



Food and Agriculture
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Comprehensive analysis of disaster risk reduction and management system for agriculture in **Albania**

Enhancement of Disaster Risk Reduction and Management (DRRM) capacities and mainstreaming Climate Change Adaptation (CCA) practices into the Agricultural Sector in the Western Balkans (TCP/RER/3504)



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Food and Agriculture Organization of the United Nations
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Acronyms

AL-DRMAP	Albania Disaster Risk Mitigation and Adaptation Project
ARDA	Agriculture and Rural Development Agency
ASIG	The State Authority for Geospatial Information
ATTC	Agricultural Technology Transfer Centres
CAP	Common Agricultural Policy
CCA	Climate Change Adaptation
CP	Civil Protection
DGCE	Directorial General for Civil Emergencies
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DRR/M	Disaster Risk Reduction/Management
EBRD	European Development Bank
EEA	European Environment Agency
EFAS	European Flood Awareness System
EIMS	Environmental Information Monitoring System
EIA	Environmental Impact Assessment
EU	European Union
EWS	Early Warning System
FEWS	Flood Early Warning Systems
FRMP	Flood Risk Management Plans
GDCE	General Directorate for Civil Emergencies
GIS	Geographical Information Systems
GIZ	Gesellschaft für Internationale Zusammenarbeit
HFA	Hyogo Framework for Action
ICT	Information Communication Technology
IGEW	Institute of Geosciences, Energy, Water and Environment
IPA	Instrument for Pre-Accession
ISARD	Inter-sectoral Strategy for Agricultural and Rural Development
IWRM	Integrated Water Resources Management
MARDWA	Ministry of Agriculture Rural Development and Water Administration
MMS	Military Meteorological Service
MoIA	Ministry of Internal Affairs
MSNATA	Meteorological Service under National Air Traffic Agency
NATO	North Atlantic Treaty Organisation
NEA	National Environment Agency
NGO	Non-Governmental Organisation
NSDI	National Strategy for Development and Integration
NSS	National Security Strategy
NWC	National Water Council
PRFA	Preliminary Flood Risk Management
PRTR	Pollutant Release and Transfer Register
RBCs	River Basin Councils
RoA	Republic of Albania
SEE	South East Europe
UNFCCC	United Nations Framework Convention on Climate Change

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Introduction

Albania is prone to numerous natural hazards, including, but not limited to those of hydro-meteorological and geological origins, for example earthquakes, floods, droughts, forest fires and landslides. Changes to the climate, specifically the frequency of extreme weather events and temperature variations that are predicated to occur as a result of climate change, have the potential to negatively affect the Albanian agricultural sector.

Agriculture in Albania is highly vulnerable to the impacts of such hazards due to its climate sensitivity. Natural hazards have the potential to adversely impact crop and livestock production among others, as well as cause significant amounts of damage to critical infrastructure, such as irrigation systems, livestock shelters and storage facilities. Increasing the levels of resilience to climate variability and change is therefore crucial for the people whose livelihoods are partially or entirely dependent on the agricultural sector.

At present, Albania is working towards the inclusion of disaster risk reduction (DRR) in the legal and institutional framework and transitioning from a reactive to a more proactive DRR orientated approach. The aim of this report is to highlight the current strengths in the Albanian institutional DRR system for agriculture as well as to indicate existing gaps and capacity needs in order to enhance it further. This report provides recommendations to strengthen the existing institutional system to help reduce the adverse impacts of natural hazards on the Albanian agricultural sector.

This comprehensive review includes a general overview of Albania's agriculture sector as well as an outline of the natural hazard, risk and agriculture profile, followed by an analysis of the existing legal, policy and institutional structure. Various components, such as the functioning of early warning systems (EWS), assessments of disaster risks and the availability of agricultural insurance for farmers are discussed. Finally, the report concludes by providing recommendations for the improvement of the current system.

The study has been conducted through the collection of secondary data sources by completing a detailed literature review of all relevant laws, policy and strategy documents, reports and articles on the current state of disaster risk reduction in Albania with a specific focus on the agricultural sector. Several semi-structured interviews were also conducted with staff from e.g. the Ministry of Agriculture, the Institute of Geosciences, Energy, Water and Environment. In addition, findings from small working group discussions conducted during a regional DRR learning exchange visit to Ljubljana, Slovenia from 15-17 March 2017 were included in this report.

This report is prepared within the context of the FAO 'Enhancement of Disaster Risk Reduction and Management (DRR/M) capacities and mainstreaming of Climate Change

Adaptation (CCA) practices into the Agricultural Sector in the Western Balkans' project (TCP/RER/3504). The recommended capacity building interventions in this document have the potential to be implemented in Albania under this project.

Natural hazard and risk profile

Albania is at risk from various natural hazards, including e.g. floods, droughts, heavy rain and snow fall, wind storms, heat waves, landslides, avalanches and forest fires. According to DesInventar, a disaster information management system, almost 4 000 disaster events have occurred in Albania between 1852 to 2013.¹ It is estimated that floods (38 percent) have caused the highest economic losses during the period 1990-2014, followed by flash floods (33 percent) and landslides (7 percent).²

Floods generally occur during the winter months, usually from November to March, when the country receives approximately 80 to 85 percent of its annual precipitation. According to historic data, the floods of November 1962 and January 1963 were the largest, which inundated around 70 000 hectares of agricultural land.³ The risk of flood related hazards in Albania is high, with on average, one event occurring every six years. During the last 33 years, the economic loss caused by floods is estimated at USD 2.3 billion.⁴ Table 1 outlines the impact of various flood events on Albanian agriculture.

Table 1 Overview of the impact of major floods in Albania on agriculture

Event	Location	Agricultural land flooded/livestock killed
Flood of Nov 1962-January 1963	Part of cities of Shkodra, Berat, Lezhe and others	70 000 ha
Flood of Dec 1970	Vjosa river area	14 000 ha
Flood of Sep – Oct 2002	Part of cities of Lezha, Shkodra, Gjirokastra, Berat and others (11 districts in total)	33 000 ha
Flood of Dec 2009 – Jan 2010	Buna River and Shkodra lake	10 500 ha
Flood of 2015	Vjosa, Devoll, Osum and Seman rivers	6 879 ha; 3 500 heads of livestock killed

Source: WMO, 2012; IFRC, 2005⁵

The river system poses the highest risk of flooding to the country, which can potentially affect 130 000 hectares of agricultural land. In December 2009 and January 2010, for instance, floods in the north-western parts of Albania were the result of increased rainfall as well as due to higher temperatures, snow melted and water levels rose resulting in the overflowing of the Buna River. Many rivers discharge into this river, including the Drin, Gjader and Kir rivers, which in turn raised the water level of the Shkodra lake and

¹ FAO, 2016b

² CRED EM-DAT database

³ WMO, 2012

⁴ REC, 2017.

⁵ IFRC, 2005

inundated the villages along the lake. The coastal areas around Lezha were also inundated as a result of heavy precipitation, high tide along with strong winds and high waves.

The most recent flooding event occurred in the southeast and southern areas of Albania in 2015. From the 1st to the 5th of February 2015, 200mm of rainfall fell over a 3-day period resulting in the damage of 10 000 ha of agricultural land in the regions of Vlora, Fier, Lushnje, Berat, Korça and Gjirokoster. The crop subsector was the most affected and extensive losses occurred, particularly fodder crops, followed by damage to greenhouses for early production of vegetables, fruits and orchards.⁶

Land instability in Albania mainly occurs after heavy rain or snowfall. Various types of landslides, such as rock falls, topples or torrent deposits, are often recorded. Deforestation as well as inappropriate land management and land use, are considered as primary causes for increased groundwater levels in the lowlands and the occurrence of landslides.

In particular deforestation, as a result of the cutting of numerous trees, which were near powerful rivers, such as the Vjosa, Osum and Shkumbin, for wood fuel and construction of buildings and dams, led to the extensive loss of top soil, which resulted in worsening the impact of floods and landslides. In addition, flood defence structures, barriers and dam reservoirs are quite outdated and have not been maintained.

Although drought is a normal recurring feature of climate, and occurs in most climate regimes, the frequency and length of periods of drought in Albania is predicted to increase in the coming years as a result of climate change. Drought is a consequence of a natural reduction in the levels of precipitation received in an area over a specific period of time. Additional factors such as high temperatures, high winds and low relative humidity have the potential to contribute to the severity of an event.

Droughts are typically classified into three main categories, meteorological, hydrological and agricultural. When based on the time of occurrence of the event, the drought can also be further classified into three more categories: permanent, season and contingent. Such droughts have the potential to have large scale negative impacts on the agricultural sector in Albania. Over 3 million people were affected by the 1989-1991 drought, which was one of the most significant disasters that occurred in Albania and costed the economy USD 24 million.⁷ The 'energy crisis' of November 2003 along with electricity interruptions in 2007 were also due to periods of drought. In 2007 drought decreased the average production of the Fierza hydroelectric power plant by 33 percent.⁸ It is expected that

⁶ FAO, 2016d

⁷ UNDP, 2015

⁸ Laska Merkoci *et al*, 2012

drought will impact agriculture more than floods and landslides in the near future as a result of climate change.

Agriculture profile

The agriculture sector continues to play an important role in the Albanian economy as it contributes approximately 20 percent to its Gross Domestic Product (GDP) and continues to grow at a faster pace than the rest of the economy.⁹ The value of agricultural production has significantly increased from USD 957 million in 2000 to USD 1.9 billion in 2012. Imports of agro food products increased by 39 percent in 2012 compared to 2007, whilst exports increased with 72 percent during this period. This has resulted in a reduction in the growth of Albania's trade deficit, however, the trade imbalance is still a major challenge for the sector. Although the annual economic real growth rate of the sector is considered to be significant (5.4 percent in 2012), it has been characterised by oscillations, due to issues, such as dysfunctional irrigation and drainage infrastructure, which continues to expose the sector to severe weather conditions and the effects of climate change.¹⁰

During the past few years, Albania has experienced a drastic shift in its socio-economic and demographic situation. In 2013, the total Albanian population was estimated at 2.3 million, which is a significant decrease from the 2001 census data when the population was still over 3 million.¹¹ Such a drastic change in a short period of time is due to a combination of emigration and lower birth rates. The 2011 census data showed that the number of urban residents far exceeded the number of rural residents. This is another significant change from 1990, when two thirds of the total population lived in the rural areas. Internal migration (rural to urban) along with emigration has largely contributed to this drastic demographic change. It is estimated that around 1.4 million Albanians or approximately one third of the population were living abroad in 2011, primarily in Greece and Italy.¹² In addition, two thirds of these emigrants are estimated to be young people from rural areas. This demographic trend negatively affects the availability of labour in rural areas and ultimately presents an important challenge for the country's future of agricultural and rural development.

Around 43 percent of Albania's total population resides in rural areas, where agriculture is the main activity.¹³ It is estimated that over 38 percent of the total labour force is engaged in this sector.¹⁴ The continued development of agriculture is important for the country in order to enhance the standard of living and alleviate poverty as the sector

⁹ FAOSTAT, 2015

¹⁰ MARDWA, 2014

¹¹ Ibid.

¹² European Commission, 2012

¹³ World Bank, 2015

¹⁴ FAOSTAT, 2015

provides the income basis for the majority of the population and acts as an employment safety net.

The country has a total area of 28 750 km², of which more than 75 percent is hilly and mountainous. The mean altitude is 708 meters above sea level. In terms of the land structure, about 24 percent is agriculture land, 36 percent is forest, 15 percent are pastures and meadows and the remaining land includes urban areas, lakes and unused mountainous lands. Agricultural land is highly fragmented with a small farm size of around 1.2 hectares.¹⁵ In 2012, it was calculated that there are over 460 000 agricultural farms, of which around two thirds are engaged in crop and livestock production and one third of the farms are orchards. Overall farm efficiency in Albania is considered to be quite low with estimates stating that the average farm is operating at one third of its potential.¹⁶

The main agricultural products are grains and in particular, wheat, with other cultivated crops, including tobacco, figs, olives, vegetables, potatoes, beans and forage crops, such as maize and alfalfa. Crop and fruit production account for 44 percent and 11 percent respectively, while livestock production makes up for more than half of Albania's total agricultural production.¹⁷

Three agro-ecological zones can be distinguished in Albania, based on e.g. soil, climatic, topographic and socio-economic characteristics, including:

- the lowland zone: 0 – 200m, where citrus fruits, figs and olives are grown;
- the hill zone: 200 – 1 000m, where field crops and fruit trees are extensively cultivated;
- the mountain zone: 1 000 – 2 700m, which is dominated by pastures and forests and where, among others, wheat, barley, rye and various fruits are produced.¹⁸

Even though Albania is rich in water resources, the agriculture sector is highly dependent on irrigation, as it only receives 20 percent of its total precipitation during the summer, when water that is used comes from rivers and artificial reservoirs.¹⁹ As a result, irrigation is indispensable during the summer. However, due to the inadequate and poorly maintained infrastructure as well as the absence of institutional coordination, the lack of water supplies has become a key constraint to various economic activities.

