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*All references to Kosovo in this publication are to be understood without prejudice to positions on status, and in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.*
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Introduction

BY THE THEMIS PROJECT TEAM
Challenges and opportunities in South Eastern Europe

The fragmentation of the former Yugoslavia into some of Europe’s newest nations has brought significant changes to South Eastern Europe (SEE) — and significant challenges as well. One of these challenges is for the region’s now several state administrations to develop and nurture multi-stakeholder partnerships within the region to address sets of problems that are shared in common. In recent years, a broad range of environmental issues with generally transboundary characteristics has emerged as a key motivator within the region for developing new forms of international cooperation and networking capabilities.

The Themis Network was established as a direct result of efforts to meet one regional challenge in particular: illegal logging. The official launch of Themis was marked by the issuing of a joint declaration by participants at a conference on illegal logging and environmental crimes, held in Budapest, Hungary, in November 2010. The conference also resulted in the approval of the network’s first multi-annual work programme (MAP), funding for which during the 2012–2013 period comes from the Austrian Development Cooperation.

As stated in its terms of reference, Themis is an “informal regional network of national authorities responsible for natural resources management and protection, and for the development, implementation and enforcement of nature conservation and forestry laws in EU candidate countries and potential candidates. [...] The network is committed to a more effective implementation and enforcement of natural resources and forestry legislation and combating environmental crimes by sharing best practices, capacity building, providing guidance and tools and awareness raising.”

This publication, which brings together a wide range of issues relevant to South Eastern Europe — some regional in scope, others with a more national focus — represents an effort to share some best practices, provide guidance and help raise awareness.

In the opening chapter, Jerphaas Donner provides a thorough and helpful history of networks in an environmental context, concluding with special emphasis on the present and future importance of communities for creating a sense of belonging.

Environmental crime has emerged in recent years as a serious global problem. International trade in endangered species of flora and fauna has a devastating effect on biodiversity, and countries not directly affected often serve as trade corridors and conduits for the movement of illegal products. Igor Jevtic briefly outlines the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) to help us better understand the issue.

Marina Malis Sazdovska turns the focus to the former Yugoslav Republic of Macedonia for a closer look at the impacts of environmental crime on forests. A practice that became particularly widespread after 2000, illegal logging is becoming an in-
increasingly sophisticated enterprise that poses significant challenges to the country’s forestry police.

Bribery and corruption are problems that affect some aspect of daily life for most people who live in SEE. Nathan Johnson draws attention to a recent eye-opening survey from the United Nations Office on Drugs and Crime (UNODC) that exposes the prevalence of bribery in everyday dealings between citizens and public authorities in seven SEE countries. The rest of the chapter attempts to explain the causes of corruption in order to ask what might be done to fight it.

As far as the region’s emerging private sector is concerned, financial and environmental transparency is vital in reducing levels of corruption in the region. Radoje Lausevic and Ana Popovic describe the results of a project to set up an integrated industrial emissions reporting tool in Serbia — a tool developed by a consortium comprising the Regional Environmental Center for Central and Eastern Europe (REC) and a Norwegian software company.

Turning to Bosnia and Herzegovina, Igor Jevtic outlines the country’s low-emission development and climate change adaptation strategies, both of which reflect the region-wide tendency to develop and implement environmental policies on par with other European states.

Over the course of two chapters, Maria Beatriz Rosell Perez outlines climate change policies for the SEE region as a whole before offering a detailed description of regional waste management practices. In the first of her chapters she introduces the Low-Carbon South East Europe (LOCSEE) project and the significance for the region of its participatory, cross-sectoral approach. Her second chapter focuses on a topic of vast importance for the region and its quest for sustainable development.

The contribution from Anamaria Stroia focuses on SEE regional renewable energy policies. Various new support schemes and financing mechanisms have emerged in the past half-decade that have expanded the realm of possibilities to develop renewable sources of energy in the region, and this chapter highlights what has — and has not — been done to take advantage of them.

Concluding this publication is a contribution from Vladimir Pavicevic that explores the implementation of CITES in Montenegro. In preparation for the country’s future membership of the EU, the responsible state bodies and scientific institutions face a huge task that has to be completed in a relatively short time.

We sincerely hope that the *South Eastern Europe Environment Outlook 2013* will contribute to an understanding of the regional challenges to be met and the opportunities to welcome in the years to come!
CHAPTER 1

150 Years of Networking for the Environment and Nature

BY JERPHAAS DONNER
The emergence of environmental organisations

From their first appearance in around 1860, organisations advocating the protection of nature and the environment developed networking structures to achieve their goals. Networks somehow always seemed like the best way to organise communication and decision making. One of the reasons may have been that, historically, environmental organisations throughout Europe generally developed from groups of agenda-setting citizens into professional campaign organisations. Connecting citizens, by definition, forms networks. This article takes a few steps through history before diving into the specifics of networking for the environment and its future perspective: communities.

While nature protection organisations first emerged in as early as the 19th century, the development of organisations with a mission to work on environmental protection only started in earnest in the early 1970s. At first, concerned citizens organised themselves into action groups focusing on issues such as the pollution of air and soil from factories. Later, the issues broadened to include, among other things, energy, agriculture, consumerism, transport and water.

Three periods can be distinguished in the emergence of environmental organisations. The first period (naturalism and nature protection) runs from 1860 until the Second World War; the second period (environment under threat) runs from 1960 until 1980; and the third (international networks for the environment) runs from 1980 to the present.

Naturalism and nature protection

The effects of industrialisation, developments in natural science and a changing attitude towards nature in the first half of the 19th century led to an interest on the part of biologists, artists, the nobility and industrialists in preserving natural areas. One famous example is that of the Barbizon school of painters in France, for whom landscape was a major theme. Members of this group appealed successfully for the preservation of the Forest of Fontainebleau in response to plans by the forest administration to fell the oldest trees. In 1853, the first European nature reserve was established by the French Government to protect the forest. One decade later, on the other side of the world, President Lincoln signed the Yosemite Grant Act to protect the Yosemite Valley as a state reserve. Subsequently, Yellowstone Park was established in 1872 as the first national park in the US. This happened as a result of the lobbying and publicity work carried out by entrepreneur James Mason Hutchings and artist Thomas Ayres. Their publicity campaign in New York included articles and exhibitions that attracted widespread attention and even attracted tourists to the
area. By lobbying Congress, they managed to ensure that the Yosemite Grant Act was passed.

In 1904, the authorities in Amsterdam, the Netherlands, decided to create a waste dump in the “worthless, barren lakes of Naardermeer” — which, in fact, was a beautiful wetland area full of birdlife. It is thanks to the efforts of a teacher from Amsterdam, Jac. P. Thijssse, that the area remained a site of natural beauty. Thijssse managed to lobby various important people and raised the sum of 155,000 guilders, a considerable amount at the time, to buy the area. This led to the establishment of Naarden monumenten, which, after the World Wide Fund for Nature (WWF), is the biggest nature protection organisation in the Netherlands. In 2009 it had 820,000 members and owned more than 100,000 hectares of land. The WWF was established in 1961 in Switzerland under the presidency of Prince Bernhard of the Netherlands.

Environment under threat

Although there were organisations dealing with environmental protection before the Second World War, it was only after 1960 that the issue rose on the political agenda and several organisations were established. In 1962, Rachel Carson impressed readers with her book *Silent Spring*, in which she described the effects of pesticides on the environment, and on bird species in particular, claiming that thinner eggshells were resulting in reproductive problems and mortalities. She criticised the use of DDT and the information that was provided by the industry. More publications followed, including *Limits to Growth*, which appeared in 1968, in which Donella Meadows, Dennis Meadows, Jorgen Randers and William Behrens explore the issue of finite resources in connection with the fast-growing world population; and *A Blueprint for Survival* in 1972, signed by over 30 leading scientists, which argued for the transition of modern society into small-scale communities in order to ensure the survival of the planet. According to critics, these publications were also the start of the doom scenarios predicted by environmentalists. Nevertheless, growing awareness provoked the establishment of several international organisations and networks for the environment, based, roughly speaking, on three paradigms.

The first group comprised radicals who wanted to restructure society on the grounds that it was technocratic, large-scale, capitalist structures that caused environmental problems, and that it was impossible to solve those problems while remaining within the existing structures. Friends of the Earth (FoE), which was established in 1971, can be regarded as an example of this school. It is also an example of an organisation that connected a real grass-roots movement and network with international activities. The Dutch FoE member Milieudefensie was established in 1972.
A second group comprised organisations that tried to create changes within the system through lobbying and publicity. One Dutch example is Natuur en Milieu (1972), at the time an expert and lobby organisation mainly focusing on the national government. The third type were organisations that developed and demonstrated examples of alternative ways of living in the form of biological agriculture, energy and water conservation, and a reduction in levels of consumption and waste. A Dutch example in this category is De Kleine Aarde, founded in 1972, which ended its activities in 2010.

In 1971, a group of Canadian environmentalists calling themselves the Don’t Make a Wave Committee chartered a boat to sail into the Amchitka nuclear testing zone near Alaska. They were stopped by the US Navy but gained a lot of support and publicity for their heroic action. They named their ship Greenpeace and established an organisation with the same name in 1972. The combination of heroism and press coverage turned out to be very successful: Greenpeace now has organisations in 41 countries all over the world.

Towards international cooperation
The decade that followed, 1976 to 1986, can rightly be called the disaster decade for the environment. Big chemical disasters (Seveso 1976; Bhopal 1984); oil spills (Amoco Cadiz 1978 and at least 10 other oil disasters); and nuclear accidents (Three Mile Island 1979; Chernobyl 1986) all feature in the list of top 10 environmental disasters described by S.M. Enzier at www.lenntech.com/environmental-disasters.htm

These disasters, in combination with the development of mass media and the use of communication techniques by professionalised environmental and nature protection organisations, created massive moral and financial support. Citizens became members and governments started to finance organisations that had proved to be right. At their height, organisations in the Netherlands had a base of around 4 million members, or 25 percent of the entire population.

International networks for the environment
Although international organisations and networks such as the International Union for Conservation of Nature (IUCN) and the European Environmental Bureau (EEB) had already been established by 1980 (in 1960 and 1974 respectively), it is only in the past three decades that the environmental movement has developed into international networks. Civil society has become a respected partner in the dialogue with governments, and environmental issues have climbed higher on the international agenda. The UN organised an historic meeting on sustainable development in Rio de Janeiro in 1992. It attracted a lot of media coverage and many NGOs were present.
One year earlier, the first Environment for Europe conference had taken place in Prague. In this process, European countries discuss mutual policy and cooperation on the environment. In 1997, world leaders got together in Kyoto to discuss climate change. These conferences have grown bigger and bigger: the 2009 climate change conference in Copenhagen attracted more than 40,000 participants from governments, civil society and the media. This may be one of the reasons why no satisfactory agreement was reached there: decision making is difficult with so many participants and such broad media coverage.

Civil society organisations have also developed international networks, such as Transport and Environment (1990), the Central and East European Working Group for the Enhancement of Biodiversity (CEEWeb, 1994), CEE Bankwatch (1995), the Climate Action Network (1997), and the Pesticides Action Network (2003).

Another form of international cooperation was that between Western civil society and countries that became independent after the collapse of the Soviet Union. For the Netherlands, the first such contacts were between Polish dissident organisations and Dutch civil society. Friends of the Earth was very active in supporting newly developed organisations. After a (secret) visit to Polish dissidents, Dutch Minister of Environment Ed Niëpels started a support programme that was implemented by Milieucontact Oost Europa (1988). The programme was established by, among others, Milieudefensie, Friends of the Earth Europe and Natuur en Milieu. In the early 1980s, dissident organisations emerged in the slipstream of Solidarnosc, the famous Polish workers union. The first was the Polish Ecological Club (PKE), founded in Krakow in 1980, which was probably the first legally established independent, environmental non-governmental organisation in the former Socialist bloc. This was followed by the ecologists journal Green Brigades (1989), the Green Federation (1993), and the Polish Greennet (1995), which is based on the example of the Dutch network of Milieufederaties.

Similar developments were taking place simultaneously in the Czech Republic and Hungary. With international support, civil society in former communist countries developed as rapidly as the societies themselves changed.

From grass-roots organisations to international networks
As shown by the history of civil society networks for the environment and nature, there are many ways in which networks can develop. To a large extent, this is connected with a country’s social and political climate and the history of organisation development. The level of freedom in terms of organisation and travel can have a significant impact, as can the existence of fundraising traditions.
The financial basis may play an important role in network development. There is a big difference between countries in which environmental organisations started to develop with financial backing from private supporters (citizens and the business sector); and countries in which organisations are mainly financed by foreign donors. The latter type often has a small membership base and hardly any support from the local or national government. This may explain why organisations in former communist countries are far more internationally oriented than, for example, Dutch local organisations.

Different environmental civil society networks often have similar characteristics, including distinct stages in their development.

**Stage 1: Concerned citizens**

In most countries, the first stage is when concerned professors, teachers and citizens start to produce publications on the state of the environment. Groups of committed people, such as students, mothers, nature lovers or scientists, begin to be active in their community or country.

**Stage 2: Grass-roots organisations**

Many of these groups then develop into organisations that meet regularly to discuss new activities. Often they are helped by seed grants from (international) donors and start writing project proposals to get more activities funded. To do this properly, they need a computer, communication tools and people with various capabilities in the fields of proposal writing, project management, communication, and of course expertise in different environmental subjects. One telling illustration can be quoted from my own direct experience. In the early 1990s, I was involved with a very active group of young people in Krakow, Poland, who mobilised people to participate in environmental action. The members of this lively and motivated group would meet in the evenings in the cellar bars in the centre of Krakow. After four years of support, I visited the office that they had established in Krakow and found my Polish partners working on project proposals, sitting behind computers, having meetings about organisational structure, and formulating goals and activities. The movement had become professional, and although people were still very motivated, along the way something of the happy, early times had been lost.
Stage 3: Professionalisation and connection
When organisations acquire office space, run projects and gain visibility in their country, they often start to connect with other, similar organisations — at least if they can get along. Sometimes environmental movements make no such connections, and organisations fight with or ignore one another. However, where there is networking, organisations can be effective in lobbying national governments. In Poland, the Czech Republic and Hungary, and more recently in South Eastern Europe, there are excellent examples of this kind of development. Lobbying at the national level also means connecting with other parties outside the movement, such as authorities, trade unions, the agricultural and industrial sectors and others that affect the environment. In this way, organisations really start to become part of the structures that control or exert power, and this is the stage of networking and participation.

Stage 4: A sustainable civil society
The final stage is a sustainable and visible civil society that has strong financial independence. In the Netherlands, we believed for a long time that the movement was sustainable and strong — an example for others. In 2010, however, almost all the organisations had to downsize by between 30 and 60 percent because of severe budget cuts from the government. Some, like De Kleine Aarde, even had to close down entirely. This illustrates their strong dependence on government funding, and their subsequent vulnerability. Greenpeace is one of the few organisations that has always refused to work with government funding, and has successfully avoided doing so.

Different types of networks
Countries may have several umbrella organisations that connect local groups. Such organisations may network on particular issues (e.g. climate change); for regional cooperation (e.g. Milieu federaties in the Netherlands; or the Polish Green Network); or within a particular structure (e.g. Mama 86 in Ukraine; Ekolevizja Albania; or FoE Europe). Some organisations and individuals may operate alone in their country but connect with partners in other countries. The strongest networks are organised at different, connected levels. There are grass-roots community-based organisations, regional support structures and national committees, platforms, umbrella organisations, and international organisations with partners in many countries (e.g. EEB, Transport and Environment, Bankwatch). There are many topics around which connections can be formed, such as gender and environment (Women in Europe for a Common Future), development and environment (Both Ends), climate change, energy, and sustainable lifestyles.
The specifics of network organisations

What all these networks for environment and nature have in common is that they link many players through many points of connection. The distinctive feature of networks, however, lies in the autonomy of the actors and the reciprocity of the connections.

Members of a network are autonomous and can thus decide for themselves whether or not they want to be part of the network. For both the individual members and the network, the relationship should be meaningful and valuable. This can be achieved if there is a strong common mission, if relevant information is exchanged, or if the network has a representative function or common financial interest.

Besides a common mission, there is always what Ronald Dore (1983) has described as a spirit of goodwill. This spirit evolves over the years between the partners in a network and creates an atmosphere that engages people and that makes it much less likely that they will leave in the event of a conflict. Partners in a network develop an enduring relationship. In his novel *The Bonfire of the Vanities*, Tom Wolfe speaks of the “bank of reciprocal services”. Something you do for someone else amasses credit in the bank. If different parties together accumulate such credits or debts, these are also a form of connection within the network. Meaningful relationships are essential if a network is to last.

