National Territorial Council, the Territorial Development Agency and the Water Basin Council Drin-Buna had found a number of procedural and material violations.

At the beginning of this year, the Ministry of Energy and Industry rejected the request of the Association for the Conservation of the Albanian Alps to see a copy of the concession contract with Gener 2 Sh.p.k. as well as the complete dossier of TPLAN Sh.p.k., the companies that are building hydropower plants in the Valley of Valbona.

The Commissioner for the Right to Information declared the refusal to provide this documentation a violation of the law on the right to information and ordered the Ministry of Energy and Industry to make the documentation available to the Association.

Using “Do not touch Valbona” as a slogan, local residents and the Earth Association have been supported by the World Wide Fund for Nature (WWF) and other national and international environmental organisations for almost two years.





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