¹⁵ Shundi, 2006

¹⁶ Ministry of Foreign Affairs, 2013

¹⁷ AEA, 2016

¹⁸ FAO, 2006

¹⁹ UN, 2002

Climate change

It is expected that temperature will increase and precipitation will become more variable as a result of climate change in Albania. An increase in extreme weather events will pose a serious threat to agriculture production, water availability, food security and economic growth for the majority of the rural population who depend either directly or indirectly on agriculture. The rural poor will be disproportionately affected. In particular, those areas that are already under marginal rain-fed production will be increasingly at risk.

The Third National Communication of Albania to the United Nations Framework Convention on Climate Change (UNFCCC) outlines the sensitivities of agriculture to the short-term changes in weather as well as the annual and longer term variations in climate, specifically temperature and precipitation.²⁰ Such direct impacts on agricultural production are also combined with the effects on soil characteristics, seed genetics, pests and disease and agronomic practices, which ultimately impact crop yield.

Seasonal temperature variations for Albania, predict a lengthening in the growing season by 37 to 22 days from north to south respectively by 2100 as compared to 1990.²¹ The largest increases in temperature are expected to occur during summer and spring, which can be seen in Table 2, coinciding with the main period of plant growth and fructification for the majority of crops, with the periods of maximum number of consecutive days without precipitation occurring during three quarters of the development of the crops. Soybean, maize, spring wheat, barley, beans, tomatoes, cabbage, millet, onion, sorghum, pepper, sunflower and watermelon are expected to be largely affected by seasonal temperature variations. In addition, it is projected that for the majority of the agricultural crops, the annual amount of effective rainfall will not be enough to meet their water requirements and these crops will thus require additional irrigation.

²⁰ Ministry of Environment, 2016

²¹ Ibid.

Table 2 Temperature change projections for different time horizons as compared to 1990 (in °C)

Years	2030	2050	2080	2100
Annual				
T _{average} (°C)	1.0	1.7	2.8	3.2
T _{max} (°C)	1.2	2.2	3.5	4.1
T _{min} (°C)	0.7	1.3	2.0	2.4
Winter				
T _{average} (°C)	0.8	1.2	2.0	2.4
T _{max} (°C)	0.9	1.4	2.3	2.7
T _{min} (°C)	0.7	1.1	1.7	1.9
Spring				
T _{average} (°C)	1.0	1.5	2.6	3.1
T _{max} (°C)	1.12	1.8	3.0	3.6
T _{min} (°C)	0.8	1.3	2.2	2.6
Summer				
T _{average} (°C)	1.6	2.5	4.3	5.3
T _{max} (°C)	1.8	2.8	4.9	6.0
T _{min} (°C)	0.5	2.1	3.8	4.6
Autumn				
T _{average} (°C)	1.0	1.6	2.8	3.5
T _{max} (°C)	1.1	1.8	3.0	3.7
T _{min} (°C)	1.0	1.5	2.7	3.2

Source: FAO, 2016a

It is predicted that the direct effects of climate change on livestock production may be more severe than on crop production, however the methods for quantitatively assessing effects on livestock are still relatively untested.²² In Albania, livestock makes up 59 percent of the total value of agricultural production, with production levels increasing from USD 50 million in 2000 to over USD 66 million in 2005.²³ Livestock are extremely sensitive to temperature and studies show that although climate change is expected to have a positive effect on productivity rates by raising temperatures in winter, such positive increases are likely to be outweighed by the negative effects of the increasing summer temperatures.²⁴

Changes to precipitation patterns caused by climate change not only have the potential to hugely impact the agriculture sector through flooding, but also through its reliance on rain fed agriculture. The general availability of water is fundamental to agriculture, with the impact of climate change having the potential to lead to:

1. **Drought-** A lack of water for a period of time causing severe physiological stress to plants and animals;

²² Ministry of Environment, 2016

²³ Ibid.

²⁴ Bhavana and Bendapudi, 2013; Ministry of Environment, 2016

2. **Flooding**- An excess of water for a period of time causing physiological and direct physical stress to plants and animals;
3. **Timing of water availability**- When severe lack or excess of water does not occur, but its availability through the year changes so as to no longer be suitable for current agricultural practices, crops or animals.

The expected changes in precipitation for the period of 2030 to 2100 as compared to 1990 are shown in Table 3 below.

Table 3 Precipitation change projections for 2030-2100 compared to 1990

Years	2030	2050	2080	2100
Annual				
P _{average} (%)	-3.84	-8.46	-14.37	-18.13
P _{max} (%)	27.70	47.42	81.12	94.90
P _{min} (%)	-35.39	-56.00	-78.64	-89.69
Winter				
P _{average} (%)	-5.96	-10.10	-14.33	-18.13
P _{max} (%)	4.01	7.70	16.10	19.57
P _{min} (%)	-15.92	-27.91	-44.75	-55.84
Spring				
P _{average} (%)	2030	2050	2080	2100
P _{max} (%)	-2.45	-7.26	-14.26	-17.74
P _{min} (%)	7.03	10.75	16.61	19.79
P _{average} (%)	-11.9	-25.3	-45.1	-55.3
Summer				
P _{average} (%)	-10.4	-19.7	-41.9	-50.4
P _{max} (%)	-7.9	-15.3	-34.5	-41.3
P _{min} (%)	-12.8	-24.1	-49.2	-59.4
Autumn				
P _{average} (%)	0.5	-2.5	-6.9	-9.5
P _{max} (%)	11.1	16.3	25.2	29.1
P _{min} (%)	-10.1	-21.3	-38.1	-48.1

Source: FAO, 2016

The projected precipitation changes in Albania are believed to impact crop productivity where a change in the pattern of precipitation events may be even more important than a change in the annual precipitation total. A reduction in rainfall accompanied with increased temperature is projected to have a negative effect on crop yields. Considering the period of crop growth, some crops are expected to be more affected as a result of these precipitation changes, including soybean, maize, spring wheat, barley, beans, tomatoes, cabbage, millet, onion, sorghum, pepper, sunflower and watermelon. It is predicted that alfalfa and winter wheat will be less affected, but overall the agriculture sector will become almost completely reliant on irrigation.

Flooding in Albania is not a new occurrence, with records showing flooding events in all major catchment basins of the country. The Third National Communication to the UNFCCC mentions that climate change will result in enhanced flooding due to expected increases in rainfall. The coastal area has been identified as the most vulnerable as it is not only subjected to be inundated due to floods, but also by sea water from storm surges. The coastal region is especially vulnerable to the effects of climate change as it currently hosts 65 percent of cultivated land, 60 percent of fruit trees, 90 percent of green houses, 75 percent of vegetables and 64 percent of field crops.²⁵ The Third National Communication to the UNFCCC recognises the potential danger present from the impacts of climate change, particularly on the coastal region, with regard to increased flooding and urges the importance of mainstreaming Disaster Risk Management (DRM) and Climate Change Adaptation (CCA) into long-term development strategies.²⁶

National legislation and policies on assessing the impacts of natural hazards to agriculture

Legislative framework

Articles 170 and 174 of the Constitution of the Republic of Albania address the issues of emergency and disaster management as well as the legal acts that need to be adopted and measures taken in the event of a disaster. Besides the constitution, there is a specific law for disaster management in Albania, which is the 2001 Law on ‘Civil Emergency Services’ (nr. 8756).

Apart from this law, other specific laws that play a role in the disaster risk reduction and management include the 2015 Law titled “For the protection from fire and rescue” (nr. 152/2015), which gives a special focus on amendments regarding the inspection of certain standards, fire prevention and other natural emergencies. In addition, the law on “Irrigation and Drainage” (nr. 8518) of 1999 and the 2004 Law on “Agricultural Land Protection” (nr. 9244) clearly defines the roles and responsibilities of the Ministry of Agriculture in relation to the prevention of hazards related to floods and to manage recovery of damaged lands. The Law of 2011 on “Veterinary service in the Republic of Albania” (no. 10465) has provisions in terms of early detection, prevention and control of epidemics affecting animal and public health.

The secondary legislation is composed of a series of Governmental decisions, which complements the primary legislation. In general, the decisions have been endorsed in early 2000 immediately after the approval of the Law on Civil Emergencies. Related to issues pertaining to the recovery phase of a disaster, there are almost no references in

²⁵ FAO, 2016a

²⁶ Ministry of Environment, 2016

any of the existing legal acts. Moreover, none of them has a listing of critical infrastructure and or other means which are essential in situations of civil emergencies.

A second set of decisions has been approved from 2012 onwards, which embraces the concepts of redemption, damage evaluation and compensation. An overview of the main legislation relevant for DRR/M in Albania is provided in table 4.

Table 4: Summary of the main legislation relevant for DRR/M in Albania

Legislation/Policies/Plans	Main DRR/M provisions	Endorsement	Relation to Agriculture
The constitution of the Republic of Albania (Article 170 and 174)	Lays down extraordinary measures and the state of emergency in event of a disaster.	1998	Generic, not specifically related to agriculture.
Law No. 8756 of 26.03.2001 on "Civil Emergency"	This Law regulates the planning and mitigation of civil emergencies in the Republic of Albania.	Updated in 2009	Relates to agricultural domains, such as property, livestock and environment.
Law No. 139/2015 on "Local Government"	This Law regulates the organization and functioning of local government units in Albania.	2015	The Municipalities have responsibilities regarding the functioning of the draining system, the management and protection of agricultural land, the development of agricultural information, extension system and management of forests and pastures.
Law Nr.9244 of 17.6.2004 on "Agricultural Land Protection"	This Law regulates the principles, the rules and the competent authorities for the protection and improvement of the functions of agricultural land.	2004	Relates to agricultural land protection and rehabilitation (mainly river banks), caused by anthropogenic factors and natural hazards.
Law No.10465 of 29.09.2011, on "Veterinary Service in the Republic of Albania"	This Law aims to protect and improve the health of animals, to protect the public health from the transmittance of diseases from animals and deal	2011	Relates to actions taken in case of epidemics caused by animals and potential threats to public health.

	with animal health epidemics and disasters.		
Law No. 8518 of 30.7.1999 on "Irrigation and Drainage"	Creation of drainage boards at local/municipal levels and a national policy for flood protection.	1999	Ministry of Agriculture is responsible for the planning and design of flood protection infrastructure and the maintenance and rehabilitation of existing flood protection assets.
Law No. 152/2015 of 21.12.2015 "For the Protection from fire and rescue"	This law establishes the organizational structure of fire corps and services to combat fires and regulates the involvement of fire corps during natural disasters.	2015	Relates to the protection from forests, scrublands and pastures fire.
Law No. 9817 date 22 /10/ 2007 on "Agriculture and Rural Development"	This law regulates the programming of policy measures related to agriculture and rural development; provides for public advisory services for agriculture; research and training and for the setting up an information database. It also provides the legal basis for the institutions responsible for the implementation of agricultural policy by establishing the Agriculture and Rural Development Agency (ARDA) for the implementation of national support schemes. Moreover, it introduces the principle of monitoring and evaluation of national support schemes.	2007	One of its objectives is the protection and maintenance of the environment through ensuring that agriculture preserves the natural resources.
Law No. 111/2012 on the integrated management of water resources.	This law aims at protecting and improving the water environment and water resources, ensuring their rational exploitation, fair distribution, protection from pollution and set forth establishment of central and local institutional frameworks required to implement national policies of management and	2012	Ministry of Agriculture is one of the organisations involved with Flood Management, Chapter five of this Law introduces the obligation for the preparation of Flood Risk Management Plans.