Networks in the Internet age

The Internet has given existing networks new communication possibilities, and has also created many new types of network. In fact, the network model has been redefined by the emergence of the Internet. Social networking no longer refers to family and friends, but to Facebook. Professional networking now means LinkedIn rather than gatherings at the chamber of commerce. Numbers are far greater than in the pre-Internet era, and connectedness is 24 hours a day, seven days a week. Internet networks can fully develop as virtual platforms where millions of users share knowledge. In the real world, this can create movements in the form of swarms or flash mobs. Flash mobs are ‘spontaneous’ meetings that take place in response to an invitation or announcement through social media. It may be a group of people who suddenly begin to dance or sing in the street, a massive picnic, or a Project X festival. These new Internet-based phenomena are often clusters without a fixed core or centre. There are only units and connections. They are useful for quick communication but very much harder to manage than traditional networks.
Swarms
In the Netherlands, a storm of protest arose shortly after the inauguration of the new government in 2012. The government had proposed to increase health insurance premiums for those on higher incomes. Through twitter and other media, protests swelled in just a few days and the plan quickly had to be withdrawn and an apology issued by the prime minister. This was a clear incidence of a swarm.

Spontaneous or organised swarms can be powerful, and their power is difficult to control as they move unpredictably. They may die out within a short time or veer off in another direction. Governments and institutions are unprepared for dealing with swarms and their response is often one of panic.

Network organisations
There is a difference between networks and network organisations. At one end of the spectrum is the informal network, or swarm, which is a loose association of friends, neighbours or acquaintances that occasionally organise something spontaneously. At the other end is the highly organised network, such as a franchise of companies or a school network. Such network organisations often have a mission; a support or even lead organisation in the form of an association, foundation or holding; formal decision-making procedures; and a membership protocol. They differ from traditional organisations in the sense that the participants are autonomous in their own fields and only part of that autonomy is ceded to the network (management).

In the case of all countries and all networks, questions eventually arise about membership, representation, organisation and communication. These questions often lead to emotional discussions about the required level of network organisation, procedures for voting, and representation and membership. Organisations wanting to be part of a network can only be rejected on the basis of specific criteria, and representation will require procedures and protocols. Establishing such policies requires tactful leadership: the process involves deeply held values such as democracy, trust and consensus on the one hand, and the acquisition and maintenance of power on the other. Discussions tend to get personal and may fall back on lasting conflicts and negative experiences.

On the other hand, it is an asset if a network can speak with one voice and be visible to and understandable by the authorities, the public, the media and other stakeholders. Some possible ways to avoid conflicts are described below.

- Develop a clear mission for the network: It might, for example, comprise organisations and individuals that work together for a sustainable society, respecting nature, the environment and social justice, without the use of violence and with respect for democracy. All members should subscribe to the mission of the network, and their individual missions must not contradict it.
• Identity content representatives: If the network develops common positions on topics such as transport, energy or waste, those members with a deep knowledge of these areas will naturally emerge as spokespersons. Their responsibility is to make others proud of being part of the network.

• Have a network secretariat: Those who are good at organising and have excellent communication skills should undertake to disseminate information, organise meetings and provide communication tools for the network. Again, their responsibility is to make membership of the network attractive.

• Ensure neutral facilitators: At national strategy meetings or forums, the role of facilitator is to give all participants an equal opportunity to present their opinions, whether they are representing one organisation or several.

• Have clear voting and decision-making procedures: These need to be explained to participants before the meeting, and their approval obtained. The procedures then need to be followed precisely during the meeting.

• Have concise criteria for membership: These should be kept short in order to avoid complicated procedures. Limiting the network to non-violent, non-commercial, non-governmental, non-religious organisations with sustainability, nature or the environment in their mission will exclude most undesired organisations.

• Develop levels of membership: Members might be subscribers to the network magazine, financial supporters, civil society organisations, and voting and non-voting members. There are many ways to attract members to an organised network without losing sight of its mission.

• Keep the network attractive: This should be the responsibility for all members of the network, but a network also needs ‘champions’ — that is, people who put energy into communication and the mobilisation of members and supporters.

• Do not be afraid of diversity: Differences of opinion on strategy, methods or activities may be one of the strengths of the network. In the case of dispute, it is important to try to build consensus, but if this cannot be achieved, members can agree to disagree and respect one another’s intentions. Contradictory actions should be avoided: it is never good if one member negotiates while the other adopts a destructive, confrontational strategy. This may lead to the exclusion of one of the network members, for which a set procedure is also required.

• Develop supporting instruments: These might include national strategy meetings, a portal or website, or a platform for discussion.
Benefits of network organisations

Networks are based on the reciprocal exchange of information. This is an ideal learning situation. In principle, information can be distributed from each part of the network to every other part. Members can share information, process it, and learn from one another’s experiences.

However, the various possibilities for learning and sharing information can create a flow of information that is beyond control. Calls for the creation of project databases are often, in fact, a cry to structure the overloaded information flow.

Being part of a network can also give an organisation legitimacy and status. Local organisations that are part of a national or international network can exploit this in their communications with the local authorities.

There can be financial benefits for networks that share services and/or capacities. A specialist may be too expensive for one organisation alone, but affordable for a group of six organisations. Sometimes a specialist can be found within the network for a more moderate price than would have to be paid for an external expert. Groups of environmental organisations can also jointly fund a national lobbying facility. Of course, there are also costs involved in maintaining a network, and networks can apply for funding — for example from DG Environment. The European Union also annually funds a number of European networks, such as the EEB and Bankwatch.

Bigger, richer members of a network can support smaller organisations and provide financial security for them. This happens, for example, in the case of Green Cross International and the International Union for Conservation of Nature (IUCN). At the same time, the stronger organisations can base their fundraising on the extensive presence of the network, including its smaller, weaker members.

While an individual or small organisation usually has a limited impact on the environment, local-level activities can contribute to national and international impacts if the organisation is part of a network. A network can also provide a safety net. Human rights organisations in many countries benefit greatly from their international connections.

Changing society, new approaches

With the rapid advances in communication means and technologies, our constant connectedness has transformed society from a ‘solid’ to a more ‘fluid’ form. While foundations and associations once represented the cement of society, temporary connections, networks, communities and collectives are increasingly taking over that role.

Traditional organisations tend to be hierarchical and professional: they are based
on legal rules and agreements and have a support structure for members and/or affiliated organisations. By contrast, networks and communities are often spontaneous and voluntary. They are based on shared values and in many cases have a shorter lifespan. Social media have reinforced this development pattern and made it even more volatile, as the earlier example of swarms illustrated. These structures are more fluid and therefore more flexible, but also less tangible. Although easy to set in motion, they are unpredictable and difficult to control. It is hard to respond to such initiatives and developments via traditional social structures, thus some suggestions are given below of how to move away from old patterns and achieve a paradigm shift:

- From broadcasting to following (Follow)
- From support to participation (Fuse)
- From coordination to connection (Forge)
- From convincing to feeding (Feed)

**From broadcasting to following**

Using traditional media — press, radio and television — environmental organisations would, in the past, develop campaigns in which their message was packaged and disseminated to a particular target group. However, these traditional campaigns, for example against smoking or to promote healthy food or public transport, no longer fit the dynamics of society. Rather than communication from a single sender to a target group of receivers, the Internet allows communication from many to many. The target is no longer defined, while at the same time individual consumers, students, activists and supporters have themselves become broadcasters, simultaneously developing their own ‘campaigns’ in the form of tweets, posts, clips and blogs.

In order to be influential, it is important to listen to what is happening in society. In his 2010 guide *The Network is Your Customer*, David Rogers recommends five strategies for the network society:

- Be accessible: Be fast, easy to find, everywhere and always on
- Engage: Involve the receiver, be a source of valuable content
- Customise: Allow for adaptability, give receivers space to customise your message at their discretion
- Connect: Be part of the information exchange in the receivers’ networks
- Collaborate: Work with the receiver, involve them at every stage of your activity
In these strategies, it is the receivers who decide for themselves when they take information, what they do with it, and with whom it is shared. Social media have imposed new patterns: in order to communicate successfully, it is vital to follow what is happening, to know who people are listening to, and to be aware of the movements already taking place. The Web has created ‘glocalisation’, an ‘energetic society’ materialised in the form of food collectives, neighbourhood associations, sustainable villages, open studios, art trails, ‘hopping dinners’ and a vast number of other civic initiatives.

From support to participation
There are basically two starting points from which networks are formed. Firstly, there are organisations and individuals active and connected in their own neighbourhood or village, who then also find one another through the Internet (amnesty groups, churches, environmental or rural development networks). Secondly, there are networks that start on the Internet and only later connect in real life (LinkedIn discussion groups, Facebook groups, platforms). In most cases, both types eventually form a mixture of a virtual and ‘real’ network. Joseph Pine and Kim Korn call this a “third space” (2011), which is created when the real and virtual merge in such a way that a totally new experience is created. The Dutch initiative Seats2meet is one example. When visitors book deskspace at one of the initiative’s locations, they also list their qualities, or social capital, on the website. When they turn up at the location to work and have a free lunch, they are expected to be open to encounters with other visitors. People may use Seats2meet specifically because they see someone on the website with social capital that is of interest to them.

Organisations that belong to existing networks often have a ‘group employee’, ‘network official’, trainer, coach or development worker. Their tasks in the organisation include providing support to the network by attending meetings and forging connections with experts. While they may travel to network in person, smartphones and tablets also allow them to be permanently visible in the virtual world. This virtual presence is essential: organisations need to be active and accessible in the energetic society if they want to have any influence.

From coordination to connection
Social innovators are often strong individualists who like to set their own course. However, a top-down approach to the coordination of activities can often lead to dependency and to the transferring of responsibilities. Since coordinators are generally professionals who know the subject and who have points of entry into official and administrative circles, it is tempting for people to offload their own responsibil-
ities onto them. The result is that civil initiatives lose their independence and momentum by committing to a larger whole that, even with the best of intentions, ends up determining their course.

People can also forge connections by moving between different groups that have similar activities or ambitions. Rogers (1981) refers to such people as “linking pins”. Initiatives and communities often experience the need for expertise from outside and the desire to be part of a greater whole and share their successes with others. In these cases, linking pins can provide an appropriate solution. The difference between a linking pin and a traditional coordinator is that linking pins intervene in response to a request, while coordinators tend to impose initiatives of their own.

From convincing to feeding

The position and status of the expert has been challenged by the massive expansion in the amount of available information. Video instructions for almost everything, from peeling a banana to building a tractor, can now be found on the Internet. Simply type a question into a search engine, and you will receive 20,000 answers in a matter of seconds. Experts can no longer count on substantial hourly rates for providing knowledge, as that knowledge is offered on the Web for free.

However, we now have to deal with an overload of information. In a few years, people will have more information available on their smartphone than they can process during their entire lifetime. In order to find the right information, search engines are indispensable. But if someone wants to buy a solar panel, for example, no search engine will be adequate. It will still not be possible to assess the quality of the product and its suppliers. Barry Schwartz (2003) describes this as the paradox of choice. With an infinite number of possibilities, it is impossible to know what to choose. If there are 8 million song tracks available for free, how does someone know which to select? This is the ‘stress of choice’. In the solar panel example, what is needed is a trustworthy person to give advice on the pros and cons of the available offers, according to the five principles mentioned above (Rogers 2010). This inevitably requires personal contacts to make sense of globally available information. The new role of the expert is to supply knowledge and guidance at the request of responsible citizens, ensuring that global communication and information are relevant rather than viral.

The new community supporter

As discussed above, in today’s world of ‘freeconomics’ many of the services we used to pay for, including expertise, are now available free of charge. Some services, such
as coordination imposed from above, may be unnecessary or undesirable. However, there is a need for those who can identify connections and provide guidance through the endless jungle of information. Governments and companies will be willing to pay for those who have the confidence of large communities. These ‘community supporters’ show up in traditional forums such as meetings, the media and personal encounters. The difference is that through smartphones, tablets and laptops they develop a similar position in the virtual world, actively appearing on social networking sites such as Facebook, Twitter, Tumblr, Instagram and WhatsApp. Such employees do not have a nine to five mentality, their office is their tablet, and their archives a cloud. Although building trust takes months, if not years, ultimately those who are able to forge connections with groups and citizens in the energetic society will be able to provide a valuable and well-paid service.

The innovator

Click on www.ted.com, and it will be immediately clear that inspiring innovators come in all shapes and sizes. Many of the presentations on the TED site convince not by argument but by inspiration. In the energetic society, those wanting to spread innovative ideas must take the following aspects into account.

COMMUNICATION IS PERSONAL

People, rather than organisations, are inspiring. Angelina Jolie made a big impact by publicly announcing her mastectomy and created a lot of media attention for the issue of breast cancer. In politics, the importance of individuals in disseminating political ideas has long been recognised. Many social organisations adhere so strongly to the content or purpose for which they were created that they are reluctant to engage at the personal level. However, people in the energetic society communicate at the personal level: they are used to exchanges with ‘friends’ and connections.

NOTHING NEW

Society seems to be exploding with ideas. How many times do people think they have come up with a new idea, only to find, after a bit of Web browsing, that the idea has been developed, and frequently improved on, thousands of times already? Nevertheless, many people will still not have encountered this idea, which may be usefully adapted to specific local circumstances or personal preferences. This, after all, has always been the case. Inventions such as printing and gunpowder, for example, cannot be attributed exclusively to one place or time. Existing ideas can be combined with new insights, or given a makeover so they appear new. The concept of the circular economy that has become so popular today looks suspiciously like one that emerged...
in the 1970s; while ‘designing with nature’ is an engineering and business model that shares fundamental similarities with the hippies’ ‘back to nature’ movement.

**PROTOTYPE SELLS**
A good example creates followers, as the saying goes. People are convinced by seeing something that works. In one TED presentation, for example, a farmer is shown driving a tractor that he built by himself using instructions obtained via the Internet, inevitably inspiring confidence among viewers. Practising what you preach conveys impressions of reliability and credibility.

**PACKAGING AS AN ADDED VALUE**
Personality and a good idea are not the whole story. Ideas have to be expressed clearly, preferably in a lecture lasting 15 minutes that features interesting examples. Adding attractive illustrations and concrete examples or prototypes will win the attention of consumers.

**COMBINE COMMUNICATION CHANNELS**
Ideas should be conveyed using all possible media. Catchy or intriguing titles (Easycratie, or The Serendipity Machine) will help attract attention. The idea will then need to be presented on the lecture circuit, radio, television, website, Facebook page and video clips.

These are all ways in which ideas can easily be disseminated, widely and without much cost. Dissemination can be rapid. If an idea is sent to 500 Facebook friends, 500 or so connections on LinkedIn and 800 Twitter followers, and if just 5 percent of them do the same, then more than 200,000 people will receive the message.

**The countervailing power**
In the energetic society, values are still threatened. Plastics are posing a threat to the ocean; nature reserves are sold to individuals because there is no more money for management; new pesticides are constantly appearing on the market; drugs are contaminating surface water; and there is no way of knowing what is in the food we eat. How can appropriate responses be developed in the energetic society? On the one hand, power bases can rapidly be built through social media. On the other hand, it is difficult to control a swarm and prevent it from turning against you. The plastic soup in the ocean is one example of very rapid global agenda setting.

The plastic soup was predicted in 1988 by the US National Oceanic and Atmospheric Administration (NOAA). Captain Charles Moore discovered an actual plastic archipelago in the 1990s and scientific studies have been written about it since 2000.
In the Netherlands, the Plastic Soup Foundation (www.plasticsoupfoundation.nl) was founded in 2011 by Maria Westerbos, an expert in mass communication. In the space of just two years she has succeeded in attracting attention to the subject, in the hope of identifying a solution to the global problem. One recent success is the voluntary ban on microplastics in cosmetics, including the Dutch chain Kruidvat. According to Kees Neighbour of Kruidvat and Trekpleister: “Following the campaign ‘Beat the Microbead’, run by the Plastic Soup Foundation, we decided to remove microplastics from our own brand. We will do this before January 1, 2014, and we are also in talks with our A-brand suppliers about their policies regarding sustainability. We will continue to actively implement these discussions in the coming years. Removal of microplastics will be part of it.”

The most recent successful intervention was to stop the launching of 150,000 balloons during the coronation of the Dutch king, William Alexander, on April 30, 2013, as the result of rapid media action on the part of nature and environmental organisations, along with many concerned citizens. These cases show just how much is possible, and in a short time. It is interesting to explore when such rapid actions work and when they do not. Will similar strategies also work if the habitat of a threatened amphibian is under threat, or less strict rules for ammonia emissions are announced? The answer will only be found by trying.

The future of civil society networks: Communities

Networks have provided a response to the democratic development of society over the past 60 years. Now, with the emergence of so-called independent citizens and volatile structures, a new form of connection is needed.

Members of existing networks in the fields of environment and nature generally communicate at either organisation or mass media level, while communication in modern society takes place at the personal level.

Networks operate by disseminating information rather than by listening to what is really happening in society. The websites of most networks provide a lot of information but very little opportunity for interaction. In modern society, however, content is less important than traffic on the website.

Many civil initiatives are emerging outside the sphere of current networks in the fields of environment and nature. Citizens might, for example, launch their own energy-producing company, local nature protection agency or food-production facility. They do not want to be controlled, or even bothered, by so-called professional organisations on nature and environment. Volatile structures generate more and more power, compared to established structures. A swarm can bring about
more change in a week than a lobby can do in years.

This is not to say that networks should be abolished. Formal structures can still play a role in the organisation of society. However, their role will be more and more in the background. Networks and organisations on nature and environment can adapt to modern society through the kind of strategies described in the previous section. Online/offline communities are an interesting tool for implementing these strategies. Communities are created by members who communicate at the personal level. The combination of online and offline can create new dynamics, a third space, in relationships among citizens and other stakeholders.

The word ‘community’ (from the Latin noun *communitas*) has many meanings, and many associations for different users. A community is a group of people with common characteristics or interests, sharing a common history, or living in the same area. The Middle English word *comunete* was used for people living in the same village or city. In Old English, the word *gemeenscape*, which closely resembles the Dutch *gemeenschap* and the German *Gemeinschaft*, refers to something done together, including living, working, developing, sharing and learning. But community also has a very positive association, according to what the participants themselves contribute: “A community is a group of people (or animals) in the same environment with a form of interaction. It is not the group that determines the community but the interaction and the feeling to be part of that results from it. This feeling is generated by a specific type of economy: the social economy” (Bacon 2013).

This takes us back to our romantic view of the first activists, the Barbizon school of painters and the crew of the Greenpeace. They were not in it for the money, but for the shared experience, the mission and the desire to protect what was valuable.

Following the community developers in the US in the 1960s came the open source communities on the Internet, when businesses also discovered the power of communities. A community built around a product or lifestyle can strengthen customer loyalty. Customers might start a community because they love a product: the Coca Cola Facebook page has more than 74 million likes. Companies build communities to strengthen their market position and eventually make money. This does not mean they are of no value to the participants. If this were the case, they would never be vibrant communities.

When community workers, marketing managers, development workers and computer programmers talk about their work within communities, confusion is likely to occur. One will be talking about work in a community centre, another about customers, the third about a village project in Tanzania, and the fourth of his friends on the Internet. Paradoxically, the different worlds share strong similarities.
Offline communities

In the Internet age, we distinguish between offline and online communities. An offline community refers to regular, personal contacts between members. It generally exists at the level of neighbourhood or district, association, church, or other context in which people do things together. Connectedness, shared values, voluntary participation and social capital are the basic elements. A company or professional organisation cannot, strictly speaking, form a community. But who would not want to work for a company in which employees, management and customers feel strongly connected, where social capital is valued, and where shared values form the basis for cooperation? It would be nice if such an image were the goal of the management. One good example is the Brazilian company Semco, which operates very successfully according to such a philosophy. The owner, Ricardo Semler, allocates responsibility to the lowest possible level and strives for maximum transparency, with employees’ salaries, for example, being visible to everyone (Semler 2013).

In conclusion, the family, tribe or village community had many traditional qualities that have been lost over time due to expansion and urbanisation. Current development trends can in some way be regarded as a search for these old values. Offline communities resemble the first grass-roots organisations working in the fields of environment and nature, with face-to-face communication, shared values and dynamic interactions among members.

Online communities

On August 25, 1991, the Finnish student Linus Tovalds placed a post in a Usenet group, asking for feedback on an operating system that he had developed. It attracted spontaneous cooperation from thousands of programmers around the world, and as a result of that one post the Linux operating system developed. The Linux community is one of the millions of communities running on the Internet, and perhaps the most successful. Another popular and lively Internet community is www.mumsnet.co.uk, which has around 5 million visitors per month! However, there are currently millions of self-proclaimed online communities, most of which are not much more than a website to which users can log in and post a message on a forum. In many cases, the latest post date is months ago. In other words, there are very few online communities that actually form a collectivity.

The ‘third space’

The Internet has made it possible to develop communities in which members do not live closely together. However, this does not mean that local communities cannot also use the Internet to strengthen their communication on the protection of local
natural values, historic sites and traditions, for sharing tools, cars and garden produce, or for disseminating local news.

By developing online communities, organisations for the environment and nature can return to their roots — that is, grass-roots, community-based organisations — but at the same time enjoy the benefits of a new tool that provides space for discussion and information sharing 24 hours a day. Surprisingly, there are not many such communities with active content connected to nature and the environment. Greenpeace has a blog page that attracts some traffic (www.greenpeace.org/-international/en/news/Blogs/), and WWF has a similar, is less lively, page: (blogs.panda.org/). Most networks have a Facebook page with rather slow traffic.

‘Third space’ is a term coined by Joseph Pine and Kim Korn (2011). It occurs when, via digital technology, the real and the virtual merge in such a way that a totally new experience is created. If a neighbourhood and a community events Facebook group interact and reinforce each other, it creates a third space. Online communities at times feel the need to organise meetings, conventions or events, as online communication lacks the aspect of body language, which is such an important part of communication. When community participants meet in person, it is easier for them to feel that they really are part of something bigger.

Private, grass-roots and business communities

Many people have their own (private) community, comprising Facebook friends, LinkedIn connections or Twitter followers. But these are only really communities if there is regular networking contact. Groups of friends, communities of neighbours, citizens initiatives, community enterprises and local organisations are all grass-roots communities. Global special-interest communities of gamers and hobbyists, travellers, parents and others also fall under this category. And as we have discussed, companies build business communities to build their customer loyalty and ultimately generate more sales.

It is also possible to distinguish common interests that bind communities. Thus there are communities of place around a particular region or neighbourhood. Or the binding element might be a profession or interest, giving rise to communities of practice such as lawyers, teachers or cyclists. Communities of action try to change society, and communities of circumstance are based on the situation in which participants find themselves, including illness, poverty or parenting.

Why communities fail

When Linus Tovalds placed his post he had no intention of starting a community. He simply wanted feedback on his product. The Linux community grew naturally, with a strong anarchist and anti-authoritarian character in opposition to the multinational
Microsoft. However, there was soon a need for processes and structures to protect the software from being rewritten by others. This required agreement and coordination, as described above in the section “From grass-roots organisations to international networks”. Nowadays we talk about community management as a regular concept. The spontaneity and more-or-less anarchic, organic nature of online communities has given way to some form of organisation and management, since experience has shown that a community without maintenance is short lived. Behind every successful community there are facilitators who are fully committed to its success. According to Connor (2009), communities fail if nobody cares about maintenance, if the community is neglected and taken for granted, and if the stamina needed for success is underestimated.

Communities should provide a space where participants feel respected and valued and where they have an opportunity to contribute. In a volunteer organisation, as many civil society organisations are, volunteers can vote with their feet. If people see no value in belonging, or if they feel frustrated, they simply leave. This means big demands on facilitators and on community management as a profession that requires a variety of skills.

This may explain why networks on the environment and nature have not developed very active communities to date. It is a costly business to have staff taking care of content, traffic and community processes around the clock. For professional organisations, communities can be expensive. The necessary software costs less than USD 300, and if an organisation launches a community as a volunteer project it can be a great asset.

Mission, participants, communication and process

A community stands or falls depending on the design and management of the relationship between mission, participants, communication (resources) and process. The mission articulates the rationale of why participants join the community and what they want to contribute. The participants determine the intensity and quality of interaction and the development of values. The communication channels and resources determine the speed and efficiency of communication. Formal (e.g. membership) processes are essential, but when the atmosphere in a community becomes authoritarian and coercive, and when it lacks transparency, it will not survive for long. These four elements should be the responsibility of the moderators supported by a core group of key members.

Be careful with the notion ...

Community is a beautiful word. Because it is used, and abused, by so many, it has apparently suffered the same fate as words such as sustainability or authenticity.
Words that are so bandied about risk becoming clichés. According to Bacon: “The word community always evokes a positive mental image. It alludes to togetherness, compassion and equality. As such, the word has been the target of hype and hot air…”

Marketing strategists, charities, smart entrepreneurs and governments can develop so-called communities and can do with them whatever they want. Nevertheless, it is important to remain focused on the goal: that of achieving something together that individuals could never achieve on their own, and in such a way that a valuable sense of belonging is created for all participants.

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References
CHAPTER 2

The Convention on International Trade in Endangered Species of Wild Fauna and Flora

BY IGOR JEVtic
Introduction
The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) regulates trade in over 33,000 species of animals and plants. The species concerned are all listed in the three appendices to the convention. Wild species of animals and plants, as well as their parts and derivatives, are classified according to specific categories that are subject to different transport and trade control measures. Each type of import, export, re-export and entry of large numbers of species covered by CITES must be approved via a system of grants and permit controls. Each country that is a party to the convention must designate one or more administrative authority to manage the granting of permits, and one or more scientific and expert authority to provide advice and opinions on the consequences to a given species in the course of trade.

CITES in Bosnia and Herzegovina
Bosnia and Herzegovina ratified CITES on December 5, 2008 (Official Gazette of BiH, No. 11/08), becoming the 175th party to the convention, and has therefore been obliged to develop a structure for the implementation of CITES in Bosnia and Herzegovina. This has meant devoting time, financial and human resources, equipment and training to CITES implementation in order to be able to issue CITES permits for imports, exports and the general transportation of endangered species according to the established procedures and in the manner prescribed by the convention.

Activities are currently being carried out in Bosnia and Herzegovina aimed at establishing further structures for CITES implementation. The Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina has prepared the Draft Decision on the Conditions and Methods for the Implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in Bosnia and Herzegovina. The objective is to designate institutions at state and entity level and in Brcko District of Bosnia and Herzegovina for the implementation of the convention.

The draft decision defines the methods for issuing permits for trade in endangered wild fauna and flora, their parts and derivatives, as well as dead specimens and all species included in the CITES appendices. The format of the CITES permit for Bosnia and Herzegovina has also been decided.

CITES in the future
The next step is for all levels of government in Bosnia and Herzegovina to agree on a structure for the implementation of the convention — that is, which institutions will
be appointed as competent administrative authorities, expert organisations, supervisory bodies etc. — and for the relevant institutions involved in the process to make the official appointments.

Another important activity that must be implemented as soon as possible is the harmonisation of the existing legislation in Bosnia and Herzegovina with the requirements of CITES, and/or the preparation and adoption of legislation required to implement the convention and EU directives in this field.

On May 13, 2013, the Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina forwarded the draft decision to the relevant entity and state ministries, with a request for their opinion.

The enforcement and implementation of CITES in Bosnia and Herzegovina do not depend solely on the Ministry of Foreign Trade and Economic Relations. To a large extent, they also depend on the governments of both entities, since nature protection, and environmental protection in general, are governed by legislation at entity level. Thus prior to the adoption by the Council of Ministers of Bosnia and Herzegovina, the decision must be approved and adopted by the governments of both entities.

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CHAPTER 3

Environmental Crime and Forest Damage in the Former Yugoslav Republic of Macedonia

BY MARINA MALIS SAZDOVSKA
Introduction

The criminal act of forest damage (Article 226 of the Criminal Code of the former Yugoslav Republic of Macedonia)\(^1\) includes the conduct of persons contrary to regulations or to the orders of the competent authorities. It includes cutting or trimming trees, bark stripping, or otherwise causing damage to forests, and is punishable by a fine or a prison sentence of up to three years. If any such acts are committed in a protected forest, national park, or other forest designated for special use, offenders will receive a prison sentence of between three months and three years.

Forests are part of the common good and are natural values that benefit from special treatment and protection. As part of the common good, forests and forest land must be maintained, restored and used in such a way that preserves their value, and they must be managed economically and expeditiously. The prevention of forest fires is an essential contribution to environmental protection and improvement.

‘Forest damage’ includes uprooting trees, felling trees, planting forests without forest fire planning, causing forest fires, illegal logging, bark stripping, destroying or damaging forest plants, clearing land in such a way that causes land erosion by water or wind, trimming trees, harvesting growing leaves from branches, and other activities that weaken forests’ useful functions or threaten their survival.\(^2\)

Forest damage in the former Yugoslav Republic of Macedonia is typically the result of the extremely unfavourable material conditions of Macedonian citizens. Because of their very low purchasing power, many citizens obtain firewood for their own needs as a result of illegal logging, as wood supplied on the black market is far cheaper than legally purchased wood.\(^3\)

In the majority of cases, it is people without any other source of income who turn to illegal logging and illegal trading in timber and wood pulp in order to make a living for themselves and provide support for their families. They are reliant on the significant illegal profits to be obtained by these criminal acts, which are therefore motivated by poverty and unemployment.\(^4\)

Forest damage is an increasing trend worldwide. The world’s forested area declined by about 2.4 percent in the 1990s, a loss of around 90,000km\(^2\) per year.\(^5\)

Table 1 shows a significantly increasing trend in illegal logging in Macedonian

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<td>Illegally harvested timber (m(^3))</td>
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forests. In 2010, a total of 11,557 m³ of wood mass was harvested illegally, while the figure for 2011 is 25,189 m³, an increase of over 100 percent in just one year.

Illegal logging in wild forests takes place throughout the country, and according to the Forestry Police it is most common in the cities of Skopje, Kicevo, Struga, Demir Hisar, Prilep, Bitola, Berovo, Strumica and Stip. According to some experts, the country faces annual losses of around EUR 10 million as a result of illegal logging.

According to some indicators, the extent of illegal logging is changing in certain areas. Of the 11,557 m³ of illegally harvested wood mass in 2010, a total of 5,552 m³ (around 50 percent of the total amount) were harvested in the Skopje region. Out of the 25,189 m³ of illegally harvested wood mass in 2012, a total of 7,153 m³ were harvested in the Skopje region, and 6,800 m³ in the northeastern region.

The increase in illegal logging is also evident from the statistics related to the work of the Forestry Police: in 2010, a total of 2,456 civil charges and 204 criminal charges were filed; in 2011 a total of 2,056 civil charges and 183 criminal charges; and in the first 10 months of 2013, a total of 1,488 civil charges and 192 criminal charges.

After 2000, illegal logging became more widespread in parts of the country affected by the war, which were not adequately controlled by the Forestry Police, although it has now spread to other parts of the country. The work of the Forestry Police is made more difficult due to the violence of the perpetrators of forest crime. Those carrying out criminal acts have even attacked members of the Forestry Police with some of the equipment used for illegal logging activities, including vehicles and chain saws, forcing the Forestry Police to take joint action with the Ministry of Internal Affairs. There have been many cases of severe injury, and some members of the Forestry Police have even been killed.

In a typical scenario, when officers from the Forestry Police arrive at the scene of the crime, offenders will overturn vehicles and caravans to prevent them from being seized and then escape from the scene. Some offenders keep dogs with them to warn of people approaching. If caught at the scene, offenders may attack Forestry Police officers with stones or chain saws.

Forest damage and organised crime

In the former Yugoslav Republic of Macedonia, there is clear evidence of the existence of organised groups of criminals involved in forest crimes, motivated by the profits to be obtained and confirmed by the murders of forest guards.

According to the 2001 UN Convention on Transnational Organised Crime, the illegal trade of flora and fauna is defined as organised crime.

Organised environmental crime is typically considered according to three types
of criminal activity: the depletion of scarce environmental resources; the destruction or degradation of the environment; and damaging or threatening to damage the environment for political purposes. We are currently seeing the increasing globalisation of environmental crime, with the penetration of organised crime at all possible levels and in all areas of the environment. Among the most challenging forms are the illegal disposal of waste, including the rise of ‘trash for cash’ schemes in the Third World as well as the illegal disposal of hazardous waste, including electronic waste, radioactive waste and other types of hazardous waste; the trafficking of endangered species and materials; and environmental terrorism.¹³ To these must be added forest damage, which can be regarded as a serious aspect of environmental organised crime.