	administration. This law transposes the EU Water Framework Directive into National Regulation.		
Decision No. 148 of 24.02.2016 on "the Establishment and Functioning of the Integrated Statistical Information System of the Council of Ministers"	The integrated information system is composed by the Operational Office adjoined at Prime Minister and civil emergency offices at each line ministry.	2016	Ministry Agriculture is supporting this system through its staff and information in line with the obligations outlined by the decision no. 965.
Decision No. 965 of 02.12.2015 on "Inter-Institutional Collaboration of Leading Structures in Case of Civil Emergencies"	Establishes the Committee for Coordination of Civil Emergency and Crises.	2015	Ministry of Agriculture is a member of the committee and its institutions, such as the Regional Agricultural Directorates, the Drainage Boards, the National Food Authority and Food Safety and Veterinary Institute, which are involved as operational structures for civil emergencies and crises.
Decision no. 329 of 16.05.2012 on "Criteria's and Procedures for Governmental Financial Support to Cover Damages Caused by Natural and Other Disasters"	Outlines general rules for damage evaluation and compensation.	2012	All agricultural products and equipment are subject to evaluation and compensation from state budget.
Decision No 532, of 1.8.2003 on "Liabilities and Tasks of the Civil Emergency Planning and Response Department"	Empowering the planning and coordination of the Department of Civil Emergency Planning and Response.	2003	Generic
Decision No 531 of 01.08.2003 on "Organization, Function, Duties and Responsibilities of the Civil Emergency Service"	Creating and mandating the Civil Emergency Service.	2003	Ministry of Agriculture is part of the line ministries involved in the implementation of the decision.
Decision No. 533 of 1.8.2003 on "Citizen Involvement on Civil Emergency Prevention and Response"	Recruitment of citizens based on their skill set and their involvement in emergency actions.	2003	Generic
Decision No. 663 of 18.12.2002 on "Composition, Functioning and Liabilities of the Technical Expert Advisory Commission on Civil Emergencies"	The technical council prepares programs, evaluate risks, prepares education programs, develops scenarios and implements exercises, to study and propose solutions to a wider series of issues related to	2002	Ministry of Agriculture provides 4 experts to this commission. Two from the Ministry level and two from the Food Safety and Veterinary Institute.

	emergencies and their effects.		
Decision No. 664 of 18.02.2002 on "Criteria and Procedures of Proclamation of the Civil Emergency Situation"	Regulates the general principles for proclaiming the emergency state, for emergencies in case of earthquake and flooding guidelines are provided, while for other natural disasters a case by case approach has been recommended based on the evaluation of the line ministries.	2002	Ministry of Agriculture and its institutes and centres are part of the proclamation process for disasters under the responsibility of this ministry.
Decision No. 655 of 18.12.2002 on "Establishment and Functioning of the National System Structure on Civil Emergency Planning and Response"	Establishment and Functioning of the National System Structure on Civil Emergency Planning and Response	2002	Establishes the Civil Emergency Planning and Response Sector within the structure of Ministry of Agriculture.
Decision No. 654 of 18.12.2002 on "Tariffs to be used in case of temporary use of any private means by state organs during emergency situations"	During emergency situations, state institutions can use privately owned means based on the provided tariffs.	2002	Generic
Ministry of Interior Guideline No. 3 of 04.03.2003 on "The criteria to be used to select the staff involved in the civil emergencies"	Lays down a set of criterias that line ministries have to apply in the selection of staff that will be involved in the civil emergency.	2003	Generic, linked to the decision No. 655.

National and sectoral policies, plans and strategies

National Civil Emergency plan of 2004

The Council of Ministers approved the National Civil Emergency Plan in December 2004, which is in line with the Law on Emergencies and is the key governmental DRR/M policy. The legal base for this plan, gives government and non-government structures the possibility to work more effectively and to abide by legal responsibilities in relation to civil emergencies. Attention is drawn to the appropriate implementation of this plan and also the capacities and resources of the structures involved.

The aim of this plan is to enhance the capacities and responding abilities through planning and investments in the following disaster risk reduction areas:

- Pre-preparation/preparedness and protection of the population;
- Prevention and mitigation of the impacts of an emergency situation on the citizens' life and property;
- Integrated and efficient response, including the use of new means and technology;

- Rapid recovery and development of the damaged area.

The National Civil Emergency Plan includes several DRR measures, such as establishment of early warning and information systems; disaster risk assessments, including the development of risk maps for e.g. floods, forest fires. In addition, interventions that mostly aim to reduce the impact of these natural hazards, such as monitoring of risks to forest fires, reforestation and fire breaks; restoration and maintenance of water channels; flood modelling; monitoring of seismological, precipitation and hydrological conditions, with agreed indicators to trigger a National Activation System; monitoring of water volume projections before maximum safe dam capacities are reached, but also the monitoring of degradation of unstable or potentially unstable slopes and the monitoring of plant and animal diseases.

In terms of institutional roles and responsibilities, the plan emphasizes the responsibility of each line ministry regarding the planning and management of civil emergencies according to their expertise area. It also mentions their responsibility to involve themselves in the decision-making process with regard to the use of their resources, services and capacities during all disaster management stages. Among their responsibility is the development of plans and the implementation of disaster risk management activities as well as to ensure that they are coordinated and cooperated with the Ministry of Local Government and Decentralization.

National Security Strategy, 2014

The National Security Strategy (NSS) approved in 2014, establishes the foundations of the national security planning in the Republic of Albania. It succeeds the National Civil Emergency Plan and the Law on Civil Emergency as it was developed prior to the Hyogo Framework for Action 2005-2015. This strategy views natural and man-made disasters as among its key national security concerns. It also includes strategic objectives and describes institutions roles and responsibility in particular related to the importance of inter-institutional and cross-sectoral coordination among relevant stakeholders at various levels to undertake the appropriate and required actions. The new draft Law on 'Civil Protection' and the drafted "National Strategy for Disaster Risk Reduction and Civil Protection", both take into account the new Sendai Framework for DRR and are currently under review by the General Directorate for Civil Emergencies (GDCE).

The draft National Strategy for Disaster Risk Reduction and Civil Protection 2014-2018

This Strategy for DRR provides the basis for enhanced coordination between all relevant institutions at all levels and embodies Albania's need to address disaster risk in national development and integration plans, including in the activities of the line Ministries, Qarks, communes and cities. This document builds on and strengthens existing plans, institutions and regulatory frames in Albania with regard to disaster risk reduction and

is in consistent with the Hyogo Framework for Action (HFA) and its successor the Sendai Framework for DRR. It encompasses the following five strategic components:

- Strategic component 1 - Strengthen national, prefect and local institutions and their regulatory frames;
- Strategic Component 2 - Provide legal basis and ensure enforcement of building codes in Albania, adapting current European standards and strengthening required earthquake risk information basis, in particular, micro-zonation maps;
- Strategic Component 3 - Increase national awareness, knowledge and facilitate the exchange of information on DRR and civil protection;
- Strategic Component 4 - Increase preparedness, emergency services and recovery capacities;
- Strategic Components 5 - Increase financial protection.

The cross-sectoral strategy includes the agriculture sector, with specific priorities and activities, the establishment of a multi-stakeholder national platform for DRR (under strategic component 1) the identification of roles and responsibilities for the country's early warning system, which will include multi-hazard Standard Operational Procedures that will focus in the beginning on floods and forest fires as well as the encouragement of an open source data collection of national disaster risk data to be incorporated into the national disaster loss database (under strategic component 2); the enhancement of current emergency planning capacities of all line Ministries, in particular on health and agriculture/water sectors (under strategic component 4); and the expansion of insurance coverage of farmers to floods and earthquakes (under strategic component 5).

Inter-Sectoral Strategy for Agriculture and Rural Development, 2014

The Inter-Sectoral Strategy for Agriculture and Rural Development (ISARD) was prepared by the Ministry of Agriculture, Rural Development and Water Management (MARDWA) from October 2012 to May 2014 and has been developed within the framework of the EU strategic planning approach for the Common Agricultural Policy (CAP) 2014-2020. The overall objective is to outline the specific requirements for the development of its agriculture, agro-processing and rural areas in Albania in line with the EU requirements.

As a result, the extent of DRR mainstreaming throughout this strategy is highly limited. Natural hazards or disaster risk reduction are not included, however the expected impact of climate change on agriculture is outlined. In particular, regarding the reduction in water resources and humidity and its adverse impact on the agriculture and forestry subsectors and biodiversity. It elaborates on the expected increase in the use of substantial irrigation during the dry months and the likely damage to plant species and habitats.

Actions to reduce the impact of climate change are linked to sustainable natural resources management, of land, forest and water resources and the importance of restoring, preserving and enhancing ecosystems, which are dependent on agriculture and forestry. In terms of specific DRR measures for agriculture, the rehabilitation of irrigation systems, flood protection systems, soil erosion practices and animal health related measures were included.

Inter-sectoral Rural Development Strategy of Albania, 2007-2013

The Albanian Rural Development Strategy focuses on rural development within the context of EU accession. As such the main pillars of rural development are therefore consistent with those of the EU Rural Development Regulation and its accession support schemes. The second pillar of 'sustainable management of natural resources, including forestry, pastures and water' is related to disaster risk reduction as environmental issues, like erosion, silting of reservoirs and flooding, are viewed as the result of deforestation and overgrazing, which have led to habitat and biodiversity loss that reduces the resilience capacities of ecosystems to external shocks and stresses like natural hazards and climate change.

The strategy provides some information on these natural hazards, but climate change is again, not mentioned. In addition, only a few DRR related measures for agriculture were included in the document and those were the EU agri-environmental practices, such as crop rotation and protection against soil erosion. Thus, the core of this document focuses on the protection of the environment through the sustainable management of natural resources in rural areas. There are some steps that the government will undertake, which encompass the following "(i) to continue to develop and implement policies aimed at improving watershed management by facilitating the village level management of mountain pastures and forests; (ii) to ensure the sustainable long-term use of water resources among competing claims; and (iii) to develop and implement policies of marine resource and inland waters monitoring and surveillance."²⁷

Strategy for the Development of Forestry and Pasture Sector, 2003

This strategy focusses very much on the development of the forestry sector as a contributor to the Albanian economy, with some emphasis on sustainable forest management, preservation and protection of forests and biodiversity. Its rationale is the following:

"Sustainable management of forestry and pasture resources means a good management and utilization of resources in a way, which restores and secures biodiversity, production, regenerative capacities, forestry vitality and potential and for

²⁷ Ministry of Agriculture and Rural Development and Water Management, 2014: 11-12.

*now and in the future, it meets the ecological economic and social functions in local, national and global level without causing damages on other ecosystems."*²⁸

Among the strategic principles is the 'sustainable management of forest and pasture resources' with one of the objectives stated the 'restoration and rehabilitation of degraded forest and pasture ecosystems'. It mentions the importance of erosion control as well as the need to decrease desertification and a more efficient utilization of water resources. However, no specific natural hazards or adaptation to climate change is included. A small paragraph is inserted on the importance of climate change mitigation and the role of forests for climate change mitigation. Only indirectly several DRR measures are outlined, such as the rehabilitation of degraded forests, afforestation, plans to improve sustainable forest management. These interventions are important as healthy ecosystems are less vulnerable and better able to prevent and mitigate the impact of natural hazards.

This planning document contains very little DRR mainstreaming and can be seen as a product of international sustainability initiatives, which are linked to the Earth Summit (Rio, June 1992) and the Convention on the Sustainable Development and its continuation. It was developed before the international DRR framework – the Hyogo Framework for Action was established in 2005, which was adopted by 168 countries who agreed to strive to reduce disaster risks and build resilience of countries and communities.

Integrated Cross-Sectoral Plan for the Coast, 2015

This draft plan was developed by the Ministry of Urban Development and considers policies and directives of the European regional conventions for the integrated management of Mediterranean coastal areas and in particular the Albanian coastal region. It also strives to ensure sustainable development for spatial development planning, including national and regional territorial planning. In addition, the plan focuses on the importance of the municipality level due to the 2014 reform, which divided the country administratively into 61 municipalities and the aim to avoid overlapping of roles and responsibilities of organizations and departments.