There are various definitions of organised crime, although according to the forms of organised crime set out in Article 2 of the Europol Convention, it can be considered that this criminal act in the former Yugoslav Republic of Macedonia can be regarded as organised crime. The annex referred to in Article 2 lists other types of criminal behaviour that also share features of organised crime, including various types of illegal trade and harm to the environment.

Organised criminal groups in the country who inflict damage on forests therefore meet the requirements: they are organised groups, with each person in the group having their own defined tasks; they act within a defined territory and a defined time; they have a leader and rules of behaviour; their action is international in character; they are armed; and they obtain profits via the sale of illegally harvested wood mass.¹⁴ The only aspect that is not in keeping with its classification as organised crime is the amount of the related fine.

**International cooperation to reduce environmental crime**

Environmental crimes can only be successfully tackled with international police cooperation. With the currently high levels of technical and technological development, new types of crime are becoming prevalent and organised crime is rising. Today, criminal activities in general are less often contained within a single state. The perpetrators of crimes tend to be mobile: crimes are being committed by groups of perpetrators from various countries, and the consequences of such crimes are affecting more and more countries.

Environmental crime is no exception. Tackling its widespread, international manifestations requires international cooperation. As the police authorities are responsible for fighting all kinds of crime, including environmental crimes, international police cooperation is essential.¹⁵ International police cooperation in the
former Yugoslav Republic of Macedonia includes several projects, such as the EU project for establishing the International Coordination Unit for competent bodies responsible for implementing legislation to improve cooperation in the work of the police. The primary goals are harmonisation with existing cooperation mechanisms and European standards and legislation, the collection of best practices from EU member states, and harmonisation with relevant international regulations and standards. The project covers the former Yugoslav Republic of Macedonia, Serbia, Bosnia and Herzegovina, Albania, Croatia and Montenegro, and national contact points were established in all six countries.16

The project was initiated by Europol and INTERPOL and is expected to improve the concept of international policing by:

- improving the international exchange of information during international investigations;
- facilitating cooperation among national contact points at operational level;
- improving human rights; and
- strengthening the protection of personal data.

In the framework of the project, the former Yugoslav Republic of Macedonia has organised and participated at conferences and workshops, established working groups, prepared an action plan for implementation, and signed a memorandum on cooperation. This and other projects will greatly improve cooperation in the region for the effective fight against all forms of crime.17

International police cooperation is also foreseen in different pieces of legislation. The Law on Border Control envisages various forms of international police cooperation, cooperation with foreign police officers, cooperation with foreign security bodies, and the appointment of officers as contact points.18

One of the latest developments regarding police cooperation in the region is the South East Europe Police Chiefs Association (SEPCA), which held its General Assembly in Skopje on April 14–16, 2011, chaired by the director of the Macedonian Bureau for Public Security. Besides chiefs of police from Albania, Austria, Bosnia and Herzegovina, Bulgaria, Italy and Turkey, the General Assembly was also attended by representatives from international associations such as Europol, INTERPOL, the American FBI, the Southeast European Cooperative Initiative (SECI Center), the Migration, Asylum, Refugees Regional Initiative (MARRI), the Organization for Security and Co-operation in Europe (OSCE), the Democratic Centre for the Control of Armed Forces (DCAF) and others.

The objective of the SEPCA is to ensure security in the region, strengthen the
democratic police service, and fight against all forms of organised crime, promoting cooperation, closer relationships between national police forces, and the exchange of information. As a result of enhanced police cooperation in the region, more than 300 persons have been arrested in less than a year, mainly in connection with the illegal trafficking of narcotics and weapons, and racketeering.

The fight against organised crime is one of the priorities of SEPCA, and the plan is to develop a criminal intelligence network among SEPCA members and other police officers in the region, also paying attention to gender balance to address the fact that only small numbers of women are currently employed by police agencies.\(^{19}\)

As 71 percent of environmental crime in the EU can be classified as transboundary crime, tackling it successfully requires cooperation with international organisations and institutions such as INTERPOL.\(^{20}\)

Formed in 1992, the Environmental Crime Committee assisted INTERPOL in identifying emerging patterns and trends in the field of environmental crime enforcement. The committee acted as a forum in which law enforcement officials could meet face to face in order to discuss new strategies and practices, share experience and expertise, and build the bridges of international cooperation that are vital in the fight against international environmental crime.\(^{21}\)

The committee was restructured in 2012 to form the Environmental Compliance and Enforcement Committee (ECEC). In the framework of the ECEC, two working groups lead projects in specific areas: the Wildlife Crime Working Group; and the Pollution Crime Working Group.\(^{22}\)

In addition, between 2005 and 2007 INTERPOL employed full-time staff with responsibility for tackling wildlife crimes: many projects were implemented, manuals were published and training programmes were organised for investigators. INTERPOL’S Ecomessage system is an intelligence data reporting system for law enforcement agencies. Sensitive information is collected, recorded and researched, and messages are passed between enforcement agencies in different countries.\(^{23}\)

INTERPOL’s first international operation targeting large-scale illegal logging and forest crimes resulted in almost 200 arrests as well as the seizure of millions of dollars’ worth of wood mass and some 150 vehicles across Latin America. Operation Lead, which ran from September 17 to November 17, 2012, involved 12 countries in Central and South America under the auspices of INTERPOL’s Environmental Crime Programme and its Project Leaf (Law Enforcement Assistance for Forests), which brought together law enforcement agencies to combat forest crime in Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Paraguay, Peru and Venezuela. Officials carried out inspections and investigations focusing on vehicles, retail premises and individuals, as well as surveillance and
monitoring at ports and other transport hubs. The resulting seizures of wood and related products are estimated at more than 50,000 m³ of seized wood, equivalent to some 2,000 truckloads of wood pulp. The total value of the seized wood pulp is estimated at around USD 8 million.24

This international operation is an excellent example of how individual countries and regions can act successfully through international cooperation to prevent illegal logging.

Regarding environmental crime in the former Yugoslav Republic of Macedonia, the Ministry of Internal Affairs has no data on international environmental criminal acts, although in practice there have been cases of the sale of wood pulp from the former Yugoslav Republic of Macedonia in Kosovo*, for example. However, to date not enough attention has been given to environmental criminal acts, and this is backed up by data from INTERPOL and Europol, that the former Yugoslav Republic of Macedonia has not dealt with any cases of environmental crime.

The Macedonian police do act in certain cases to identify the perpetrators of some acts of environmental crime such as forest damage, illegal hunting and illegal fishing, although such police actions, and the involvement of the judiciary in particular, have no influence on preventing environmental crime. In fact, due to the low levels of public and institutional awareness and lenient policies, there is a tendency for perpetrators to reoffend.

In addition to the police, there are other bodies and services undertaking measures to tackle environmental crime and working successfully in terms of international cooperation. These include the Ministry of Environment and Physical Planning, the Ministry of Agriculture, Forestry and Water Management, and the Customs Administration.

Case study on forest damage in the former Yugoslav Republic of Macedonia

One typical example of forest damage as transboundary, organised crime is the illegal transfer of wood mass from the former Yugoslav Republic of Macedonia to Kosovo* for sale. In this way, Macedonian offenders attempt to cover their traces in their own country by offering the wood pulp for sale in a neighbouring country.

In response, the former Yugoslav Republic of Macedonia adopted the Strategy for the Development of Forestry, which is based on the Forest Law. In keeping with the strategy, the State Inspectorate for Forestry and Hunting was reorganised to include 25 inspectors and the legislation was modified.25

As a result of the activities of the State Inspectorate for Forestry and Hunting, and international cooperation with colleagues from Kosovo*, strict measures were agreed aimed at preventing the illegal transportation of wood pulp from the former
Yugoslav Republic of Macedonia to Kosovo*. Intensive patrols were introduced along the border, contributing to a significant reduction in the number of illegal border crossings and reducing the illegal transportation of wood pulp.

This is an excellent example of how bilateral and wider international cooperation can be established in order to successfully reduce and prevent criminal activities. In the future, the work of the police, inspection services, judicial authorities and other institutions and agencies should be strengthened in order to reduce the rate of environmental crime in the country.

**Conclusion**

Forest damage in the former Yugoslav Republic of Macedonia is a serious problem due to:

- the large number of people involved in illegal logging;
- the international nature of the problem, since either foreign citizens are damaging Macedonian forests, or Macedonian citizens are transporting illegally harvested wood pulp out of the country (e.g. to Kosovo*);
- the damage caused to the Macedonian economy;
- the low level of penalties for perpetrators of this criminal act, which encourages perpetrators to reoffend; and
- the resulting environmental pollution, since the reduction in Macedonian forests leads to a reduction in the function of forests in terms of ensuring clean and healthy air.

These and other problems that arise as a result of forest damage in the former Yugoslav Republic of Macedonia can only be addressed by taking an interdisciplinary approach. The institutions responsible for dealing with illegal logging are the Ministry of Internal Affairs, the inspection services of relevant ministries, the Ministry of Environment and Physical Planning, the Ministry of Agriculture, Forestry and Water Management, including the Forest Police, the courts, and public prosecutors. Intensive cooperation among these bodies is essential in putting a stop to organised environmental crime and ensuring a healthy environment for future generations.

*Prof. Marina Malis Sazdovska, PhD,* serves on the Faculty of Security in Skopje, former Yugoslav Republic of Macedonia
Endnotes


4 Illegal logging costs the global economy an estimated USD 10 to 15 bln a year and undercuts legitimate business. In a significant number of countries, illegal logging is a major problem that poses a serious threat to forests, communities and wildlife. R. Hembery, A. Jenkins, G. White and B. Richards. *WWF UK Illegal Logging Report*, January 2007.

5 The rate of deforestation is highest in Africa, at over 7 percent per decade; and in Latin America, at slightly below 5 percent per decade. Deforestation declined markedly in Asia from the 1980s to the 1990s, in part due to the expansion of plantation forests. Almost all the world’s deforestation is taking place in tropical regions, which contain slightly less than half of the world’s forests. In Europe and North America, natural forests have expanded since 1990, as less land has been needed for agriculture due to low population growth and continuing increases in agricultural productivity. *Global Challenge, Global Opportunity*, www.johannesburgsummit.org.


7 According to data from the Forestry Police, illegal logging activities in 2010 involved 17,890.20 m$^3$ of forest; in 2011 over 21,701.40 m$^3$; and in the first 10 months of 2013, a total of 25,231.70 m$^3$ of forest. www.dw.de/a-16422974.

8 www.stat.gov.mk

9 *Illegal logging in South Eastern Europe, Regional Report*, Regional Environmental Center, 2010, p. 93


12 It is difficult to assess the scale of wildlife-related crime, partly because it remains outside the sphere of ‘mainstream’ crimes and is not therefore recorded in the same way as drug trafficking, murder, rape or burglary, for example. Wildlife crimes are also, in many respects, victimless crimes. There is considerable evidence of the involvement of organised criminal networks in the harvesting, processing, smuggling and trading of wildlife and wildlife products using sophisticated techniques that span across national boundaries and continents. Fraud, counterfeiting, money laundering, violence and corruption are often found in association with various
forms of wildlife crime. Environmental crime is now high on the world agenda:
16 www.moi.gov.mk
21 www.interpol.int/Crime-areas/Environmental-crime/Environmental-Compliance-and-Enforcement-Committee
23 www.interpol.int/Crime-areas/Environmental-crime/Ecomessage
24 www.interpol.int/News-and-media/News-media-releases/2013/PR017
CHAPTER 4

Shadowy Figures and Shady Dealings: A Brief Survey of Corruption

BY NATHAN JOHNSON

‘Corruption, like the wind, remains invisible though its destructive capacity is plain to see.’

Yuri Fedotov,
Executive Director,
UNODC
Bribery in South Eastern Europe: The UNODC survey

Environmental crime and corruption take on many forms, but, considered broadly, are types of criminal activity that promise comparatively high rates of success for their perpetrators. As environmental crime has emerged only in recent years as a serious problem for government officials and law enforcement agencies, the general public knows very little about it; hence environmental crime is not high on the list of concerns for the vast majority of people throughout the world, and this is certainly true in South Eastern Europe (SEE). Corruption, on the other hand, is not only widely practised in the SEE region, but is also a deep public concern, ranking third in the region behind unemployment and poverty.

Corruption takes on many forms, but bribery, in one guise or another, is behind much of it. The survey report ‘Corruption in the Western Balkans’, carried out by the United Nations Office on Drugs and Crime, provides the following definitions of ‘bribery’:

“(a) the promise, offering or giving to a public official, directly or indirectly, of an undue advantage, for the official himself/herself or another person or entity, in order that the official act or refrain from acting in the exercise of his/her official duties; and
(b) as the solicitation or acceptance by a public official, directly or indirectly of an undue advantage, for the official himself/herself or another person or entity, in order that the official act or refrain from acting in the exercise of his or her official duties.”

While bribery certainly takes place on a grand scale and at the highest levels all over the world, the UNODC survey focuses on “the kind of petty corruption that affects the daily lives of ordinary people in their dealings with the public administration, the service provider which plays such a huge role in contemporary society that a remarkable eight out of ten adult citizens in SEE interact with it at some point during the course of the year.” (For a country-by-country breakdown of key bribery indicators, please see the tables at the end of this chapter.)

The UNODC survey data, taken as a whole, reveal several striking features about the nature and perceptions of bribery in the SEE region. The first is that many of the instances of bribery throughout the region take place in everyday dealings between citizens and individuals working in the public sector. For instance, of those citizens surveyed with recent corruption experience, 57 percent have paid bribes to doctors, usually to reduce waiting periods or to receive preferential treatment. Second in line to receive cash bribes are police officers (35 percent), which is the usual reward for reducing a fine or not issuing a citation.

This feature alone can tell us a great deal about the protean nature of corruption. A first consideration is that figures need to be viewed in their proper perspective: while the incidence of corruption might be strikingly high within a given area of study, the magnitude of corruption might not be as severe as one might at first
think. By the same token, a seeming willingness of citizens to pay or offer bribes on a regular basis for basic services, or an obvious willingness of law enforcement personnel to accept payment in lieu of performing their legal duty, is cause for concern.

It is perhaps due in large part to the widespread occurrence of petty corruption that there is just as frequent an occurrence of bribery in the SEE region in rural areas as in urban areas, which is starkly at odds with corruption trends elsewhere. Also, while males in the region are somewhat more prone than females to involvement in one form of bribery or another, the gender gap is comparatively narrow.

A second feature that emerges from the UNODC survey is startling: in 43 percent of bribery cases, payment has been offered by citizens themselves. “This shows the lack of faith some citizens have in the ability of the public administration to function without the payment of some kind of kickback for facilitating bureaucratic procedures.” It also indicates how deeply certain aspects of corruption have become acknowledged as part of a ‘way of life’ in the region.

Not everybody is amenable to such dealings: approximately one in four citizens surveyed in the region turned down a bribe request from a public official. More discouraging is the fact that less than 2 percent of bribe payers report their experiences to the authorities; but this should perhaps come as no surprise if there is a general public understanding that the authorities themselves are, at best, unlikely to do anything about it, or, at worst, already steeped in corruption. The truth of the matter is that “a formal procedure against the public official is actually initiated in only one quarter of reported cases” — a figure that in turn casts suspicion upon members of the judiciary and the court system.

As a result, a ‘culture of silence’ generally prevails in the SEE region where bribery is concerned. It becomes very difficult to break this silence when all levels of society are involved in one form of bribery or another. The circle is more or less closed, and no one group or stratum of society feels that it can confront the problem on its own.

A third key factor that emerges is the role of public administration in SEE societies. Public administration plays an important role in most contemporary societies, whether having to do with official documents, school enrolment, medical coverage, pension payments or social allowances. In the SEE region, 82 percent of adult citizens have had contact with a public official at least once in the past 12 months. With such a high incidence of contact between private citizens and public authorities, already friendly conditions for acts of petty bribery allow corruption to permeate society at every institutional level.

But public administration is not only vital in terms of the services it provides to people living in SEE. It is also the region’s largest employer, and the good wages, security and associated benefits of public administration employment is highly
sought after. In the past three years, nearly one in five adult citizens living in SEE has applied for a public sector job, and of those whose applications were successful: “One in eight admits to paying some money, giving a gift or doing a favour to help secure their position. Among those who failed, there is a widespread perception that factors such as cronyism, nepotism or bribery played a decisive role in the recruitment process, while only 10 percent believe that the selection was made on merit.”

This sort of low-level influence peddling also affects the outcomes of local elections. Asked about the most recent elections in their respective countries, an average of 8 percent of survey respondents were “asked to vote for a certain candidate or political party in exchange for a concrete offer of money, goods or a favour. The greatest number of offers was made in rural areas, more frequently to men than women, and more often to individuals with low incomes and low educational levels.”

Lest the reader take on the false impression that everyday life in SEE is fraught with anxiety and duplicitous encounters, the prevalence rates for personal theft, assault, burglary, robbery and car theft in countries of the region are considerably lower than for bribery — 4.3 percent, 2.9 percent, 2.7 percent, 1.0 percent and 0.9 percent respectively. These moderate rates for serious crimes are more or less similar to those of other European countries. “Eight out of ten [citizens in Western Balkan countries] feel safe when walking alone after dark in their neighbourhoods, and an even larger majority of the region’s inhabitants feel fairly secure in their homes.”

What this all suggests is that living standards in SEE could rise to very high levels indeed if solutions can be found to drastically curb the influence of corruption and bribery. But there is work to do in this regard. Roughly one half of citizens in the region believe that: “Corrupt practices occur often or very often in a number of important public institutions, including central and local government, parliament, hospitals, judiciary and the police. [And] one third (34 percent) of [citizens living in the] Western Balkans believe that corruption is actually on the rise in the own country, while half of them believe it is stable, and a further 14 percent think it is decreasing.”

Understanding corruption

Experts from the Regional Environmental Center for Central and Eastern Europe’s Law Enforcement and Compliance Topic Area have produced documents and participated in projects to help raise awareness about the nature and scope of corruption in the SEE region, primarily as it relates to environmental crime.

As part of an ECENA project exchange programme held in Zagreb, Croatia, in
February 2010, Tsvetelina Borissova Filipova and Bruno Mesquita prepared a presentation on environmental inspection ethics, during which participants were given an opportunity to discuss the biggest problems and to consider a broad range of recommendations and proposed solutions.

Basic modes of corruption (petty corruption, influence peddling, nepotism, and embezzlement) take place when a person or group seeks to gain an unfair advantage with the willing or unwilling complicity of another person or group. It does not matter whether the achievement of a desired outcome involves granting or receiving preferential treatment, influencing the outcome of an election, or participating in or concealing an environmental crime.

‘Petty corruption’ (which, as discussed above, is predominantly rife throughout the SEE region) is the everyday form of corruption that takes place between bureaucrats and ordinary citizens. It is sometimes called ‘survival corruption’ — that is, something carried out by junior or mid-level agents struggling to get by on a poor wage.

‘Influence peddling’ is the illegal practice of using one’s influence in government or exploiting one’s connections with authority figures to obtain favours or preferential treatment, usually in return for payment.

‘Nepotism’ is a form of favouritism that involves family relationships. It describes situations in which a person exploits his/her power and authority to procure jobs or other favours from relatives.

‘Embezzlement’ is when a person is entrusted with some form of public or private property and retains or expropriates it for personal advantage or financial gain.

There’s a reason for everything

Corruption does not originate and develop inside of a vacuum. A culture of corruption emerges out of particular social, economic and political circumstances. A poor salary has already been mentioned as a motivating factor, and this applies not just to low-ranking bureaucrats, but to police officers, environmental inspectors, teachers, medical personnel — pretty much anybody acting as a link in a chain of services.

Another reason for corruption is institutional ambiguity or uncertainty. Sometimes the ‘rules of the game’ are too complex, which leaves most people unclear about proper or ethical forms conduct in a given situation: most people, for example, do not pay taxes out of altruism, but they are far more likely to do so if the rate is fair and the filing system is clear and simple.

Other times, the rules are too open-ended, leaving lots of wiggle room for interpretation: this is especially troublesome when multiple institutions — and, often, multiple languages or cultures — are involved, each of which has a different understanding or usage of a term or practice. In other cases, the problem might be that no
clear rules are in place at all. Such a situation might produce ‘clear’ outcomes, but not ones that redound to everyone’s benefit.

Sometimes good rules are in place, but a lack of institutional capacity renders them ineffective. A complex chain of police command, for example, will work when a network has clearly defined roles of responsibility and proper communication technology; another police unit, thrown together in haphazard fashion and given outdated equipment, will be incapable of using the same rules to respond as effectively as possible. Weak institutional frameworks tempt certain people — whether out of greed or necessity — to seek the most expeditious route towards achieving a result. A decision maker of considerable ability and conscience can undoubtedly obtain good results by cutting corners; but, in the long run, an institution that lacks developmental resources and proper internal control mechanism is inevitably susceptible of authoritarian figures more interested in securing power for themselves and their cronies than in fair and effective administration.

This ties in to another key source of corruption that is endemic within larger social and operational structures: lack of accountability. If, for example, residents of a riverside town discover toxins in their drinking water, it might seem clear to 99 percent of those who live in the town that the source of the toxins is a chemical plant operating upstream. But what if that chemical plant is part of a global enterprise and has 100,000 employees? Who, precisely, should be held accountable? If there is the possibility that a decision was taken at the highest level to dump poison into the river, can the citizens of this small town afford the legal challenge to prove it? Can they afford not to?

There are multiple scenarios to consider from the corporate point of view. Some companies are so rich and powerful that they are able to violate the law with impunity, partly because it is easier for individuals acting within a complex corporate structure to deflect personal responsibility. The blame can always be shifted downward.

Another company might grow too large to effectively monitor every aspect of its operations: corporate management might be doing everything it can to operate responsibly, while a local operating unit is violating rules on its own. Finally, the corporate dynamic often places considerable distance between who take decisions and those who are affected by them: a person is more willing to sanction harmful activities when he/she has no physical or emotional contact with those people likely to be affected.

There is another form of corruption that results from the establishment of standards that are extremely difficult or impossible to meet. For example, in order to be granted an operating permit, a company might have to pay high out-of-pocket costs
to comply with newly introduced environmental legislation. In such a case the company might provide falsified information or attempt to bribe the authorities. If an inspection process is involved, company personnel might attempt to bribe or somehow dissuade the inspector from carrying out his/her task honestly. More often than not, an inspector struggling to get by on a low salary will find the ‘generous’ offer of a bribe quite tempting.

A basic understanding of the root causes of corruption makes it easier to develop strategies that can defeat it.

**Tackling corruption**

There are structural and personal components involved in the fight against corruption, and there is a symbiotic relationship between the two. When an effective structure is in place, individuals are far more likely to follow standard practice. At the same time, ethical behaviour from individuals on a widespread and consistent basis gives the structure its strength, resilience and effectiveness.

**Structural tools**

In the first place, good, well-written laws need to be in place. Legislation is the bedrock of an organised society, but even where the rule of law is generally observed, some areas lack clear legal guidelines. Heightened concern about the environment in recent decades, for instance, has produced reams of new environmental legislation ranging from local to international in scope. To cite just a few examples, protected areas have been established, pollution standards and limits have been introduced, and some law enforcement agencies have been tasked with dealing solely with violations of environmental law.

Policies and conventions, while not necessarily carrying the force of law, are strategies crafted at the highest levels of administration, and typically serve as blueprints for current and future action. While the law establishes minimum requirements, policies, conventions and directives set forth goals deemed within reach. The basic goal might be to preserve a wilderness area, but a supporting legal mechanism might be required as well if destructive practices are to be halted or reversed.

Nowadays, most governments have a framework policy that informs decisions taken with regard to climate change. Failure to meet certain legal obligations can bring certain penalties, while failure to meet a policy target will not result in punitive action. On the other hand, something like the UNECE Convention on Access to Information, Public Access in Decision-making and Access to Justice in
Environmental Matters (known as the Aarhus Convention), represents an international commitment to a shared vision of the future, with environmental protection at the core of this commitment.

What legal and policy mechanisms do share in common, however, is reliance upon effective monitoring systems. Understood at a holistic level, a ‘monitoring system’ comprises an aggregate of input from public, private and civil society. At the social level, for example, good practices are encouraged and demonstrated; in the private sector, employers and employees are conscientious about malpractice and fraud, and are convinced of the effectiveness of enforcement mechanisms in place should a crime or act of wrongdoing be reported to the relevant authorities; CSOs and NGOs, meanwhile, are trusted partners and helpful advocates within both the public and private sectors.

One of the most powerful tools at the disposal of civil society organisations is the ‘joint initiative’. CSOs and NGOs with sufficient and expertise can help multiple stakeholders to pool their resources, and can also facilitate the sharing and exchanging of vital information.

Two other tools, working in opposite directions, can be effective in reducing corruption: incentives and sanctions. The former rewards good behaviour, while the latter punishes bad behaviour. As punitive threats are worthless without the force to back them up, sanctions lie generally within the domain of governments and their respective law enforcement agencies and court systems. Incentives, on the other hand, can greatly enhance the effectiveness of policies and joint initiatives, and civil society is generally the best place to turn for ideas with regard to what motivates local populations or a particular set of stakeholders.

Individual conduct

Most individuals attempt to live their lives in such a way that a healthy balance can be struck between personally acceptable behaviour and socially responsible behaviour. But not only do we all fall well short of leading perfect lives, a high degree of variation also exists between individuals and cultures as to what constitutes proper conduct — which is why societies create laws. We rely upon each other to help us regulate our own conduct.

But there are also good, basic ground rules to keep in mind, and public authorities would do well to adhere to them as much as possible in carrying out their duties. The following recommendations and guidelines were presented at the ECENA exchange in Zagreb in 2010.20

By definition, a public authority is employed to serve the broader public interest. A ‘conflict of interest’ exists when such a person is compelled to pursue outcomes
that violate the public trust, whether this means seeking material or financial advantage, or using one’s connections to benefit family, friends, business associations or politicians. Actions might be carried out knowingly and wilfully, either directly or indirectly; sometimes, however, circumstances are such that a public official will find it impossible to behave in an impartial manner or carry out his/her duties professionally and objectively.

Environmental inspectors — to focus on just one type of public authority — should always be mindful of serving the public interest. Focusing on the needs of the client (or, the public, as the case may be) will help inspectors to do good-quality work and ensure the integrity of their office. It is also important to stick to the business at hand while carrying out an inspection. One should not enter into familiar terms or any sort of political discussion during the course of an inspection. It is vital to be as neutral and impartial as possible, while at the same time treating everyone with courtesy and respect in the course of carrying out a task.

It is also extremely important for environmental inspectors to be knowledgeable and up-to-date with relevant legal obligations, rules and procedures that apply to each inspection. Any uncertainty can lead to mistakes that can be costly to all parties involved, but it can also leave one vulnerable to manipulation. Ultimately, one should not act rashly or hastily when in doubt. Any inspector unclear about what to do in a given situation should contact his/her superior and, if possible, enter a written record so that the problem is spelled out in detail for the present and made available for future reference as well.

Institutional strategies

There are also several structural measures and internal policies that institutions can adopt in order to encourage ethical behaviour from their members and representatives. One such step is for the institutional directorate to elaborate and implement a strict anti-corruption policy. An effective anti-corruption strategy involves making a careful study of existing external environments (political, economic, social, legal, etc.) and the institution’s internal environment (staff, skills, values, operational structure, style, strategy, etc.), as well as identifying key problems to address. Within an established anti-corruption policy, a system of rewards and penalties may then be put in place for employees.

Another very important factor is to ensure that communication within the institution is secure. All employees need to be assured that corruption may be reported without risk of reprisal. The institution might also choose to discourage potential corrupters by making its anti-corruption policy available to the general public. At the same time, a system of checks and balances should be in place in order to prevent abuses of power and position.
Bribery in SEE (2010)

TABLE 1 SEE REGION AVERAGES

<table>
<thead>
<tr>
<th>KEY INDICATORS</th>
<th>TOTAL</th>
<th>URBAN</th>
<th>RURAL</th>
<th>MALE</th>
<th>FEMALE</th>
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</thead>
<tbody>
<tr>
<td>Percentage of population having contact with public administration</td>
<td>82%</td>
<td>83.5%</td>
<td>80.3%</td>
<td>82.4%</td>
<td>81.7%</td>
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<tr>
<td>Prevalence of bribery</td>
<td>12.5%</td>
<td>12.2%</td>
<td>12.9%</td>
<td>13.3%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Average number of bribes</td>
<td>5.0</td>
<td>4.9</td>
<td>5.1</td>
<td>4.9</td>
<td>5.1</td>
</tr>
<tr>
<td>Average amount paid (EUR-PPP*)2010</td>
<td>257</td>
<td>294</td>
<td>216</td>
<td>258</td>
<td>255</td>
</tr>
</tbody>
</table>

Source: UNODC (2011). Corruption in the Western Balkans: Bribery as experienced by the population, p. 56
*PPP = Purchasing power parity in euros, used for international comparison

TABLE 2 ALBANIA

<table>
<thead>
<tr>
<th>KEY INDICATORS</th>
<th>TOTAL</th>
<th>URBAN</th>
<th>RURAL</th>
<th>MALE</th>
<th>FEMALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of population having contact with public administration</td>
<td>79.7%</td>
<td>80.6%</td>
<td>78.8%</td>
<td>80.1%</td>
<td>79.3%</td>
</tr>
<tr>
<td>Prevalence of bribery</td>
<td>19.3%</td>
<td>17.7%</td>
<td>20.9%</td>
<td>17.0%</td>
<td>21.3%</td>
</tr>
<tr>
<td>Average number of bribes</td>
<td>4.1</td>
<td>4.2</td>
<td>4.0</td>
<td>3.8</td>
<td>4.3</td>
</tr>
<tr>
<td>Average amount paid (EUR-PPP)2010</td>
<td>103</td>
<td>80</td>
<td>123</td>
<td>85</td>
<td>116</td>
</tr>
</tbody>
</table>

Source: UNODC (2011). Corruption in the Western Balkans: Bribery as experienced by the population, p. 57

Monitoring processes and regularly scheduled reviews should also be written into anti-corruption policy. Finally, external audits should be conducted at regular intervals in order to guarantee financial transparency. An operating structure that has all of these pieces in place will create an environment that will be much more effective in keeping the myriad forces of corruption at bay.

Nathan Johnson works with the REC Publishing Department and is editor of Green Horizon Online: www.greenhorizon-online.com
### TABLE 3 BOSNIA AND HERZEGOVINA

<table>
<thead>
<tr>
<th>KEY INDICATORS</th>
<th>TOTAL</th>
<th>URBAN</th>
<th>RURAL</th>
<th>MALE</th>
<th>FEMALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of population</td>
<td>78.3%</td>
<td>81.4%</td>
<td>75.6%</td>
<td>79.6%</td>
<td>76.9%</td>
</tr>
<tr>
<td>having contact with public</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>administration</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Prevalence of bribery</td>
<td>20.7%</td>
<td>20.6%</td>
<td>20.8%</td>
<td>23.2%</td>
<td>18.2%</td>
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<tr>
<td>Average number of bribes</td>
<td>5.4</td>
<td>5.6</td>
<td>5.3</td>
<td>5.5</td>
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<tr>
<td>Average amount paid (EUR-PPP)2010</td>
<td>222</td>
<td>288</td>
<td>166</td>
<td>208</td>
<td>243</td>
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</table>

Source: UNODC (2011). *Corruption in the Western Balkans: Bribery as experienced by the population*, p. 58

### TABLE 4 KOSOVO*

<table>
<thead>
<tr>
<th>KEY INDICATORS</th>
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<th>URBAN</th>
<th>RURAL</th>
<th>MALE</th>
<th>FEMALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of population</td>
<td>69.7%</td>
<td>68.5%</td>
<td>70.3%</td>
<td>71.3%</td>
<td>67.9%</td>
</tr>
<tr>
<td>having contact with public</td>
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<tr>
<td>administration</td>
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<td></td>
</tr>
<tr>
<td>Prevalence of bribery</td>
<td>11.1%</td>
<td>13.7%</td>
<td>9.7%</td>
<td>11.8%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Average number of bribes</td>
<td>10.2</td>
<td>9.9</td>
<td>10.4</td>
<td>10.8</td>
<td>9.5</td>
</tr>
<tr>
<td>Average amount paid (EUR-PPP)2010</td>
<td>174</td>
<td>169</td>
<td>176</td>
<td>137</td>
<td>210</td>
</tr>
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</table>

Source: UNODC (2011). *Corruption in the Western Balkans: Bribery as experienced by the population*, p. 60

### TABLE 5 FORMER YUGOSLAV REPUBLIC OF MACEDONIA

<table>
<thead>
<tr>
<th>KEY INDICATORS</th>
<th>TOTAL</th>
<th>URBAN</th>
<th>RURAL</th>
<th>MALE</th>
<th>FEMALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of population</td>
<td>74.7%</td>
<td>76.1%</td>
<td>72.6%</td>
<td>76.1%</td>
<td>73.3%</td>
</tr>
<tr>
<td>having contact with public</td>
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</tr>
<tr>
<td>administration</td>
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<td></td>
</tr>
<tr>
<td>Prevalence of bribery</td>
<td>6.2%</td>
<td>6.4%</td>
<td>5.8%</td>
<td>7.0%</td>
<td>5.3%</td>
</tr>
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<td>Average number of bribes</td>
<td>5.9</td>
<td>6.0</td>
<td>5.5</td>
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<tr>
<td>Average amount paid (EUR-PPP)2010</td>
<td>1,212</td>
<td>1,597</td>
<td>773</td>
<td>1,027</td>
<td>1,545</td>
</tr>
</tbody>
</table>

Source: UNODC (2011). *Corruption in the Western Balkans: Bribery as experienced by the population*, p. 63
For further reference

The following resources will be useful for those who wish to learn more about the issue of corruption and how to fight it.