This coastal plan mentions natural hazards, such as flood and droughts as well as erosion and other coastal risks. Climate change is recognised as an additional challenge for coastal zone planning and management, as natural hazards like storms will intensify as well as expected rising sea levels, increasing air and sea-surface temperatures and acidification of oceans, which are already adversely affecting its ecosystems, infrastructure and communities.

²⁸ Directorate General of Forests and Pastures, 2003: 7.

DRR is not systematically mainstreamed through the document as there is only one section that focuses on flood risk, environment risk, erosion and climate change. Measures to reduce disaster risks include the development of municipal plans to define these erosion and flood risks in the coastal areas and establish parameters to prevent damages to new constructions. As such, there is not much focus on the agriculture sector in particular, as well as the mentioning of other particular sectors. However, it does state that it is important to take into account the climate change impact on coastal cities, infrastructure and the natural landscape.

Specific emphasis is placed on the central role and responsibilities of municipalities for DRR, in particular regarding climate change risk and the implementation of measures, like e.g. forestation and planting trees in the vulnerable areas, the construction of dams to prevent flooding and the use of eco-materials and renewable energies in addition to developing these municipal plans as mentioned above.

National integrated water resources management strategy, draft, 2016

The Integrated Water Resource Management (IWRM) Strategy of 2016 provides the legal, institutional, technical as well as socio-economic framework for Albania regarding its water resources. This strategy is established based on the European environmental legislation as well as on IWRM principles and helps to address the following identified needs for Albania's water resources:

- "Adequate access to water in sufficient quality and quantity for human and animal consumption;
- Security of food production;
- Adequate water resources protection for energy production, waste (water) disposal, or (mineral) extraction;
- Protection of natural habitats, biodiversity and ecosystems;
- Protection from negative impacts of climate change in the Balkan region."²⁹

Its vision includes risk reduction and management with regard to floods:

*"By 2027 Albania has become a water efficient nation with functional integrated management of water resources including a sound monitoring system and acceptable flood risks. Water use is founded on equitable and sustainable principles for equal social-gender economic benefits and environmental justice for present and future generations."*³⁰

The strategy outlines that by 2027 one of the policy objectives is to have effective national disaster management, which entails the development of a national disaster management plan that includes and prioritise water-related disasters. The organisations envisioned to be involved in the establishment of this plan are the Ministry of Agriculture, Rural Development and Water Administration, the Ministry

²⁹ Ministry of Agriculture, Rural Development and Water Administration, 2016: iii.

³⁰ Ministry of Agriculture, Rural Development and Water Administration, 2016: 69.

of Internal Affairs (MoIA) and other institutions and local authorities. One of the assumptions is that disaster management requires to be integrated in IWRM.

DRR is quite extensively mainstreamed within the strategy as well as linked to climate change. The impact of natural hazards and climate change on the agriculture sector is recognised and deforestation and limited riverbed management are seen as causes for the exposure to floods of the western plains and the Drini and Vjosë river basins.

There is a specific objective on ensuring an efficient and climate resilient integrated water resources management system and certain sections on water scarcity and droughts and DRR measures for crop production and forestry are included in the document, such as the use of irrigation systems for critical crop growth stages, flood protection systems like river and sea embankments, flood risk assessments, flood hazard and risk maps, early warning for flood compliance with the EU Flood Directive and those related to the DRR plans, such as the establishment of river basin management plans, flood management plans, water sectoral and master plans.

Cross-sectoral coordination and planning is considered essential for an effective and efficient climate resilient integrated water resource management system. Within this context, the River Basin Councils (RBCs) can play an important role and coordinate in the areas of risk prevention among others. Although there is a need to enhance the technical and administrative capacity of the RBCs at the regional level. A total investment of USD 98 million is calculated to establish an efficient, climate resilient integrated water resource management system.

Updated Environmental Action Plan, 2001

This Environmental Action Plan is a revision of its 1994 plan and embodies the Albanian governmental policy on environmental protection. Thereby, aiming to efficiently and sustainably using its natural resources as well as preventing and controlling cross-border pollution and general damage to the global environment. This document provides an in-depth overview of Albania's environmental challenges and threats it is facing.

Landslides and floods are mentioned as one of the five main issues in Albania as well as unsustainable land management, which is further contributing to increasing the underlying vulnerabilities and exposure to natural hazards. Decades of inappropriate land use have resulted in environmental degradation, such as erosion, salinization as well as pollution, which has been caused by the use of unsustainable agricultural and livestock practices. Despite that there are some improvements in erosion reduction, substantial deforestation in the mountainous areas is one of the causes as well as the uncontrolled grazing of goats.

Floods and landslides are viewed as frequently occurring, with floods primarily affecting the northern and central part of the western plain, which affects the communities who are residing in these areas. Erosion issues are occurring more in mountainous areas, which occasionally leading to landslides, which is also adversely affecting soil fertility. Despite that the agriculture sector is not mentioned as such, this document outlines the implementation of preventative measures and the integration of environmental issues in the sectoral planning process.

The strategy also points to the limited available financial resources for, among others, the monitoring of water resources due to the analytical methodology being outdated. In addition, institutional strengthening and capacity building is one of the key priorities, in particular of the environmental protection institutions and structures in order to more effectively ensure the implementation of policies that focus on the sustainable management of Albania's natural resources and biodiversity. Inter-institutional coordination as well as the importance of political and financial commitment is emphasized. This revision of the 1994 plan specifically identifies the roles and responsibilities of the central and local institutions as well as the other societal stakeholders, including the public, to successfully implement this plan.

Strategic policies for the protection of biodiversity in Albania, 2015

The Biodiversity Strategy and Action Plan is the main policy document on biodiversity in Albania and covers the period of 2000-2015. The strategy outlines the main priorities for biodiversity and habitat conservation. The laws that are in line with this strategy, includes the Law on protected areas (2002), the Law on biodiversity protection (2006) as well as the proclamation of new protected areas. In addition, the Strategy and Action Plan for Wetlands was adopted in 2006 and the Action Plan for Global Environment, which refer to the implementation of the three United Nations conventions, namely on Biodiversity, Climate Change and Desertification.

Its successor of this national document on biodiversity protection was published in 2015, which describe the natural hazards of forest fires, diseases and storms as threats to forest in Albania. Climate change is mentioned under objective 2, which focuses on reducing elements and processes that are threatening biodiversity as well as under objective 4, which aims to enhance biodiversity conservation and promote the sustainable use of ecosystems. It mentions that the impact of climate change may result in e.g. changes in vegetation patterns, biodiversity loss, extinction of certain species as well as may have a substantial environmental impact. However, the impact of climate change on other sectors, such as water or agriculture, is not mentioned or how degraded or deforested areas they already have become and the more vulnerable they will be to natural hazards in the near future.

The document mainly includes DRR measures, which relate to the health and vitality of forests that are sensitive to climate change. In addition, the importance of

monitoring forest ecosystems, promoting agricultural variability, diversification and the sustainable use of genetic resources for agriculture is mentioned.

National Strategy for Development and Integration 2014-2020

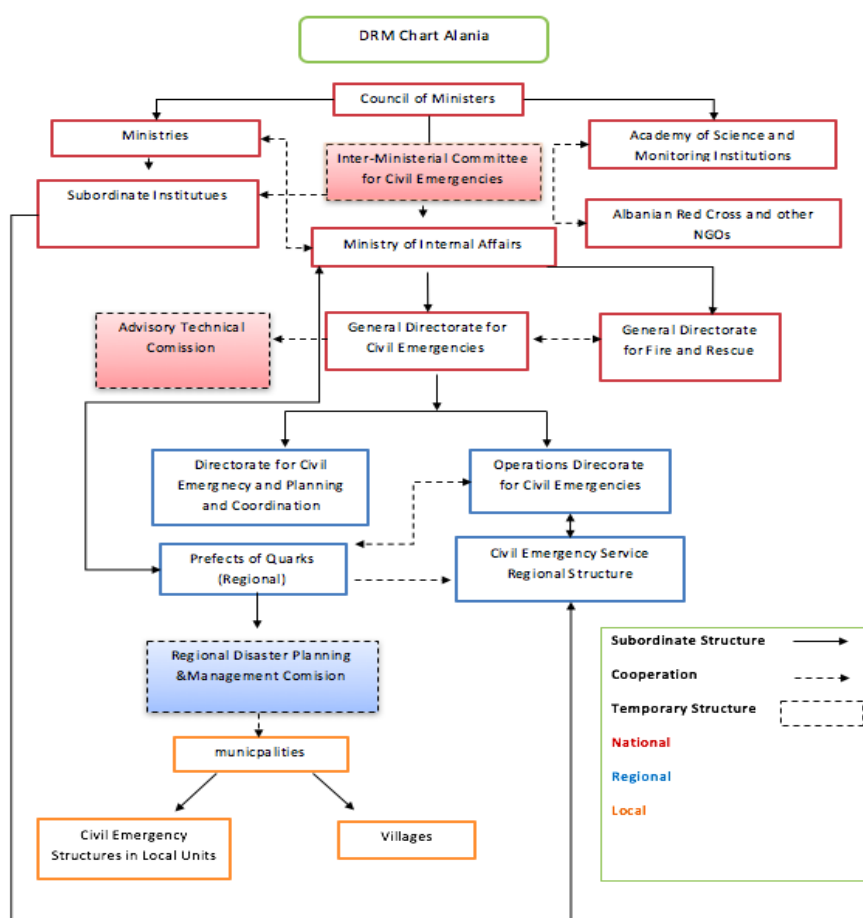
One of the pillars of the National Strategy for Development and Integration (NSDI) is “Sustainable Growth through Effective Use of Resources”, which focuses on sustainable natural resources management within the context of aligning Albania’s policies with the requirements for accession to the European Union. Other strategic goals also aim to minimize environmental degradation and conserve natural resources. There are some causes described for some of its environmental challenges, such as soil erosion due to unsustainable, forestry, agricultural and pastoral practices.

Forestry is one of sectors covered by this strategy, with a focus on enhancing the institutional and legal framework for sustainable forestry and pasture management through e.g. the development of payment for ecosystem services, rehabilitation of burned areas via forestation and reforestation as well as rehabilitation of pastures through forage and tree planting. DRR for agriculture is thus hardly mainstreamed in this document. Insurance is described, however only social insurance and not related to helping farmers transfer agricultural risks.

Main Stakeholders, roles and responsibilities in disaster risk reduction and management (DRRM)

The Civil Protection System in Albania consists of permanent and temporary structures at national regional and local as shown in figure 1. Through these structures, each ministry, department or institution, has specific responsibilities, for all stages of the disaster risk management cycle.

Figure 1 Chart to show the structure of Civil Emergency Stakeholders in Albania.



Source: Adapted from FAO, 2016b

In accordance with national legislation, the General Directorate of Civil Emergencies is established within the Ministry of Interior. This organisation is divided into two functional directorates, namely the Operational Directorate of Civil Emergencies and the Directorate for Civil Emergency Planning and Coordination.

The Directorate for Civil Emergencies is the key institution for disaster risk management and is best placed to enhance the inclusion of DRR in the existing legislation and management system. The Directorate has no direct responsibility with regard to the work of the line ministries, but does have a responsibility for ensuring the effective coordination of all ministries, institutions and other bodies in matters of emergency management, including mitigation and preparedness. The Directorate is also coordinating full-time civil emergency officers employed by all 12 regions of Albania. In addition, the municipalities that are within the regions have their own civil emergency officers who are currently under the legal department. However, these officers have no decision power in terms of disaster risk management.

Responsibilities at the national level

Council of Ministers

The Council of Ministers chairs the National Management System of Civil Emergencies in Albania. It approves the strategies, policies and programs, which aim at prevention, mitigation, preparedness and response to civil emergency situations. The Council of Ministers declares the state of civil emergency in a given area or throughout the country. After declaring the state of civil emergency, the Council of Ministers establishes the Inter-Ministerial Committee of Civil Emergencies. The Inter-Ministerial Committee of Civil Emergencies coordinates the activities of all the institutions involved in all the stages of response to the state of civil emergency. The Committee for the Coordination of Civil Emergencies and Crises is headed by the Deputy Prime Minister and co-chaired by the Minister of Internal Affairs and all other Ministers are members. This committee is the highest authority in coordinating the actions of the state and private entities and ensures the financial means needed to overcome emergencies and crises.