- Regional Anti-Corruption Initiative: www.rai-see.org/home.html
- European Partners Against Corruption: www.epac.at/
- Public Governance and Management (OECD):
  www.oecd.org/topic/0,2686,en_2649_37405_1_1_1_1_37405,00.html
- Transparency International: www.transparency.org
- Anti-corruption handbooks: www.rai-see.org/anti-corruption-handbooks.html

Endnotes

1 This introductory section is based on a survey report titled Corruption in the Western Balkans: Bribery as experienced by the population, published in 2011 by the United Nations Office on Drugs and Crime (UNODC), with support from the European Commission. The report is regional in scope and draws from detailed individual reports for Albania, Bosnia and Herzegovina, Croatia, Kosovo*, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia. The report's aggregate (i.e. regional) findings include survey data from Croatia, but country-specific data pertaining to Croatia are not included in this assessment, as the country does not come within the context of the Themis project.

2 Corruption in the Western Balkans, p. 7.


5 Ibid, p. 7.


7 Ibid, p. 8.


11 Ibid. p. 15.

12 Ibid. p. 8.

13 Ibid. pp. 8–9.

14 Ibid. p. 9.

15 Ibid. p. 9.

16 Ibid. p. 9.

17 Ibid. p. 9.


19 Powerful, unscrupulous companies will generally seek to guarantee immunity from wrongdoing by simply buying off politicians and judges—a practice that further complicates the question of ‘accountability’.

20 LEC Topic Area expert Cecile Monnier also provided materials and input for this chapter.
CHAPTER 5

Setting up an Integrated Industrial Emissions Reporting Tool: A Case Study from Serbia

BY RADOJE LAUSEVIC AND ANA POPOVIC
Introduction

The countries of South Eastern Europe (SEE) are moving along the path to eventual EU membership. In this process they are sharing common environmental challenges. Bridging the gap between policy making and the achievement of goals represents one of the major challenges. Furthermore, the implementation of the acquis will require additional capacity, significant time and financial resources, especially in relation to directives on water; wastewater; integrated pollution prevention and control (IPPC); large combustion plants (LCP); and waste management.

Although the burden of pollution has been reduced as a consequence of the industrial restructuring that took place during the years after the political and economic transformation of the SEE countries, the environment in this region is under severe strain. This means that to ensure sustainability it is important to monitor and manage reporting on the environmental impacts of industrial activities. As a result of the introduction of new environmental legislation in SEE countries, as part of the harmonisation of national environmental legislation with EU regulations, simple eco-reporting became insufficient. There is a real need to improve emissions reporting and in general to coordinate reporting routines with those of the EU.

In this paper, we present the results of a project to set up an integrated industrial emissions reporting tool in Serbia. This tool was developed by a consortium comprising the Regional Environmental Center for Central and Eastern Europe (REC) and the Norwegian company Emisoft, in the framework of the project ‘Setting up the Environmental Management Center in Serbia’, implemented between October 2010 and May 2013 with financial support from the Norwegian Ministry of Foreign Affairs.

Partners in the project were the Serbian Environmental Protection Agency (SEPA) as the grant recipient and main beneficiary; the Ministry of Energy, Development and Environmental Protection of the Republic of Serbia (MEDEP) as key partner; the Regional Environmental Center for Central and Eastern Europe (REC) as project implementing agency; Emisoft, as provider of the TEAMS environmental management software; and 10 industrial clients from various industrial sectors and geographical regions — Zelezara Smederevo, a steel production and processing company; HIP-Petrohemija, producer of petrochemicals; Delta Agrar Ltd., an agribusiness company; Serbian Railways; Tigar JSC, a manufacturer of rubber footwear, technical rubber and recycled rubber products; Kolubara Ltd., a producer of lignite; Agroprodukt Sinkovic Ltd., a poultry breeding and trading company; Sojaprotein JSC, a soybean processing company; RTB Bor Ltd., a copper mining and smelting complex; and Beogradske Elektrane, a district heating public utility company.1
Background

There has been rapid development in environmental management information systems (EMISs) in the last 30 years. These systems are used for sustainability reporting by businesses, but also by various public authorities, banks, investors and insurance companies, for example. In particular, EMISs play a significant role in business companies where they can be part of the early warning systems for the identification of environmental risks. Businesses that are using EMISs can efficiently monitor their environmental performance. This contributes to their competitiveness, as there is a positive correlation between proactive environmental management and the improvement of company performance compared to other companies in the same sector. An important part of an EMIS is the collection of monitoring data and their processing.

The legal framework for environmental monitoring and reporting in Serbia is provided by the Law on Environmental Protection. In Article 69, the law defines institutions and their obligations for environmental monitoring as an integral part of the environmental information system. In Article 73, the law defines the obligations of state institutions and other authorised bodies, as well as all polluters, to deliver environmental monitoring data and information to SEPA in the predefined format. An integrated information system, managed by SEPA, has been established by Article 74 of the law. In the Amendment to the Rulebook on the Methodology for the Development of National and Local Registers of Pollution Sources and the Methodology for the Type, Manner and Terms of Data Collection, which entered into force in January 2013, one of the defined methods of data delivery to SEPA, stipulated in Article 1, is the direct entering of data into the information system of the Department of the National Register of Pollution Sources.

The legal framework described above gives SEPA the mandate to develop and manage the national integrated environmental information system; environmental data acquisition, centralisation and processing; reporting on the state of the environment; and policy implementation in the field of environmental protection. In addition, SEPA has established cooperation with the European Environment Agency (EEA) and the European Environment Information and Observation Network (EIONET) on a voluntary basis.

Both SEPA and industrial facilities in Serbia were recently provided with powerful tools for integrated emissions reporting, and these tools have enabled the smooth enforcement of the legal framework.

The concept of integrated industrial emissions reporting

The integrated industrial emissions reporting tool used in Serbia was developed on the basis of the TEAMS Sustainability Reporting platform.
TEAMS reporting platform

TEAMS SR (Sustainability Reporting) is a very flexible and efficient software tool used for the recording, consolidating, calculating, quality assurance and reporting of companies’ environmental and corporate social responsibility (CSR) data in a single system. The system covers regulatory monitoring and reporting for single processes or the requirements of whole factory operations. The first version of TEAMS was launched nearly 20 years ago and today it is used by leading companies in several countries.9

TEAMS is based on a modern and mainstream technology, fulfilling the three key objectives of corporate sustainability reporting: transparency, traceability and compliance. It has several functional areas: data input and registration; data collection and aggregation; reporting; analysis and follow-up; and historic data and docu-

<table>
<thead>
<tr>
<th>Table 1</th>
<th>TEAMS – Functional Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data input and registration</strong></td>
<td>• Manual registration of data through user’s web client&lt;br&gt;• Integration with other systems&lt;br&gt;• Decentralised according to need&lt;br&gt;• Master data maintained in the same system, also through integration&lt;br&gt;• Multilingual unit conversions, help text, minimum/maximum values, restrictions on overlapping periods, etc.</td>
</tr>
<tr>
<td><strong>Data collection and aggregation</strong></td>
<td>• Combines data needed for any report and time period&lt;br&gt;• Integrated models for data processing</td>
</tr>
<tr>
<td><strong>Reporting</strong></td>
<td>• Flexible report generator&lt;br&gt;• All options for aggregation and filtering in needed dimensions&lt;br&gt;• Defined user roles and access ensures flexible reporting at all levels of the organisation&lt;br&gt;• Reports viewed in TEAMS can be saved or opened directly in PDF, Excel, Image etc.</td>
</tr>
<tr>
<td><strong>Analysis and follow-up</strong></td>
<td>• Monitoring of trends and relations&lt;br&gt;• Monitoring of critical limits, incidents, etc.&lt;br&gt;• Data analysis within any area per reporting unit, source of information, time interval, etc.</td>
</tr>
<tr>
<td><strong>Historical data and documentation</strong></td>
<td>• Transaction log (What? Where? When? Who?)&lt;br&gt;• Change log (for calculations, emission factors, etc.)</td>
</tr>
</tbody>
</table>
The reporting functionality is flexible, fulfilling the requirements of a diverse group of customers.

The TEAMS platform provides complete traceability, not only of all transactions but also of factors and calculations. All data entries and changes are logged and contain all historical information, which makes the system easily accessible for data auditing. Information containing both text and numbers can be reported and handled by the system. Partners in the supply chain may also be granted access to directly register data in the system on behalf of the customer. Functional areas of the system are described in Table 1, and TEAMS functionality requires registered to be approved in order to become a valid transaction in the system.

TEAMS structure and technical development tools are explained further by Aamodt et al.¹⁰

Tools developed for integrated industrial emissions reporting in Serbia

Using TEAMS as the development platform, two new tools were developed for SEPA and industrial clients in Serbia: the Competent Authority TEAMS Solution (CAS); and the Parent Client TEAMS Solution (PCS).

TEAMS COMPETENT AUTHORITY SOLUTION (CAS)

The CAS provides SEPA with a state-of-the-art environmental management system ensuring compliance, transparency and traceability with regard to their reporting to the European Union. With this solution, Serbia may become one of the global frontrunners in environmental reporting.

The CAS is an information system designed according to the rules of the Protocol on Pollutant Release and Transfer Registers (PRTR) that receives annual PRTR reports from those companies which have an obligation to report according to Serbian legislation. The CAS makes data from companies available to SEPA and to relevant EU institutions. Some of the reporting companies have their own solutions, but this system enables SEPA to register annual data (manually or by import) and to report historical data in the same as companies that do not have their own client solutions. Key elements of the CAS are presented in Table 2.

The CAS comprises annual facility reports from operators containing pollution and release quantities, master data with the code lists that need to be assigned to the reported quantities, incorporated data logic, administration and data monitoring, the Web Report Designer, and maintenance of the report library and output tables, together with the master data assigned. This is a robust solution that meets the current and future needs of SEPA.
With the goal of further improving environmental reporting from Serbian companies, 10 Parent Client Solutions (PCSs) were built, customised, altered, specified and adapted. The PCSs were tailored to the needs of 10 selected companies as pilot cases, representing various types of industries and geographical regions in Serbia. These solutions will help the companies to fulfill their environmental priorities. With a PCS, companies can document and report efficiently using a single integrated system throughout all levels of the organisation. The PCS is defined and configured according to the client’s organisation and specific needs. This approach ensures easier, more secure and efficient use, and allows the straightforward implementation of changes according to the client’s needs.

The PCS is a robust, flexible, state-of-the-art environmental management reporting system that will help companies to achieve compliance with EU regulations and to manage their environmental data in a transparent, traceable and consistent way.

Together with the company’s customised logic, organisational structure, data and administration elements, all functionalities have been incorporated into the system.

### TABLE 2 MAIN ELEMENTS OF THE COMPETENT AUTHORITY SOLUTION (CAS)

<table>
<thead>
<tr>
<th>Input</th>
<th>• Annual facility reports from operators, with pollution and release quantities. The input schemas can be based on Excel specifications already prepared by SEPA.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master data</td>
<td>• Code lists and other properties assigned to registered quantities. The master data library is in compliance with, and always updated according to, the E-PRTR. It contains all the data necessary for the National Register of Pollution Sources.</td>
</tr>
<tr>
<td>Data logic</td>
<td>• Automatic handling of data within the system, which is incorporated into the solution. This ensures consistency and compliance with predefined procedures and E-PRTR.</td>
</tr>
</tbody>
</table>
| Administration | • Data management  
• User management  
• Access management |
| Monitoring/follow-up | • One-click status reports and quality control follow-ups; ad-hoc reporting. |
| Output | • Provision of the aggregated and quality-controlled data required for reporting to the National Register of Pollution Sources and the EU. |
| Reports | • Reports library |
The PCS is an information system designed according to the rules of the PRTR Protocol and domestic legislation. It is defined and configured according to the client’s organisation and specific needs. In the PCS, reports are defined according to specific needs and parameters across the organisation. They are typically internal compliance reports, reports on key performance indicators (KPIs), including environmental indicators, or management or corporate reports. The flexibility in data structure and relations makes it possible to benchmark between facilities and units across the organisation.

**FUNCTIONALITY AND REPLICABILITY OF RESULTS**

The CAS has become the backbone of SEPA’s National Register of Pollution Sources. As stated during the conference ‘Reporting for Sustainability VI’, held in Belgrade in May 2013, the CAS will be used for online reporting by all industrial facilities in Serbia. Full CAS functionality will be checked during the preparation of emissions reports for 2013. The CAS developed for SEPA can readily be translated to other institutions responsible for collecting and processing industrial emissions reports in the SEE region and beyond.

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### Table 3: Main Elements of the Parent Client Solution (PCS)

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Pollution to air, water and land</td>
<td>• Provision of the aggregated and quality-controlled data required for reporting to the National Register of Pollution Sources and the EU.</td>
</tr>
<tr>
<td>• Annual information</td>
<td>• Reports library</td>
</tr>
<tr>
<td>• Wastewater transfer, waste formation and waste management</td>
<td></td>
</tr>
<tr>
<td>• Production volumes, consumption of fuel, water, electricity and raw materials</td>
<td></td>
</tr>
<tr>
<td>Master data</td>
<td>Reports library</td>
</tr>
<tr>
<td>• Code lists and other properties assigned to registered quantities. The master data library is in compliance with, and always updated according to, the E-PRTR. It contains all the data necessary for the National Register of Pollution Sources.</td>
<td></td>
</tr>
<tr>
<td>Data logic</td>
<td></td>
</tr>
<tr>
<td>• Automatic handling of data within the system, which is incorporated into the solution. This ensures consistency and compliance with predefined procedures and E-PRTR.</td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td></td>
</tr>
<tr>
<td>• Data management</td>
<td></td>
</tr>
<tr>
<td>• User management</td>
<td></td>
</tr>
<tr>
<td>• Access management</td>
<td></td>
</tr>
<tr>
<td>Monitoring/follow-up</td>
<td></td>
</tr>
<tr>
<td>• One-click status reports and quality control follow-ups; ad-hoc reporting.</td>
<td></td>
</tr>
</tbody>
</table>

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design together with transactions, a report library and output tables with master data and code lists accordingly assigned. Table 3 presents the key elements of the PCS.
| Pollutant release and transfer | • Emissions to air (kg per month) |
|                              | • Emissions to air (t per year) |
|                              | • Emissions to air (operational, accidental, total) |
|                              | • Emissions to air, all facilities (t per month) |
|                              | • Emissions to air per pollutant group |
|                              | • Emissions to water (kg per month) |
|                              | • Emissions to water (kg per year) |
|                              | • Emissions to water (operational, accidental, total) |
|                              | • Emissions to water, all facilities (t per month) |
|                              | • Emissions to water per pollutant group |
|                              | • Emissions to land (kg per month) |
|                              | • Emissions to land (kg per year) |
|                              | • Emissions to land (operational, accidental, total) |
|                              | • Emissions to land, all facilities (t per month) |
|                              | • CO2 emissions |
|                              | • CO2 per total energy consumption |
|                              | • CO2 per fuel type |
| Water, energy and fuel consumption | • Water use (m³ per month) |
|                              | • Total energy use (kWh per month) |
|                              | • Energy use per energy type |
|                              | • Fuel consumption (t per month) |
|                              | • Fuel consumption (t per year) |
|                              | • Fuel consumption, all facilities (t per month) |
| Waste | • Waste (t per month) |
|       | • Waste (t per year) |
|       | • Waste treatment operation (t per month) |
|       | • Waste, all facilities (t per month) |
|       | • Waste (waste treatment, total and percentage recovered) |
| PRTR report | PRTR report |
| National Register report | • General data pollutant source |
|                        | • Air emissions |
|                        | • Water emissions |
|                        | • Land emissions |
|                        | • Waste management report |
|                        | • GIO1 (annual waste report of waste producer) |
|                        | • GIO2 (annual waste report of waste disposal facility operator) |
|                        | • GIO3 (annual waste report of operator of facility for the reuse of waste) |
The functionality of the developed PCS was analysed in depth in the context of the Kolubara mining company. Kolubara Ltd. is the largest producer of coal in Serbia, with an annual production of approximately 30 million tons (70 million m³ of overburden), which is around 79 percent of total production in Serbia. It operates within Electric Power Company of Serbia and is located in Lazarevac. Table 4 provides an overview of the analysed reports provided using TEAMS.

It can be concluded that by introducing the PCS, Kolubara Ltd. has a state-of-the-art environmental management reporting system that completely meets the needs of the company in terms of internal and external environmental reporting and corporate responsibility. The developed system is sufficiently flexible to enable further developments in line with identified needs. It is expected that the use of the TEAMS PCS will lead to economic benefits for Kolubara Ltd. In addition, the tool can easily be transferred to other similar industrial and energy facilities.\(^\text{14}\)

The overall corporate objective of implementing TEAMS in an organisation or industrial facility is to ensure the compliance, traceability and transparency of sustainability reporting. In general, the software offers: a complete solution in which all areas of reporting are included in one system, as defined by the user; rapid development and flexibility, enabling the implementation of changes and new areas of reporting; a good basis for decision making and predictability for the future, particularly if cost estimations are used; resource efficiency, since information and reporting are coordinated in one system; customised user interfaces enabling straightforward use and minimal training requirements; and flexibility, since reporting is based on available information and changes can be implemented when needed.

The developed PCSs are particularly relevant for industrial facilities that come

### Table 4 TEAMS Reports Analysed for Kolubara PCS Case Study (Continued)

<table>
<thead>
<tr>
<th>Category</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVE</td>
<td>GVE (report of annual balance of air pollutant emissions)</td>
</tr>
<tr>
<td>AA01</td>
<td>AA01 (report of producer, importer, packer, supplier and end user)</td>
</tr>
<tr>
<td>POV2</td>
<td>POV2 (annual report on placing products by type on the market of the Republic of Serbia)</td>
</tr>
<tr>
<td>Other</td>
<td>Product quantity (per month)</td>
</tr>
<tr>
<td></td>
<td>Product quantity (per year)</td>
</tr>
<tr>
<td></td>
<td>Product volumes (all facilities)</td>
</tr>
<tr>
<td></td>
<td>Product quantity (per facility)</td>
</tr>
<tr>
<td></td>
<td>Greenhouse gas emissions</td>
</tr>
<tr>
<td></td>
<td>Environmental development</td>
</tr>
</tbody>
</table>

...
under the scope of the Directive on Integrated Pollution Prevention and Control (2008/1/EC). All such facilities in Serbia have to obtain an IPPC licence, with the aim of preventing or reducing emissions to air, water and land, reducing waste, and ensuring the efficient use of energy and resources. Using a PCS is expected to improve compliance with the law, increase the transparency of their emissions data, and strengthen their corporate social responsibility.

Conclusions

The two new tools developed for environmental reporting on the basis of the TEAMS Sustainability Reporting Platform, the Competent Authority Solution for SEPA and the Parent Client Solution for 10 selected industrial partners, made possible integrated electronic environmental reporting in Serbia and the introduction of the Eco-management and Audit Scheme (EMAS) in interested industrial companies. With simple, tailor-made modifications, these tools can be transferred to other institutions responsible for collecting and processing industrial emissions reports, as well as to industrial facilities aimed at improving environmental performance and reporting in the SEE region and beyond.

The results presented in this paper were developed under the project Setting up the Environmental Management Center in Serbia, implemented between October 2010 and May 2013 with the financial support of the Royal Norwegian Ministry of Foreign Affairs under grant number SRB-10/0124.

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Ana Popovic is Senior Expert in Environmental Management at the Regional Environmental Center for Central and Eastern Europe

Endnotes

1 A. Popovic (ed.). TEAMS Success: Setting up an Environmental Management Center in Serbia. Regional Environmental Center for Central and Eastern Europe, Szentendre, 2013.
4 Law on Environmental Protection. Official Gazette of RS, No. 135/04, 36/09, 72/09, 43/11.
5 Rulebook on the Methodology for the Development of National and Local Registers of Pollution Sources and the Methodology for the Type, Manner and Terms of Data Collection. Official Gazette of RS, No. 91/10, 10/13.
CHAPTER 6

The Low-Emission Development and Climate Change Adaptation Strategies of Bosnia and Herzegovina

BY IGOR JEVTIC
Introduction

Bosnia and Herzegovina is a decentralised state comprising two entities (Republika Srpska and the Federation of Bosnia and Herzegovina) and Brcko District. The two entities and Brcko District govern environmental issues through the enforcement of laws, regulations and standards. The Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina is responsible for coordinating the activities and harmonising the plans of the entity government institutions at international level, including in the field of energy, environmental protection, and the development and exploitation of natural resources.

Unlike many other problems in the field of environmental protection, the impacts of climate change are not geographically bound to their cause. Although Bosnia and Herzegovina is among the countries with the lowest greenhouse gas emission values per year (approximately half the average value in the EU), certain climate change impacts are already noticeable. Due to its geographic location, the economic significance of its agriculture and forestry sectors, and its limited capacity to adapt to climate change, Bosnia and Herzegovina is particularly vulnerable to climate change impacts. Summer temperatures in some places have risen by 1.2°C over the past decades and rainfall patterns have also changed.

Vision and action

Bosnia and Herzegovina is taking measures to address climate change issues at both domestic and international level. Climate change is increasingly regarded as an issue of crucial strategic significance in Bosnia and Herzegovina, particularly by local governments and academia. The state’s vision is that of a prosperous and viable green economy in the country by 2025. Improving energy efficiency, increasing the use of renewable sources of energy and improving energy and transport infrastructure and services will help to attract international investments, create jobs and boost businesses in an economy based on the efficient use of resources. The negative impacts of climate change will be minimised by building resilience and exploiting the opportunities arising from the changing climate. Being socially inclusive and providing a positive contribution to gender equality, the transition to a green economy will particularly benefit vulnerable and disadvantaged groups.

Climate forecasting models predict an increase in average annual temperatures of 2 to 4°C by the end of the century, with summer temperatures rising by up to 4.8°C. This situation will require fundamental changes in the agricultural and forestry sectors, and in approaches to the cultivation and management of land. An anticipated reduction in annual rainfall by 30 percent, and a reduction of up to 50 percent
in summer rainfall in the valley of the Sava River and southern Bosnia and Herzegovina, will have negative implications for agriculture and forestry.

These two important economic sectors account for 12 percent of GDP in Bosnia and Herzegovina, employ 20 percent of the workforce, and play a crucial role in rural development. Changes in the rainfall regime will also affect the hydropower sector, and without adequate measures to adapt to such changes it may become difficult for the country to meet its energy needs. The foreseen changes will also lead to specific opportunities and challenges in the tourism sector, particularly in relation to the protection of ecosystems and the management of protected areas. It is also expected that climate change, and in particular the higher summer temperatures, will have implications for public health, with negative impacts on elderly people and those suffering from cardiovascular disease. Effective climate change adaptation measures are essential in order to reduce the vulnerability and increase the resilience of the population and of the most significant economic sectors.

To date, no integrated climate change mitigation or adaptation measures have been implemented. Without a coordinated and planned approach to climate change adaptation, the country will face negative economic consequences and environmental impacts. If strategic actions are not taken immediately, the cost of future adaptation measures will rise.

Although climate change mitigation measures are vital in order to minimise negative impacts, adaptation measures are also necessary in order to ensure that the country reduces the vulnerability of society and the economy and maximises any opportunities that arise.

**Strategic approach**

In this context, Bosnia and Herzegovina has developed the Strategy for Climate Change Adaptation and Low-Emission Development, aimed at:

- building resilience to climate variability and climate change; and
- curbing the level of greenhouse gas emissions at a level below the EU27 per capita average by around 2025.

The adaptation component of the strategy focuses on the implementation of practical adaptation measures in order to increase the resilience of Bosnia and Herzegovina to current climate variability and long-term climate change, while exploiting opportunities for development. This will be accomplished by establishing a context for the coordinated process of climate change adaptation in all relevant sectors, at all levels of government, and in civil society and the private sector. The strategy focuses on seven priority sectors that will support most of the envisaged activities.
A number of other related issues from different fields are also considered in the formulation of activities.

The low-emission development component focuses on mitigation measures, such as the reduction of greenhouse gas emissions. With international assistance, the aim is to boost development through the implementation of nationally appropriate mitigation actions (NAMAs). The strategy focuses on analysing general scenarios and policy options and on identifying concrete mitigation actions and connections with existing sustainable development objectives and strategies, strategies to fight poverty, and economic growth strategies in Bosnia and Herzegovina and the region.

The priority for Bosnia and Herzegovina in terms of climate change mitigation is to strengthen institutional and professional capacities for the development and enforcement of policies, the monitoring of greenhouse gas emissions, and the planning, implementation, monitoring, reporting and verification of mitigation measures. The capacity-building process, combined with the implementation of mitigation actions, will help to set the country on the path towards fulfilling the requirements for EU membership in terms of the transposition and harmonisation of legislation, administrative capacities, and the enforcement of policies.

Besides capacity building, the low-emission development component focuses on three sectors that have the greatest potential in terms of emissions reductions and positive economic and social impacts: electricity production; district heating; and transportation and traffic. In the electricity production sector, the strategy aims to replace existing coal-based thermal power plants with new, more efficient power plants, while promoting investments in renewable sources of energy. In the district heating sector, the strategy aims to improve energy efficiency in buildings and district heating, as well as to replace fossil fuels with biomass or other renewable energy sources. In the transportation and traffic sector, the aim of the strategy is to reduce the expected growth in emissions from public transport by investing in rail and public transportation. The three sectors are interconnected and are linked to other important areas, including public health and water resources.

The strategy represents a first step towards establishing a feedback-based management process. Bearing in mind that data are currently insufficient and national capacities limited, the strategy has been designed to consolidate political support for the concepts of low-carbon development and climate resilience. As the quality of emissions information improves and experience is gained in terms of mitigation actions, the strategy will be revised and adjusted. The strategy will facilitate the creation of coordinated sectoral strategies containing detailed policies, measures, programmes and projects. In addition, the strategy will identify mitigation and
adaptation actions and capacity-building needs, providing a strategic and programmatic basis for effective international support. In addition to management issues, the strategy will also ensure that mitigation and adaptation measures are gender sensitive and include specific actions to ensure that the most vulnerable population groups receive adequate support.

Training for the preparation and implementation of NAMAs by non-Annex I parties to the United Nations Framework Convention on Climate Change (UNFCCC) are key requirements arising from the negotiation process under the convention. According to the recommendations of the Conference of the Parties to the UNFCCC held in Copenhagen in 2009 (COP15), developing countries are required to submit their NAMA project proposals to the convention secretariat. The Cancun Agreement, adopted at COP16 in 2010, included an agreement to establish a NAMA registry, to prepare a work plan to support NAMA implementation, and to create a standard format and manuals for the monitoring, reporting and verification of emissions.

The implementation of the strategy will certainly require the strengthening of national capacities in terms of defining project proposals, as well as implementing activities related to emissions reductions, monitoring and reporting. These activities do not require extra budgetary funds from Bosnia and Herzegovina but rather depend on the use of international funds.

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CHAPTER 7

Climate Change Policies in South Eastern Europe and the LOCSEE project

BY MARIA BEATRIZ ROSELL PEREZ
Introduction

Climate change is defined by the Intergovernmental Panel on Climate Change (IPCC) in its 2013 Summary for Policymakers – Fifth Assessment Report as “a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period”. According to this document, “the warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia”. The last statement is based on detailed and long-term observations and improvements to climate models. Observations have enabled the attribution of anthropogenic impacts on the climate and it has been concluded that cumulative CO₂ emissions are not only influencing the increase in global temperatures, but that these emissions will also influence warming trends through the 21st century and beyond, thus climate change will continue even if greenhouse gas (GHG) emissions are fully reduced (IPPC 2013).

Climate change is regarded as a major environmental, social and political issue because of its intrinsic and complex relationship with the global economy in terms of energy resources and industrial development and production, as these are the main sources of GHG emissions. Current climate change policies encompass adaptation (steps to adapt to current changes in the climate); mitigation (efforts to reduce and prevent GHG emissions); and, since some vulnerable countries are unable to undertake either adaptation or mitigation, the loss and damage principle (introduced in 2012 based on financial compensation paid by states that fail to reduce GHG emissions to countries that are vulnerable to climate change impacts). Climate policy mainstreaming is another hot topic in the global climate negotiations and concerns the integration of GHG emissions reduction targets within a country’s relevant economic sectors.

Climate challenges in South Eastern Europe

South Eastern Europe (SEE) is a diverse and complex region in which countries face common challenges: a history of conflict, multiethnic societies and low GDP per capita levels compared to the EU28 average. Although European integration is widely recognised as a key strategy towards economic development in the region, the countries of SEE are still characterised by the unsustainable use of resources, giving added urgency to environmental issues and climate change risks.

The SEE region is experiencing a general warming trend, as indicated in regional reports (e.g. Bruci 2007, Whitlock 2012). In the case of Albania, more frequent droughts are expected. The country is sensitive to variations in rain patterns and extreme weather events due to its high reliance on irrigation and hydropower
In Bosnia and Herzegovina and Serbia, precipitation will increase in some areas and decrease in others. In the former Yugoslav Republic of Macedonia, the intensity and frequency of floods and droughts will continue to increase. Serbia will continue to experience intense droughts. Extreme heat waves are expected in Montenegro, which has been affected by heat waves since 1998. In Kosovo*, the severe droughts that have taken place since the 1980s will continue, accompanied by the increasing intensity and frequency of heavy rain and floods in the lowlands. The number of forest fires will increase in Kosovo* (Restelica 2013).

While the negative impacts of climate change are already evident, in the future there will also be drinking water shortages, a reduction in agricultural productivity, more severe droughts and an even greater risk of floods heat waves and forest fires and lower capacity for renewable energy generation (Whitlock 2012). Other impacts will be evident in the areas of public health and food security.
Climate change policies in the SEE region and the transposition of the Climate and Energy Package

Shaping policies and measures in a harmonised way in order to reduce GHG emissions in all EU member states, candidate and potential candidate countries, as well as neighbouring countries remains one of the most important tasks for Europe. The lack of availability and capacities of national authorities represents a major obstacle, as in SEE there are different levels of experience on low-carbon policies. These low-carbon policies follow the EU 2020 Strategy — that is, the Climate and Energy Package or the 20-20-20 targets (cutting GHG emissions by 20 percent from 1990 levels, increasing the use of renewables by 20 percent, and achieving a 20 percent improvement in energy efficiency by 2020). The shortage of administrative capacities and budgetary deficits are another collective constraint. Inter-institutional cooperation needs to be improved, and significant efforts are required to strengthen the countries’ monitoring, reporting and verification capacities (EC progress reports 2013). Climate change requirements are still not well integrated into policy making and policy implementation. The active participation of a wide range of stakeholders and the launching of a dialogue on potential solutions are therefore essential in order to move decision making in the direction of a low-carbon economy and a low-carbon society.