Ministry of Internal Affairs

The Ministry of Internal Affairs is responsible for implementing policies of the Council of Ministers in the areas of planning and coping with civil emergencies. The General Directorate for Civil Emergencies is the key institution for disaster management. This directorate acts as a secretariat for the Committee for the Coordination of Civil Emergencies and Crises. Through this permanent structure, the Ministry monitors the state of emergency in the entire territory of Albania, whereas in calm situations and in case of small scale emergencies, it cooperates with central institutions and structures involved in the issues of civil emergencies. Under this directorate, the Technical Advisory Committee is established, which is formed by members of all line ministries and academic institutes and various coordinating directorates and agencies. This Committee has to evaluate strategies and policies, perform risk assessments, develop public education programs for emergency staff, evaluate risks and mitigation options as well as evaluate the proposed plans from state institutions.

Line Ministries

Each Ministry is responsible for the planning and management of civil emergencies according to their scope of activity. Within each ministry, a specific office for Information and Management of Civil Emergencies and Crises is present, which consists of people, who in addition to their permanent roles, also take on certain DRR related tasks. These offices are coordinated by the General Directorate of Civil Emergencies and their activities are incorporated in all stages of disaster risk management and, as appropriate, the Directorate plays a leading or supporting role, which is dependent on the nature and size of the disaster event. Although, it does seem to be still quite focused on emergency response activities. More information on the role of the Ministry of Agriculture, Rural Development and Water Administration is provided in the section below.

National non-governmental organisations and the private sector

Several private sector companies are called upon to provide humanitarian support, including mobile phone companies (e.g. AMC, Vodafone Albania, Plus), Tirana International Airport and so on. In addition, humanitarian non-governmental organisations (NGOs), such as the Red Cross Albania, provide humanitarian services.

Responsibilities at regional level

The region prefect is responsible for the planning and coping with civil emergencies at county or regional level. Under the chairmanship of the prefect of the Quark, the Commission of Planning and Civil Emergencies Response is established whose task is to coordinate activities of the county authorities and voluntary organizations for planning and coping with emergencies. A permanent sector for planning and coping with emergencies is established and in case of a disaster, a Regional Disaster Planning and Management Commission is organised under the chairmanship of the prefect.

Responsibilities at municipality level

The mayor is responsible for planning and responding to civil emergencies in the respective municipality. Under the chairmanship of the mayor, the Commission for Planning and Responding to Civil Emergencies is established. Its main task is to coordinate all activities of the local government unit and voluntary organizations, responsible for the planning and responding to emergencies. For municipalities, which are the regional centre, there is an established permanent unit at the level of a directorate to plan and take measures in case of disasters, meanwhile for the other municipalities this structure is organized as a sector. All municipalities have their own civil emergency officers who are located within the legal department, however these officers have no decision-making powers in terms of disaster risk management. The only exception is the municipality of Tirana, which has its own department for civil emergencies that consists of 11 municipalities or units, which provide the municipality with decision-making authority. Beside the permanent structures, there is the local Civil Emergency Planning and Management Committee. In general, the disaster response capacity at municipality levels is very weak and therefore support from the central government level is required to enhance disaster response as well as DRR related capacities.

National Platform for DRR

At present, a multi-disciplinary, multi-sectoral and multi-stakeholder National Platform for DRR does not exist, in order to help advance a national commitment to reduce disaster risks. Although DRR is addressed and acknowledged in some policies, strategies and action plans, as outlined earlier, a systematic approach to the mainstreaming of DRR into sectorial and multi-sectorial plans has not yet been adopted. In the National Strategy for Disaster Risk Reduction 2014-2018 which is yet to be formally approved, one priority action that has been outlined is the need to engage line ministries at a higher level around

DRR, including the formalisation of a multi-stakeholder National Platform for DRR, emphasising the growing recognition around the need for effective DRR in Albania.³¹

Ministry of Agriculture, Rural Development and Water Administration (MARDWA)

The Ministry of Agriculture, Rural Development and Water Administration (MARDWA), formerly the Ministry of Agriculture, Food and Consumer Protection, is currently involved with actions on a national scale relating to agriculture, rural development, fishing and water administration. The work of MARDWA at all levels from national to local, along with other external ‘structures’, such as other line ministries, e.g. Ministry of Environment and organisations that work under MARDWA, exercise actions associated with the following functions and duties with regard to ‘emergencies’, which are outlined in table 5 in the area of civil emergencies.³²

Table 5 Functions of MARDWA

Emergency	Objectives of its actions
Floods	Aim to prevent, alleviate, overcome, rehabilitate and recover areas that are at risk or have been flooded.
Fires	Aim to protect forests and agricultural land from fires
Erosion	Aim to protect land from forms of erosion
Water ³³	Aim to protect water sources and water supplies and ensure stability maintenance and exploitation according to water supply regulations
Fauna	Aim to protect animals and livestock from contagious diseases and preventing the spread of potential epidemics
Flora	Aim to be constantly informed on the phyto-sanitary situation of agriculture on a national scale and draft the appropriate strategy to fight plant diseases
Transportation	Exercise control in border patrol areas to prevent transporting diseased plants and animals, and hence, transmission of diseases across borders
Inspection	Inspect conditions of storing, marketing and use of products for the protection of plants
Monitoring	Maintain monitoring and readiness of channels, dikes dams and pumping stations.

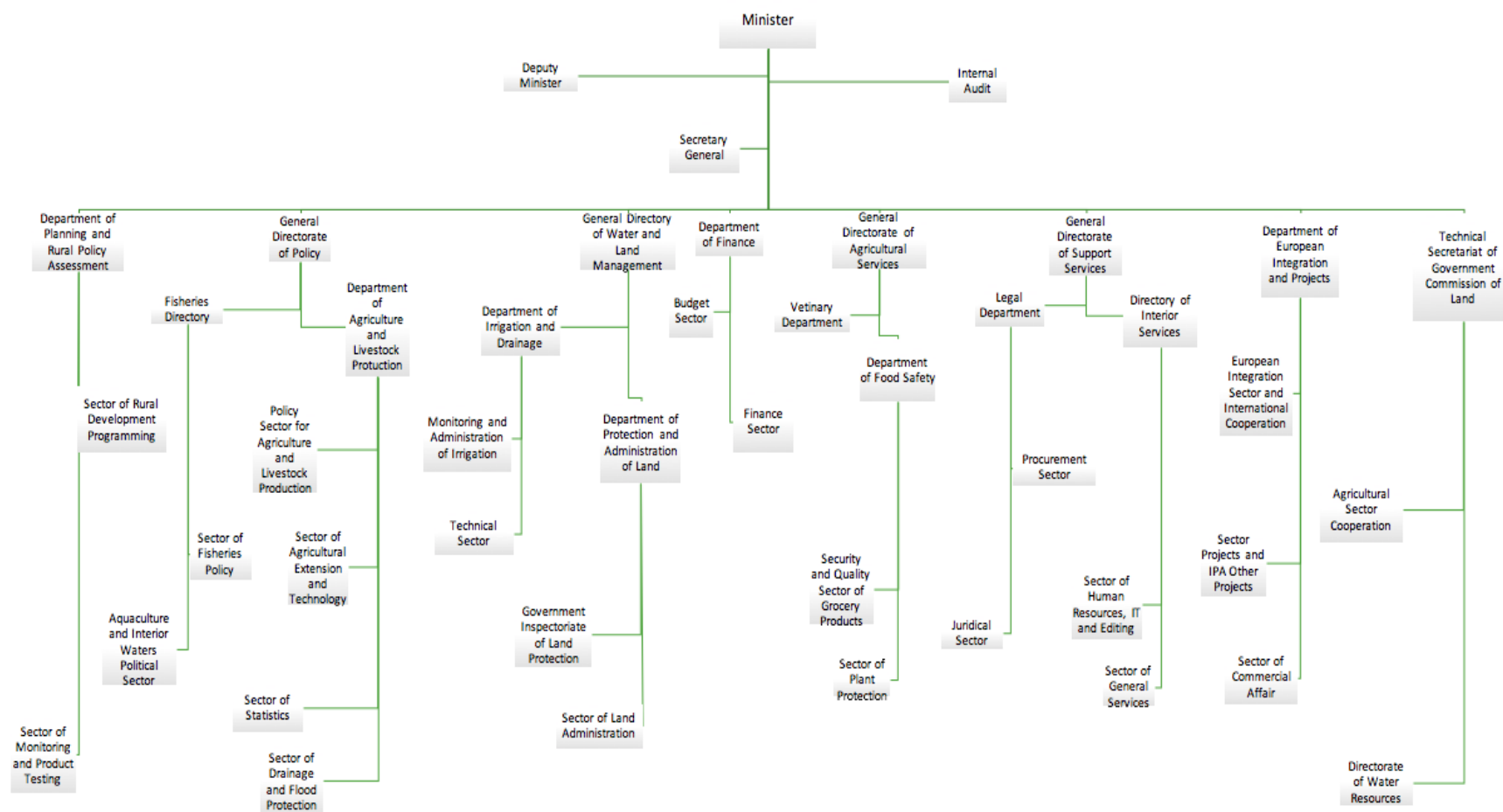
The current operating structure of MARDWA can be seen in figure 2, which highlights the current lack of a department specifically focussed on or related to disaster risk reduction in agriculture.

³¹ Republic of Albania, 2017

³² Ibid.

³³ It seems that drought is considered as a water management issue within the context of various irrigation and drainage projects.

Figure 2 Organigram of Ministry of Agriculture, Rural Development and Water Administration



Source: Adapted from MARDWA, 2016

In the event of a disaster or civil emergency, the Law No. 9244 “Agricultural Land Protection” and the Law No. 8518 “Irrigation and Drainage” state that MARDWA is the Ministry responsible for dealing with affected agricultural lands. They have the responsibility to be constantly informed of the phyto-sanitary situation of the agricultural cultures on a national scale and to adopt an appropriate strategy when required to prevent and control plant diseases.³⁴

It is also the responsibility of MARDWA to secure the maintenance, monitoring and readiness of channels, dykes, dams and pumping stations and the recovery of flooded areas. In order to carry out such actions, MARDWA coordinates activities with the following ministries:

- The Ministry of Industry and Energy to guarantee the supply of the pumping stations with electric power and prompt repair of defects;
- The Ministry of Economic Developing, Tourism, Trade and Entrepreneurship and the Ministry of Industry and Energy to help control, inspect and monitor interventions in water collection dams and dikes;
- The Ministry of State for Local Government for issues regarding or involving the Local Government.
- The Directorate of Police for Fire Protection and Rescue along with the Ministry of Defence to provide adequate structures for the extinguishing of forest fires;
- The Ministry of Defence and the private sector to help with excavations in the occurrence of massive earth displacements;
- The Ministry of Health and other scientific research institutions to manage and deal with infected areas that pose a danger to plants, animals and humans;
- The Ministry of State for the Local Government issues, along with local governance bodies to determine zones that pose a danger to be flooded and/or suffer breakage of water collection dams;
- Other ministries related to the control of floods and water, such as the Ministry of Health and Ministry of Environment.

MARDWA’s current responsibilities related to DRR activities are most present under the umbrella of water administration. The management of water resources, involves several ministries and other institutions at both regional and local levels and due to the fragmented institutional set up the coordination between the multiple partners involved is often considered as not always sufficient, nor successful.

Although, there are multiple partners involved in the management of Albania’s water resources, the Ministry of Agriculture, Rural Development and Water Administration is ultimately responsible for the administration of water and essentially decides ‘who gets what’ of the state-owned resources. They are therefore the institution that is involved in

³⁴ FAO, 2016c

and legally responsible for the production and promotion of flood risk assessment plans and projects. While the River Basin Councils are currently in charge of the management of the six main river basins in Albania and are therefore responsible for any 'issues' related to the functioning and maintenance of flood defences and so on.

Currently the Directorate of Land and Water Management, which operates within MARDWA are working together with the GDCE, the Ministry of Internal Affairs, GIZ and the Italian Consortium on the implementation of two separate projects based on flood risks. One of these projects is specifically focussed on the creation and use of flood early warning systems, however, both of these projects are still in the early stages of development and it is also unknown to what extent agriculture is integrated into these projects.

Regarding the risks posed to agriculture from droughts and landslides, the only activities that are currently ongoing within the MARDWA are related to their commitment to the improvement of Albania's irrigation system. In many regions, the Albanian agriculture is highly dependent on irrigation, especially during the summer months, with current predictions estimating that due to climate change, irrigation will be much more needed. However, as a result of lack of proper maintenance, the 40-year old system is underperforming. One of the aims of the MARDWA is to provide 360,000ha of agricultural lands with a fully functioning irrigation system. At present, with support from the World Bank, 220,000 ha have been irrigated and the remaining area will be covered by irrigation systems in the coming years.³⁵

Staff at the Ministry of Agriculture are aware of the expected adverse impacts of climate change on the agriculture sector in Albania, however, there remains a limited focus on DRR and the mainstreaming of related activities. Despite that plans for future projects appear to incorporate DRR more extensively into the management of the country's water resources, a general focus on disaster risk reduction does not yet seem to be fully incorporated into the Albanian Ministry of Agriculture's daily activities.

At the time of writing of this report, the MARDWA had recently established a working group within the ministry to deal with the management of civil emergencies and disasters. The working group will be headed by the minister and will be comprised of 3-4 staff members from within the ministry who will work in close collaboration with the Ministry of Internal Affairs and the DGCE.

Local Government and Extension Service

In 2013, the government of Albania carried out a territorial and administrative reform, which was aimed at reducing and consolidating the first tier of local government units (LGUs). The law 115/2014 "on Administrative-Territorial Division of Local Government Units" was finalised and passed, reducing the number of LGUs from 373 to 61 and

³⁵ Information obtained from a semi-structured interview.

abolishing communes. 58 of the new LGU's are in functional areas while 3 other municipalities were created with the specific aim of protecting ethnic minority rights. The new LGUs became operative after the June 2015 local elections.

The extension service is an internal body that is managed by the MARDWA, which aims to provide information, advice and training to farmers and agri-businesses. The extension service works at central, regional and local levels and employs a total of approximately 300 people. There are 12 regional directorates of MARDWA and 120 Agricultural Information Centres at the local level. Within the extension service, there are five Agricultural Technology Transfer Centres (ATTC), which are responsible for applying research in various agricultural areas. ATTC's roles include supporting MARDWA in the formulation of design and strategies of national schemes and the facilitation of the transfer of technology to food processing businesses and agriculture.³⁶

Overall, it is estimated that the extension services and the ATTC provide up to 20 percent of farmers and agri-businesses with information and support to apply to and benefit from national support schemes.³⁷ However, there are also multiple issues faced by the public extension services, which is hindering their performance and limiting the amount of help they can provide, due to, among others:

- i. Limited number of extension specialists, with on average one per 1 700 farmers;
- ii. Ageing extension specialists with limited IT skills;
- iii. Insufficient/low outreach services in mountainous/remote areas;
- iv. Insufficient financial investment in agricultural training centres and facilities;
- v. Limited knowledge about the functioning of value chains, farm economics and business management.³⁸

The level to which DRR is mainstreamed throughout the extension services remains relatively unclear.

The Ministry of Environment

The Ministry of Environment (MoE) is responsible for environmental protection, sustainable use of natural resources, promotion of nature and biodiversity, sustainable development and management of forestry and pastures and monitoring of water quality in Albania.

At present, the Ministry of Environment and the organisations under its responsibility, such as the Ministry of Economic Development, Trade and Enterprise, the Ministry of Transport and Infrastructure and the Ministry of Health are tasked to develop and protect Albania's water quality. However, the Ministry of Environment is the primary

³⁶ MARDWA, 2015

³⁷ Ibid.

³⁸ Information obtained from a semi-structured interview.

organisation that is responsible for the establishment and implementation of policies, strategies, national plans and legislation regarding e.g. the protection of aquatic resources, rational exploitation of water resources, improvement of the aquatic environment, protection of inland surface water, temporary surface water and marine water.³⁹

National Environment Agency (NEA) Albania

During the restructuring of the Agency of Environment and Forestry, the National Environment Agency was established by the Decision of Council Ministers No. 150, dated 17/04/14. The duties and range of activities covered by the NEA are stipulated in Albania's environmental legislation. The NEA is the national focal point for environmental monitoring and assessment at the national level.

The Agency is a legal, public and budgetary institution, which operates under the Minister of Environment. The main duties and responsibilities of the NEA are related to monitoring the state of the environment throughout Albania, using environmental indicators related to air, water and soil quality as well as the state of forests and biodiversity. The NEA is also the body responsible for the management of the National Environmental Information System and National Forestry Inventory.

Functions of the NEA include:

- Following the procedures related to Environmental Impact Assessments and Environment Permissions in line with legislation in force;
- Drafting and implementing the annual National Monitoring Programme;
- Carrying out in own capacity and in collaboration with contracted third parties, the annual monitoring programme;
- Collecting, managing, assessing and drafting the National State of Environment Report on an annual basis;
- Building and managing the Pollutant Release Transfer Register (PRTR), National Forestry Inventory, Environmental Information System, etc.;
- Relaying information on the environment to the public, interested bodies and providing advice to other public institutions at national or local level on issues related to the state of the environment;
- Providing information services to the public on the environmental decisions taken by policymakers in accordance to the provisions of the laws in force;
- Implementing the principle of 'the polluter pays'.⁴⁰
- The NEA is also required to report to the European Environment Agency (EEA) and contribute to the EEA report titled 'The European Environment – state and outlook'.

³⁹ Shehi, 2012

⁴⁰ NEA, 2016

National Water Council

Regulation 268 dated 6.4.2016, approves the Regulation on the Functioning of the National Water Council.⁴¹ The National Water Council (NWC) is the main decision making institution, which is directed by the Prime Minister who chairs the Council and has the responsibility to approve the national water strategy and the national plan for Albania's water resources. The NWC is responsible for providing and implementing the legal, policy and strategic framework in the water sector and for screening and reviewing the technical content of EIA. This is required for all projects that could have a significant impact on the environment, and for issuing environmental consents and permits for larger activities.⁴²

Hydro-meteorological institutions and functioning of early warning system

Early warning systems (EWS) are extremely important when it comes to increasing the capacity to mitigate risks from natural hazards, especially with regard to agriculture. Effective EWS are typically comprised of four main elements: risk knowledge, monitoring and warning service, dissemination and communication and response capacity. It is therefore crucial that there is not only the appropriate system set up to predict, monitor and disseminate warnings through various outlets, such as the media, but also that the information that is received is understood and acted up on in the appropriate correct manner. The technical and operational capacities of the Albanian institutions regarding forecasting, monitoring and warning of hydro-meteorological data are still considered to be insufficient in order to cope with the multitude of risks posed to the country.

National weather forecasts are currently produced in Albania by three governmental organisations:

- Institute of Geosciences, Energy, Water and Environment (IGEWE)
- Military Meteorological Service (MMS), which is under the Ministry of Defence
- Meteorological Service under National Air Traffic Agency (MSNATA)

Along with one private company, MeteoAlb.

The IGEWE is a national research centre and is identified as the national monitoring and warning agency for natural hazards, including floods wildfires and earthquakes. The institute is endorsed by the World Meteorological Organisation (WMO) as the National Meteorological and Hydrological Service (NMHS) for Albania. In 2012, the Institute of Geosciences (IG) and the Institute of Energy, Water and Environment were merged to form the Institute of Geosciences, Energy Water and Environment (IGEWE). It a part of

⁴¹ Ecolex, 2017

⁴² Shehi, 2012

the Polytechnic University of Tirana and currently falls under the Ministry of Education and Sports.

MeteoAlb is a private company that was founded in 2008. It supplies, along with the three governmental agencies, meteorological datasets and related services in Albania. The company operates a network of 19 observation stations, all of which are located in urban areas. 11 of which provide the 'main' meteorological data within a 10-minute frequency with the other 8 providing the data twice a day. MeteoAlb also maintains daily, monthly and annual information on air temperature and precipitation from 1960 onwards.⁴³

In general, the early warning structure for hydro-meteorology in Albania is focussed around three main components: the monitoring of the network of surface hydrological and meteorological automatic stations, the satellite and internet components of the WMO-Global Telecommunication System and the analysis and forecast centre based at IGEWE.

The IGEWE is responsible for the dissemination of hazard monitoring data, forecasts and early warnings to the General Directorate for Civil Emergencies (GDCE) and other DRR partners that are actively involved. The IGEWE produces a daily bulletin from Monday to Friday. The bulletin of Friday also includes information for Saturday and Sunday. The bulletins are available to the public via the IGEWE's website and its Facebook page, and are also sent to the GDCE. In the case of a potential high risk situation, these bulletins can be increased to two or three times a day, however the additional bulletins are not available to the general public and include additional information. Additional hydromet information and data is available from the IGEWE upon request.

IGEWE, along with support from the World Bank, achieved the digitization of data from 2001-2011 in 2013. This therefore meant that new data from the recently installed automatic station, provides the ability to create an additional archive with detailed information useful for the MMS, which has its own observation network and also provides hazard warnings in TV presentations and by disseminating advisories to the media who then edit and give their own forecasts and warnings.

The MMS also provides commercial weather services to customers in other economic sectors of Albania. It is also understood that the MSNATA has its own observation station, however there is very little cooperation between the three weather forecasting organisations. Proposals to introduce a continuous warning stripe on the TV screen in case of emergency and the sending of SMS to mobile phones located at or near to the potential danger site(s) have recently been established. At present, there is a system in place to send SMS warning messages to key figures and focal points in high risk areas, however, the IGEWE is currently working with the WMO and phone operators on an SMS

⁴³ ASSI, 2015

broadcasting system, which will be available to the wider public. This system will send warnings or alerts to all mobile phones in a pre-selected geographical area.

At present Albania is not a member of the EUMETNET Meteoalarm systems, which is a combined network of 31 European meteorological systems. EUMETNET combines data received from across Europe to issue alerts on the possible occurrence of severe weather, such as severe rain with a risk of flooding, gale-force winds, heat waves, snow storms etc.

Over the past few years a significant amount of progress has been made in Albania with regard to forecasting and monitoring systems. Improvements include:

- 40 new automated hydro-meteorological observing stations have been installed nation-wide, with real-time data from the majority of these stations currently being secured;
- A 'hydro-meteorological data and visualisation and distribution portal, interfaced to the IGEWE hydro meteorological system, with both public and restricted access sections' have been in place since 2013;
- 20 years of hydrological data and 10 years of meteorological data have been digitised in the framework of South Eastern Europe (SEE) Albania Disaster Risk Mitigation and Adaptation Project (AL-DRMAP);
- 3-day and 7-day bulletins are now published and posted on the IGEWE website;
- Forest fire warning bulletins during the summer and meteorological warning bulletins during the wet season are now issued;
- In March 2015 Albania gained its first hydro-meteorological radar for monitoring severe weather as part of the regional European Union (EU) Instrument for Pre-Accession (IPA) Project (AdriaRADNet). The regional project that includes Italy, Croatia and Albania, consists of setting up an integrated web-based scalable-flexible-interoperable Information and Communication Technology (ICT) infrastructure, based on a network of low-cost weather radars and satellite data to be integrated with web orientated geographic information systems (GIS), regionally tuned numerical prediction models and decision support systems for civil protection within the Central and Adriatic regions.

However, in general, efforts to improve and modernise IGEWE have so far focused on investment in technological equipment rather than institutional reform, ultimately questioning the sustainability of the system. Issues including the need for the further modernisation and rehabilitation of the weather station network, regular maintenance of equipment, regular reliable internet connections, new qualified staff, such as hydrologists and meteorologists and large amounts of historical data, which still have not been digitised, all need to be addressed in order to improve Albania's EWS.

Studies for flood warnings have been carried out for multiple river basins, however no mathematical model has been used and only correlations with rainfall were taken into

account. Flood forecasting is therefore conducted for the relationship between the meteorological forecasts and the water levels. As an EU candidate country, Albania is currently eligible to access the EU Civil Protection Mechanism and has access to the following systems and programmes:

- Directorate General for Humanitarian Aid and Civil Protection/Joint Research Centre (DG ECHO/JRC) European Floods Awareness System (EFAS) to the Neighbourhood countries;
- ECHO/JRC long term technical programme for the Seveso Directive and strengthen chemical accident prevention in Neighbourhood countries;
- Eligibility for the Union Civil Protection Mechanism and ECHO peer reviews;
- Eligibility for the annual Mechanism calls for Disaster Prevention and Preparedness projects and Civil Protection Exercises.

Albania has partially undertaken some hazard and risk mapping, in particular for floods. The General Directorate for Civil Emergencies, the Institute of Geosciences, Energy, Water and Environment, the State Authority for Geospatial Information, the National Environment Agency, the Albanian Geological Survey, the National Territorial Planning Agency are some of the agencies that are involved in this activity. For instance, through a 2014 Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) project 'Climate Change Adaptation in Western Balkans', flood risk maps and flood risk management plans were developed at the local government, country and national levels, such as those for Shkodra city and the local government of Ana e Malit, Bërdicë, Bushat, Dajç, Guri i Zi, Rrethina and Velipojë. Besides Albania, also Kosovo, the FYR of Macedonia, Montenegro and Serbia were included in this project.⁴⁴ However, the lack of appropriate modelling software, capacity building trainings, general funding issues and a limited number of qualified personnel are some of the constraints.

At present, there is no one specific agency involved in or associated with awareness raising of disaster risks in Albania. Although there is a degree programme in 'civil protection and rescue' offered by private universities, there is no curricula that integrates DRR at the primary and secondary level. GDCE, through donor support, organises annual seminars, training, workshops and a roundtable on DRR focussing on protection and rescue, yet general efforts to increase awareness have been limited to the distribution of leaflets, brochures and posters and the GDCE website. NGOs such as the Albanian Red Cross and Save the Children have both been involved in the organisation of periodic national campaigns on disaster awareness issues for vulnerable communities, however, such efforts remain sporadic rather than systematic.

⁴⁴ GIZ, 2015.

Disaster risk assessments

In Albania, the Directorate General for Civil Emergencies (DGCE) is responsible for undertaking national disaster risk assessments and coordinates with the line ministries and institutions that have responsibility for the respective sectoral risk analysis, development strategies and integrated plans. At the local level, the prefectures and municipalities are responsible for their own risk assessment and planning.

In the case of a disaster event, the DGCE coordinates the inter-ministerial committee and collects all relevant data on the disaster from line ministries and its own local teams. This information is synthesised and prepared for the Prime Minister's office. The DGCE organises a meeting on a bi-annual basis with the Prefects to enhance emergency management planning for the next 6 months. The national plan for the areas, which are exposed to the largest risks is then prepared by the DGCE with all geographic analysis and maps supporting the plans prepared by the Ministry of Defence.

Regarding flood risk assessment, the legal framework is not clear, with many overlaps and gaps especially when it comes to the shared responsibility between the Ministry of Agriculture and the Ministry of Environment. Although MARDWA is charged, not only with the management of any form of floods, but also flood protection and planning, in its mandate only floods affecting agriculture or caused by agriculture related water infrastructures are mentioned. MARDWA also has numerous structural gaps, regarding human resources and access to technology and software, which hinder its capacity to perform systematic flood risk assessments or even basic flood hazard mapping. The Directorate of Land and Water Management is identified as responsible for the preparation of studies on flood risk.

At the local level, drainage boards do not have the technical capacity to carry out flood risk assessments, which as a result are more focussed on the implementation and management of flood protection infrastructures. Municipalities do not perform any form of flood risk assessments and it has been noted that there is no real spatial planning process available at a local level.⁴⁵

In terms of a Preliminary Flood Risk Assessment (PFRA), which is a reporting obligation under Article 4 of the EU Floods Directive, Albania has not yet conducted this. As an EU pre-accession candidate, it would need to fulfil all requirements regarding the EU Floods Directive. However, there are several on-going projects relevant to PFRA. Data on floods and the associated losses are systematically collected by the General Directorate of Civil Emergency under the Ministry of Internal Affairs.⁴⁶ In 2012, flood prone areas in the lower parts of the Buna and Drini river were mapped as part of the 'Post-Disaster Comprehensive Flood Risk Assessment & Management Study, Risk Analysis of Flood

⁴⁵ WMO, 2012

⁴⁶ IPA Floods, 2016

Hazard & Impact'. This was supported by the General Directorate of Civil Emergency-Ministry of Internal Affairs and the World Bank and represents a starting point for conducting PFRA at a national level.⁴⁷

Although the elaboration of flood risk management plans (FRMP) is included in Law 111/2012, so far only a small amount of pilot attempts at FRMP exist and there is no systematic use of FRMPs for each Unit of Management. Law 111/2012 stated that River Basin Councils are responsible for the preparation of FRMPs, however the Councils are not fully operational.⁴⁸ However, this is something that the MARDWA is currently trying to address.

At present, the governance of drought risk does not to be considered as an issue of importance by the Albanian government and therefore the only drought risk analysis that is carried out is by academics and in the framework of research and development projects.

Overall, risk assessment is not operationally developed in Albania. The DGCE is identified as a coordination body, and although it collects information on floods, there is no real technical capacity to perform actual risk assessments. Line ministries do not have the capacity to produce current up-to-date hazard maps and even data on exposure and vulnerability is sparse. Along with such issues, there is the notion of referring to risk assessment as only hazard mapping rather than including a clear analysis of multiple disaster scenarios and the level of exposure of people and their assets to each of the scenarios. This therefore means that a change in thinking and the way in which risk assessment is approached and understood also needs to take place. The general hazard risk assessment in Albania should be built from the foundations up, starting with a legal and institutional framework with clear mandates, duties and responsibilities along with the provision of funding for appropriate human resources, suitable data, tools and technical capacities.

Hazard mapping and GIS Capacities

In general, hazard and more specifically flood maps are not currently developed and distributed on a large scale in Albania and at present, there is no geographical data, which exists for past floods. Institutional arrangements for risk assessments are ad-hoc and tend to only be activated after a flood has occurred. Flood hazard and risk maps along with flood risk management plans, only exist for two out of six river basins, Drini and Mati, both completed in 2012.⁴⁹

⁴⁷ IPA Floods, 2016

⁴⁸ IPA Floods, 2016

⁴⁹ FAO, 2016b.

The Albanian, Department of Seismology of the Geo-sciences Institute is participating in the project 'Harmonization of seismic hazard maps for the Western Balkan Countries', which was launched in 2007 under the framework of the Disaster Preparedness and Prevention Initiative of the Stability Pact for South Eastern Europe with the support of the North Atlantic Treaty Organization (NATO) Science for Peace and Security Programme.⁵⁰ The aim of the project is to prepare for joint preparedness and prevention activities in the Western Balkan nations through the production of regional seismic hazard maps. The collaboration between the project partners was ultimately aimed at enhancing cooperation and coordination in the field of seismic hazard management.

With regard to the use of Geographical Information Systems (GIS) in Albania, the State Authority for Geospatial Information (ASIG) was established in 2013 in accordance with law 72/2012 on the "organisation and functioning of the national infrastructure of geospatial information in the Republic of Albania". The objectives of ASIG are:

- The creation of a geodetic framework consistent with European standards to enable the support of a unique map of the entire territory of the Republic of Albania;
- Establish a national infrastructure of geospatial data in Albania through a geoportal, where everyone can access the geospatial data that is possessed by the Albanian State.

The roles and responsibilities of ASIG include the implementation of national policy for geospatial information infrastructure. Design, construct, maintain and update the Geodetic Framework 'KRGJSH2010', and create standards and rules for the creation of National GIS in accordance with relevant European standards.⁵¹

Prior to the establishment of ASIG in 2013 during the collection of data for the 2011 Albanian census, GIS technology was for the first time implemented in all phases of the census process. However, it is reported that the implementation of GIS for statistical purposes and the delineation of small statistical areas proved difficult due to the lack of digital maps at building level, roads and digital maps of administrative boundaries was considered to make the process more complicated. Geographic information did not exist and therefore in 2009, census operations started with the implementation of a digital mapping infrastructure organised in a GIS system covering the territory of Albania at building level. The focus of the project was to digitalise the whole building fund in Albania, using the most recent satellite images. The census mapping project was completed in 2011 and a census spatial database was constructed. However, although ASIG was created in 2013, limited information exists on the use and application of GIS in DRR, limited GIS experts and especially related to agriculture across Albania.

⁵⁰ Tzvetkov *et al*, 2015

⁵¹ ASIG, 2017

Post-Disaster Needs Assessment

There is currently no systematic post-disaster needs assessment, which includes damage and losses assessment, undertaken for the agriculture sector in Albania. When a disaster occurs, the Ministry of Agriculture, reacts depending on the disaster occurred. The process of data collection starts from the communes up to the counties and to the national level. Agriculture extension services has a department in each county and its staff are responsible for collecting data and conducting damage and losses assessments in the affected sub-sectors, generally crop and livestock.

A clear methodology for the aggregation of damage and losses from all the affected municipalities is not available. During the 2015 floods, the Ministry of Interior took the lead on conducting the PDNA, with the Ministry of Agriculture being responsible for the agriculture sector. Within the Ministry of Agriculture, only extension services staff were involved at all levels. It is important to say that the Ministry did not react during and after floods of 2016, which were smaller in extent compared to the 2015 floods, mainly due to the fact that there was no request for PDNA as well as no international support (from e.g. UN, EU or WB) as there was for the PDNA of the 2015 floods.

Pre-disaster baseline

At the moment, there is no systematic pre- and post-disaster baselines for the agriculture sector, which as a result does not allow for making comparisons between the pre-disaster and post-disaster conditions and situations. The tables used for the collection of the baseline data are not prescribed.

In terms of data collection, the State Statistical Office (INSTAT) is a specialized and independent organisation within the state administration in Albania, with as basic functions to collect, process and disseminate statistical data about the country's demographic, social and economic state. The statistical unit in the Ministry of Agriculture has been suppressed in 2013 and since then INSTAT has acquired the role of central unit for the collection of all agricultural data.⁵²

Validation of the results from the field

Data validation in order to ensure the integrity of the data collected and avoid double-counting is not performed in Albania due to the lack of technical capacities to verify the work of local governments.

A clear methodology for the validation of the damage and losses is not available. FAO's experience in leading the Agricultural PDNA assessment in Albania in 2015 has indicated a number of ad-hoc procedures for data collection, processing and validation in each entity, which resulted in numerous findings regarding the data collection and, in particular, the validation methodology.

⁵² Agricultural data available for Albania is accessible at www.instat.gov.al.

Assessment of the disaster impacts

The Council of Ministers, in response to the floods of 2011, has endorsed the decision no. 10 dated 10.01.2011 "On the establishment of working groups to evaluate damages from flooding in the regions of Shkoder, Lezhe and Durrës". This decision is accompanied by standard evaluation templates and a list of prices for a wide range of agricultural products. However, since the decision is still in force, it has been used as a methodology for the damage evaluation even though it has not been used in a standardized way. In addition, further weaknesses are related to the fact that the prices are variable and the geographic remit of this decision is limited.

The assessments performed or the follow up procedures do not indicate any cross-cutting issues to be addressed in the recovery process, such as gender and social equity and disaster risk reduction, neither do they foresee any step-by-step approach to assist and support the more vulnerable small-holder farmer.

Recovery strategies and reconstruction needs

A specific recovery strategy is also not prepared, although, the Ministry of Agriculture aims to develop support programmes for the affected areas via subsidy systems and/or undertake investments in rehabilitating the damaged public infrastructures, such as channels and dams. However, there is a need for a vision and guiding principles for these activities, as they are not based on estimated reconstruction and recovery needs, prioritised needs, response analysis and the formulation of interventions, including the estimation of the financial costs.

Agricultural insurance

Agricultural insurance is currently almost non-existent in Albania. The insurance market as a whole, only accounted for 1.6 percent of GDP in 2013 with motor insurance making up 81.5 percent of total paid claims.⁵³ The World Bank assessment report on the Albanian insurance sector states that the sector remains small and underdeveloped in Albania and lags behind all other countries in South-Eastern and Central Europe.⁵⁴ A social impact survey that was carried out in 2015 in the flood affected areas found that none of the households interviewed had property insurance. Primary reasons provided for this included e.g. the unaffordability of flood insurance, followed by a lack of trust in insurance companies, a limited understanding of the importance of prevention investment and an expectation from the agribusiness sector for the authorities to fully compensate losses in the case of a disaster.

In general, throughout Albanian society the lack of an insurance culture and the lack of public/private insurance schemes adversely impact the recovery of a disaster affected area or population. The expectation that once a disaster causes significant amounts of

⁵³ Galliardi, 2017

⁵⁴ World Bank, 2014

damage to houses, goods, crops and cattle, the government will automatically allocate emergency funds to compensate of up to 40 percent of the losses, continues to hinder development in this field.⁵⁵

It is understood that agricultural insurance policies, have previously been offered in Albania, specifically by the insurance company Insig, however, the company considered the agricultural clients as high risk customers and after 2003 pulled out of the agricultural segment. Although some insurance companies do currently have a small number of agricultural clients and these limited number of cases are focused on livestock (mainly cattle) and greenhouse insurance around the big cities. However, there is little information available on the details of the policies as well as the insurance contracts, although the companies seem to focus more on covering infrequent catastrophic risks, such as damage to greenhouses from high winds, which are also lower in costs to the customers.⁵⁶

The current legal framework and set up in Albania is such that agricultural insurance is not specified as a particular class and is therefore practiced under the property insurance license. This makes it impossible for the insurance market supervisor to receive data concerning agricultural insurance separately, since reporting applied to this type of insurance does not provide the separation of indicators by kinds and types of insured property.

Currently, the Law No. 52/2014 on the “activity of insurance and reinsurance” provides the most appropriate legal framework for agricultural insurance in Albania. It applies to the establishment, activity and supervision of insurance, reinsurance and intermediation companies. It also makes specific reference to insurance against natural calamities and similar adverse climatic events as one out of the 18 main classes of non-life insurance.⁵⁷ Although the law refers to such ‘natural climatic events’, it only specifically lists, among others fire, explosion, storm, natural forces other than storm, nuclear energy and land subsidence and earthquakes’ as actions, which can be insured against.⁵⁸

However, due to the ever-increasing vulnerability of Albanian agriculture to and damage caused by natural hazards, such as floods, droughts and landslides, the projects implemented during the last few years, mostly undertaken at national scale, have been carried out with the aim of increasing the use of agricultural insurance as a form of risk management in Albanian agriculture.

One of these projects that has been set up between the Albanian and Italian government is referred to as ASSI, which is a ‘Pilot project for the establishment and testing of a

⁵⁵ Duro, F., 2015

⁵⁶ Agroweb, 2015

⁵⁷ Galliardi, 2017

⁵⁸ Galliardi, 2017

subsidized insurance system to cover agricultural risks'.⁵⁹ The general objective of the project, which was formally signed by both parties in 2012 with a budget of EUR 2 million, is to contribute to the stabilisation of the income of Albanian population involved in agriculture.⁶⁰

The main outcome of the project is expected to be the establishment and testing of a subsidized agricultural insurance system for natural hazards and similar adverse climatic events at national level, through a pilot project in the vineyard sector. The project is based on the successful implementation of similar schemes in Italy and other European countries and aims to build a subsidized insurance system with regard to weather risk management in agriculture. The results of the project are expected to include the creation of a defined legal framework for subsidised agricultural insurance, the establishment of a database of meteorological data and weather stations and the development of a subsidised agricultural insurance market.⁶¹ Although the project was formally signed in 2012 and the inception report published in 2015, at the time of preparing this document there has been no progress reports or documents of any kind published related to the implementation of the ASSI project and its progress so far.

Another project that has recently been carried out in relation to agricultural insurance in Albania is a pilot project on 'Insuring Greenhouse Construction'. This project refers to an agreement, which was signed by 757 farmers in Krutja village (Lushnja), and Fed Invest, Sigal UNIQA Group Austria and IFIS Broker, which are all foreign companies that are supported by MARDWA and financed by the European Bank for Reconstruction and Development (EBRD) to enable them to receive a certificate of insurance at zero cost for a year.⁶² This means that for the first time, 100 percent of the products cultivated in their greenhouses are insured against damages caused by natural hazards.

Albania, Serbia and Macedonia are all currently part of a Regional Catastrophe Risk Insurance Facility, which was set up and launched by the World Bank in 2010 in collaboration with other partners. At present, new insurance products are being developed by the company Europa Re along with a public awareness and education campaign for catastrophe risk and catastrophe insurance products. Earthquake Residential and Commercial Insurance, and Flood and Earthquake Residential and Commercial Insurance will be available in all three countries, however, only farmers in the Former Yugoslav Republic of Macedonia and Serbia will have access to the agricultural insurance programme, but the reason for this is not clear.

In general, it is clear that the penetration of agricultural insurance in Albania is still extremely low with the main reasons behind its 'non-existence' believed to include

⁵⁹ Republic of Albania, 2016

⁶⁰ Ministry of Agricultural Supply and Consumer Protection, 2011

⁶¹ ASSI, 2015

⁶² Agroweb, 2016

agriculture being considered too much of a 'risky business', lack of information available to farmers and the lack of an adequate legal framework to attain it.⁶³ Although it seems that it is now included in the National Strategy for Disaster Risk Reduction 2014-2018, but this strategy is not yet approved. A number of projects are starting to take place in Albania and the use and uptake of agricultural insurance can help farmers to transfer and mitigate their risks. However, such a lack of detail and specific points of reference, suggest a need for a change in the legal framework of Albanian insurance to not only more specifically refer to and include agricultural property and practices, but also to include all forms of climatic events, which have the potential to cause damage to Albanian agriculture. An increase in the capacity of and knowledge available to the farmers on the uses of agricultural insurance as well as how to obtain it and the legalities surrounding the policies, along with the potential for the government or other funding bodies to help contribute towards some of the farmers' premiums, would all hugely contribute towards the more effective use of agricultural insurance in Albania.

⁶³ Galliardi, 2017

Conclusions and recommendations

Considering Albania's increasing levels of vulnerability to multiple natural hazards, including floods, droughts and landslides, an effective disaster risk reduction system needs to be in place in order to mitigate such risks, especially with regard to the significant impacts that these hazards can have on the agriculture sector. This is also highly important within the context of climate change. The vulnerability of the country to an ever-changing climate is highlighted in multiple documents, such as the third national communication to the UNFCCC, along with projections on how agriculture will be specifically impacted by it in the near future, due to the expected increase in and severity of extreme weather events.

At present, Albania is in the process of shifting from an emergency response towards a more proactive DRR approach. Although DRR is referenced in numerous policies and strategies it is yet to be officially implemented and embedded into the legal framework. The 2001 Law on "Civil Protection" still focuses primarily on response to emergencies and recovery activities, although to a certain extent it also includes disaster planning and mitigation. Albania has developed and adopted a national Civil Emergency plan of 2004 as well as drafted the National Strategy for Disaster Risk Reduction and Civil Protection 2014-2018. However, the latter DRR strategy has not yet been adopted.

In terms of mainstreaming DRR into Albania's agricultural plans, policies and strategies, it seems that DRR is taken more into account in recent documents, including in the 2015 Integrated Cross-Sectoral Plan for the Coast and in the 2016 National Integrated Water Resources Management Strategy. However, in the Inter-Sectoral Strategy for Agriculture and Rural Development of 2014-2020, natural hazards and DRR are not mentioned, except the expected adverse impacts of climate change on the sector. This is unfortunate as climate change will pose an additional challenge to the sector with regard to enhancing agricultural productivity in a more sustainable, resource efficient and climate-resilient manner. At present, Albania does not yet have a National Platform for DRR, which would bring all relevant stakeholders from various sectors together and would facilitate inter-institutional coordination, collaboration and communication to advance its national commitment to reduce disaster risks as a member of the Sendai Framework for DRR 2015-2030, the successor of the Hyogo Framework for Action 2005-2015.

Several pilot projects on the application of agricultural insurance as a risk transfer tool in Albania are currently in their planning phase. The importance of insurance, in particular for farmers, was also included in the draft of the National Strategy for Disaster Risk Reduction 2014-2018, which is unfortunately not yet been approved. Certain challenges and constraints have been identified, such as a national expectation that any damage and losses incurred due to a disaster will be compensated by the government and a general lack of insurance culture, which are hindering the use of insurance to mitigate production losses in the agriculture sector.

Hazard mapping and the application of GIS technologies are also increasingly being used in Albania, especially with regard to the establishment of the State Authority for Geospatial Information. Although, the fairly limited use of and capacity to use these technologies across line ministries and related organisations, reduces the identification of hazards, vulnerable areas to reduce potential disaster risk, including for the Albanian agriculture sector.

Risk assessment and planning is currently hindered by a lack of clarity regarding the roles responsibilities of line ministries and other stakeholders involved in DRR. Communication and coordination between involved ministries and parties needs to increase in order for full assessments of risks to take place at national, regional and local levels. Although at present the DGCE is identified as the coordination body and actively collects information on floods in particular, their capacity seems to be fairly limited to conduct hazard assessments.

Overall, although there are clear improvements being made regarding the implementation of DRR in agriculture, in Albania, there is still a long way to go before effective mainstreaming and implementation of DRR in agriculture takes place. This document has provided a comprehensive overview of Albania's agriculture sector, an outline of natural hazards and risk profile, and an analysis of the existing legal, policy and institutional structure. Regarding the enhancement of disaster risk reduction in agriculture, the following actions are recommended:

Legal and policy Framework

- Adopt the drafted National Strategy for Disaster Risk Reduction 2014-2018, which provides a national framework for DRR;
- Clearly outline the DRR roles and responsibilities of all relevant stakeholders in DRR and sectoral laws, strategies, plans and policies, along with expected actions;
- Establish a National Platform for DRR to advance the national commitment to reduce disaster risk and enhance institutional coordination, collaboration and communication on DRR actions.

Risk assessment, mapping and GIS

- Consider the development of a standardised national risk assessment framework, for all potential hazards in Albania;
- Clarification of roles and responsibilities across line ministries and other organisations regarding risk assessment and mapping;
- Regional coordination and cooperation, leveraging expertise, capacities, resources and information across the region among IPA beneficiaries and with various regional centres in Europe;

- Enhance capacities to undertake disaster risk assessments by the line ministries and at local and municipal level;
- Ensure that the importance of drought risk assessments is known, as drought has a significant impact on the sector at present and in the near future. Links need to also be made with regard to damage and losses assessments and enhancement of capacities to collect baseline as well as post-disaster data of the impacts of drought as well as the monitoring of droughts and dry spells through soil moisture analysis by the hydro-meteorological institute;
- Increase the use of GIS and risk mapping by line ministries, for multiple hazards across Albania.

Early Warning

- Conduct technical training courses focussing on risk assessment and decision making based on a country wide standardisation of risk assessment methodologies;
- Participation in regional initiatives for exchanging information on DRR and combining efforts in monitoring, forecasting and responding to disasters;
- Create a National Disaster Observatory - an institutional arrangement for systematically collecting, storing, analysing and interpreting disaster related data for decision making for DRM;
- The Albania early warning system needs to strengthen all the elements of its early warning system, including the communication component with Standard Operating Procedures for early warning dissemination and identified responsibilities for issuing warnings at national, prefecture and communes levels.

Communication/Education and Awareness

- Increase communication and coordination between all relevant authorities, such as line ministries (e.g. MARDWA and Ministry of Environment), civil emergency structures, academic institutions, quarks and municipalities;
- Use knowledge, innovation and education to build a culture of safety and resilience at all levels;
- Include DRR, disaster preparedness and preparedness information and activities into the curriculum of primary and secondary schools and agricultural institutions.

Post-Disaster Needs Assessment

- Align the country's post-disaster damage and losses evaluation and compensation methodology to the international standards for conducting post-disaster needs assessments, developed by the EU/UNDG/WB, which includes standard forms, , data reporting and standardised calculation templates, also for undertaking damage and losses assessments, in particular for the agriculture sector;
- Ensure that pre-disaster data is collected systematically and accurately in order to make comparisons with post-disaster data possible;

- Enhance knowledge and strengthen awareness capacities through providing e.g. tools and training for national relevant organizations to enhance DRR and pre-disaster recovery planning and PDNA methodologies.

Insurance

- Create an education/awareness programme involving insurance companies and MARDWA to raise awareness amongst farmers and agribusinesses on the importance of prevention investment and how agricultural insurance works;
- Create a national agriculture insurance policy, which outlines the roles and responsibilities of all relevant stakeholders and makes data collection and reporting on agricultural beneficiaries and effects on the sector possible;
- Highlight the need for an increase in the use of insurance across Albanian society as a form of personal risk reduction.

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