Although the countries of SEE have experience in introducing measures aimed at reducing GHG emissions through the drafting of low-carbon policies, of promoting low-carbon technologies, and of transposing EU climate legislation, progress in these areas varies significantly across the region (www.locsee.eu). In terms of building the capacities of public authorities, the SEE countries regularly participate in the climate component of the Environmental and Climate Regional Accession Network (ECRAN). Countries are also taking action at domestic level. Among the most important regional climate change initiatives in SEE are the SEE Climate Change Framework Action Plan for Adaptation (SEE/CCFAP-A), the SEE Disaster Risk Management and Adaptation Programme, the SEE Forum on Climate Change Adaptation, ECRAN and the Environment and Security Initiative (ENVSEC). The level of transposition of EU climate directives is shown in Table 1, based on the European Commission’s 2013 progress reports.
## Table 1: Climate Change and the Climate Acquis (EC Enlargement Progress Reports 2013)

<table>
<thead>
<tr>
<th>Country/ Focus</th>
<th>Alignment</th>
<th>Monitoring, Reporting and Verification (MRV)</th>
<th>Awareness</th>
<th>Status of Administrative Capacity</th>
<th>Overall Progress/ Stage of Preparation in the Field of Climate Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>Progress has been made but further efforts are needed for proper implementation and enforcement.</td>
<td>Significant efforts are still required.</td>
<td>Climate awareness remains low and cooperation between all relevant stakeholders requires further strengthening.</td>
<td>Limited administrative capacity and weak inter-institutional cooperation are delaying the preparation and implementation of climate policy in line with the acquis.</td>
<td>Little progress. Early stages.</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>Very early stages. Lack of a comprehensive climate strategy. Substantial efforts are required to fully integrate climate change into sectoral policies.</td>
<td>Significant efforts are required.</td>
<td>Significant efforts are needed to raise awareness at all levels.</td>
<td>Weak administrative structure on climate change: needs to be considerably strengthened.</td>
<td>Limited progress. Early stages.</td>
</tr>
<tr>
<td>Kosovo*</td>
<td>No development. Need for concrete steps for alignment and implementation.</td>
<td>No development in reporting.</td>
<td>Efforts are needed to raise awareness at all levels.</td>
<td>Weak. Inter-institutional cooperation is fragile and inconsistent.</td>
<td>Early stages. Legal and institutional framework to implement EU standards is partially in place.</td>
</tr>
<tr>
<td>COUNTRY/FOCUS</td>
<td>ALIGNMENT</td>
<td>MONITORING, REPORTING AND VERIFICATION (MRV)</td>
<td>AWARENESS</td>
<td>STATUS OF ADMINISTRATIVE CAPACITY</td>
<td>OVERALL PROGRESS/STAGE OF PREPARATION IN THE FIELD OF CLIMATE CHANGE</td>
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</tr>
<tr>
<td>FYR Macedonia</td>
<td>Limited progress in alignment with the EU climate acquis. No comprehensive countrywide climate policy.</td>
<td>Significant efforts are required to strengthen MRV.</td>
<td>Efforts to raise awareness and promote cooperation between stakeholders should be intensified.</td>
<td>Little effort made to strengthen administrative capacity for implementing and enforcing climate change legislation. Lack of sufficient human and administrative capacities and capital to implement climate standards.</td>
<td>Limited progress. Early stages. Substantial efforts are required in order to integrate climate change into other sectoral policies and strategies. Climate standards are not mainstreamed.</td>
</tr>
<tr>
<td>Montenegro</td>
<td>Early stages. No developments regarding environmental liability. Need for a comprehensive climate strategy.</td>
<td>Significant efforts are required.</td>
<td>Efforts are needed to raise awareness at all levels and to promote cooperation between all relevant stakeholders.</td>
<td>Training provided to ministries but the constant reliance on temporary staff is a concern. Administrative capacities need to be strengthened.</td>
<td>Little progress. Early stages.</td>
</tr>
</tbody>
</table>
Assessment of climate change policies and challenges by country

In the following country overviews, the main source of information on Albania, the former Yugoslav Republic of Macedonia, Montenegro and Serbia was the draft state-of-the-art analyses of climate change, which are among the outputs of the project Low-Carbon South East Europe (LOCSEE), delivered by project partner Joanneum Research.

In Albania, one of the external factors driving improvements to climate change policies is EU accession. Internally, investments in green technologies (transportation, renewables and energy efficiency), along with ecotourism, organic farming, carbon financing and forest certification are among the important drivers of sustainable development (Drakenberg 2011). The Ministry of Environment, Forests and Water Administration (MoEFWA) is responsible for implementing climate change–related activities. In relation to international environmental obligations in the field of climate change, Albania ratified the Kyoto Protocol in 2005 and submitted its first national communication to the United Nations Framework Convention on Climate Change (UNFCCC) in 2002. The second communication was prepared in 2009, and in April 2013 the MoEFWA announced the preparation of the third national communication in collaboration with the United Nations Development Programme (UNDP).
The main sectors contributing to GHG emissions are energy (44 percent), agriculture (27.2 percent) and land-use change and forestry (21.6 percent) (Second National Communication to the UNFCCC 2009). According to the analysis carried out by Joanneum Research, Albania is a relatively low net emitter of GHGs, with relatively low CO₂ emissions per capita, mainly due to the fact that 95 percent of its electricity is generated from hydropower. However, emissions of CO₂ per unit of GDP are high, due to the high levels of energy intensity. If no measures are implemented, the country may see a strong rise in GHG emissions by 2020. As one of the Energy Community contracting parties, Albania has adopted a target for renewables of 38 percent, while the current share is 29 percent. The energy-saving target for 2018 is 9 percent, a goal acknowledged in the draft National Strategy for Development and Integration (NSDI) for 2013–2020. Other documents relevant to the energy sector and climate change mitigation include the National Energy Efficiency Action Plan (2010–2018), and the draft National Action Plan on Renewable Resources.

Although the NSDI for 2007–2013 is a key document, touching on the need for mitigation and adaptation measures, it contains no clear target related to GHG emissions reductions. The Environmental Cross-cutting Strategy 2007–2013 focuses on energy efficiency improvement in all sectors. Concerning climate change policies, current measures are implemented in the framework of the Second National Communication to the UNFCCC, in which each sector scenario was developed and mitigation and adaptation actions suggested. The measures are being implemented through projects such as the UNDP Global Solar Water Heating Market Transformation and Strengthening Initiative; the UNDP Identification and Implementation of Adaptation Response Measures in the Drini–Mati River Deltas; and Building Capacity to Access Carbon Finance in Albania (Western Balkans Investment Framework).

In the draft NSDI for 2013–2020, Albania set a GHG emissions reductions target of 16 percent by 2020, compared to the baseline year 1990, and a target for reducing the amount of hydrochlorofluorocarbons (HCFC) from 120 to 108 tonnes by 2014, with the long-term goal of a reduction by 29 tonnes by 2040. Regarding adaptation measures, the Ministry of Agriculture, Food and Consumer Protection and the Ministry of Health, with the assistance of the World Bank, are working on the development of the Programme for Reducing Vulnerability to Climate Change in the Albanian Agricultural System, and the Albanian Strategy for Health Adaptation in the Climate Change Context. The MoEFWA, in cooperation with UNDP and the Austrian Development Agency, prepared the Albanian Policy Paper for Carbon Finance in 2009, which envisions Albania as being placed competitively in the Clean Development Mechanism and future carbon markets, based on the high quality of Albanian project activities.

Bosnia and Herzegovina ratified the UNFCCC in September 2000 and the Kyoto
Protocol in April 2008. Shortly after these commitments, the country created the institutional basis to tackle climate change challenges (Laganin 2010). The Ministry of Physical Planning, Civil Engineering and Ecology is the main institution dealing with climate change issues. It is the focal point for the UNFCCC and the Global Environment Facility (GEF) operational focal point. The 32-member State Climate Change Steering Committee was also established (Laganin 2010). The initial financial support for preparing the preliminary documents for the first UNFCCC national communication in 2009 came from the GEF, and Bosnia and Herzegovina is now working on the second national communication. Data in the 2009 communication are from 1990: the share of GHG emissions from the energy sector was 74 percent, followed by agriculture (12 percent), industrial processes (11 percent) and waste (3 percent). The initial communication indicates the need to develop a national climate change mitigation strategy and action plan, and the importance of relating this strategy to the national economic and development plans, as well as of provisions for the direct inclusion of local-level entities and authorities.

In 2010, the main activity in the field of climate change was the national capacity-building programme carried out under the World Meteorological Organization’s programme for climate monitoring, the detection of climate extremes, capacity building on early warning and forecasting, and climate data gathering and management using advanced methods and technologies. By 2010, four projects on the Clean Development Mechanism had been reported, focusing on energy efficiency and renewables. Another project focused on sustainable transportation, strengthening cooperation in the field of climate change at local, national and regional level, and another on the preparation of the Climate Change Action Plan which was still a draft document in 2010 (Langanin 2010). At present, Bosnia and Herzegovina lacks a comprehensive countrywide climate policy, and significant efforts are needed to integrate climate policies in the different sectors. Alignment with the EU climate acquis is at a very early stage and the country has made limited progress in terms of preparations EC-BH 2013). There is also a lack of research on how climate change issues will affect forest productivity and biodiversity, for example, at regional and local level. Related models have not yet been developed for evaluating possible national actions (Vojnikovic 2010).

The main institutional challenges hindering the development of climate change policies are the insufficient financial means to meet increasing management costs for climate activities; the poor regulatory framework; non-transparent business procedures; corruption; and poor infrastructure (Vojnikovic 2010). The question remains how to articulate strategies and how to monitor what has been accomplished with the support of international experts and funding from, for example, GEF, UNEP, UNDP and bilateral donors.
Kosovo* declared its independence in 2008 and there is an urgent need to clarify its legal status in relation to various international processes, including its status with respect to the UNFCCC; and to accomplish the goals set out in international conventions and agreements (Pfeiffer 2010). Addressing environmental issues has recently become more of a priority in Kosovo*, following various environmental problems such as flooding in 2006 and severe droughts in 2007 and 2008 (Restetica 2013). In 2008–2009, Kosovo* carried out its first GHG inventory, supported by various international agencies and experts. Emissions reached 9.5 Mt CO$_2$-eq in 2008 and 10.5 Mt CO$_2$-eq in 2009. As elsewhere in SEE, the energy sector in Kosovo* (combustion and the exploitation of fossil fuels) was a key contributor, with a share of 82 percent. In 2008–2009, the share of agriculture was 13 percent, followed by the waste sector (3 percent) and industrial processes (2 percent).

In terms of climate strategies, Kosovo* faces institutional problems: lack of human capital is a major challenge, along with low levels of awareness among decision makers, lack of financial resources and low levels of inter-institutional cooperation (Restelica 2013). Responsibilities are not clearly divided between the central and local-level authorities, there are weak environmental management systems, and weak law enforcement mechanisms (Pfeiffer 2010). A system needs to be established to properly assess and select measures to reduce GHG emissions and the capacities of national and local authorities must be strengthened. A climate change focal point still needs to be appointed, and financial methods and opportunities for mitigation and adaptation measures need to be improved (Restelica 2013). According to the European Commission progress reports, in 2013 there were no developments in terms of EU climate acquis alignment, and no developments in reporting. Administrative capacity remains weak, institutional cooperation is poor, and climate standards have not been mainstreamed into other policies.

By contrast, the United States Agency for International Development (USAID) has reported some activities related to GHG emissions reductions. As an initial step towards the formulation of climate change policies, the Low-Emission Development Strategy (LEDS) for Kosovo* has been developed with the assistance of UNDP, under a global initiative for sharing knowledge and resources to advance low-emission development. Activities are based on peer-to-peer learning, regional and country-level cooperation, donor coordination and the implementation of analytical tools for capacity-building activities. This is particularly positive for Kosovo*, taking into consideration the statements on climate change preparations in the EC 2013 progress reports. Concerning energy targets, Kosovo* plans to reach a share of 7 percent of renewables use by 2016. Kosovo* has developed feed-in tariffs for wind and hydropower, and the same incentives are currently being prepared for solar energy
The regulatory framework has improved: laws have been passed on giving priority to power produced from renewables, certificates of origin, preferential access to the grid, and tax incentives.

Between 2014 and 2018, USAID will assist Kosovo in the fields of energy efficiency, renewables and policy making on low-carbon systems. The GHG emissions management system will be managed by the Kosovo Environmental Protection Agency (KEPA), which will report to internal and external bodies on policy development, policy debates and policy monitoring.

The former Yugoslav Republic of Macedonia ratified the UNFCCC as a non-Annex I party in December 1997, and the Kyoto Protocol in July 2004. The country has presented two national communications to the UNFCCC (2003 and 2009) and is currently preparing its third communication. The National Action Plan for Climate Change Mitigation was announced in the second national communication (UNEP 2012). A roadmap was prepared for the introduction of monitoring reporting and the verification of GHG emissions under the EU Emissions Trading System (EU-ETS) in 2012, and the country has started building its relevant capacities.

The former Yugoslav Republic of Macedonia is one of the few SEE countries that made efforts to reduce emissions from the land-use change and forestry sector in the period 1990–2002. Emissions of GHGs from the agricultural sector were reduced by 8 percent, although the energy sector is still the main contributor to GHG emissions (70 percent). The Green Growth and Climate Change Analytic and Advisory Support Programme was launched in 2011, and the entity responsible for coordinating this initiative, as well as for all other climate change–related activities, is the Ministry of Environment and Physical Planning (MOEPP) with the support of the World Bank. In addition, a national system for the stabilisation of GHG concentrations in the atmosphere has been legally established under the country’s Environmental Law.

Mitigation measures have been introduced into certain national strategies, and the Comprehensive Communication Strategy on Climate Change, along with a detailed action plan, has been prepared. A case study on the mitigation potential in the transport sector has been undertaken, and it is envisaged that mitigation scenarios will be analysed to assess possible GHG reductions in line with future UNFCCC and EU requirements. In the National Sustainable Development Strategy (2010), improvements within the energy sector were identified to contribute towards national sustainable development. In the National Environmental Investment Strategy (2009), carbon financing is identified as a potential means of attracting foreign investments. The National Strategy for the Adaptation of the Health Sector to Climate Change (2011), the National Strategy for Clean Development Mechanisms 2008–2012 (2007) and national climate change indicators have also been developed.
The country has identified a GHG emissions reduction target of 20 percent by 2020 under the business-as-usual scenario, a target of 30 percent reduction including mitigation measures. Another goal for 2020 is to achieve a share of 21 percent of renewables in total energy consumption, while the national indicative annual energy-saving target for 2018 is 9 percent (147 ktoe). The third national communication to the UNFCCC will comprise five sections: a national GHG inventory following the guidelines of the Intergovernmental Panel on Climate Change; vulnerability assessments based on the previously developed climate scenario in the water resources, forestry, health, biodiversity, agriculture, disaster risk reduction and tourism sectors; the definition of appropriate climate change adaptation measures; mitigation assessments and case studies in the energy, industrial processes, energy efficiency in buildings, transport and waste sectors; and research through the transfer of technologies.

Montenegro ratified the UNFCCC in October 2006 as a non-Annex I party, and the Kyoto Protocol in March 2007. It submitted its initial national communication to the UNFCCC in 2010, and in 2014 the government plans to finish the second national communication. Between 1990 and 2003, the country reduced its GHG emissions by 2 percent (UNEP 2012). The Ministry for Sustainable Development and Tourism is the main competent body in the field of climate change (adopting policies and regulations); and the Environmental Protection Agency is the executive body for the implementation of legislation. The country’s national strategic and legal frameworks deal to some extent with climate change issues, although Montenegro is still in the early stages of preparations for tackling climate change. In 2003, the energy sector contributed the biggest share of the total GHG emissions generated in Montenegro (49.8 percent). Industrial processes contributed 35.5 percent, mostly from aluminium production. The contribution of the agriculture sector was 12.3 percent, and the waste sector produced 2.3 percent of national GHGs.

In its various national and environmental strategies, including the National Strategy for Sustainable Development (2007) and the National Environmental Policy (2008), Montenegro has set general goals in the field of climate change. Climate change is poorly integrated into the policies and plans of the agricultural, spatial planning and waste sectors, but in the forestry, air quality and energy sectors the integration of climate change policies is somehow better. Between 2010 and 2011, Montenegro improved its legislative framework in relation to the energy sector, developing the Energy Law, the Law on Energy Efficiency, the Energy Policy of Montenegro up to 2030, and the draft Energy Development Strategy of Montenegro up to 2030. Montenegro’s current energy targets are for a 33 percent share of renewables in use by 2020, and a 9 percent improvement in energy efficiency by 2018. Strategies include combined heat and electric power, improvements to the efficiency
of industrial boilers, the replacement of coal with liquefied petroleum gas in industrial boiler rooms, and the production of high-temperature heat.

In the transport sector, the strategy is to replace fossil fuels with alternative fuels and to develop a more efficient transportation system. In the agricultural sector, improvements to manure management and the promotion of organic farming have been identified as strategies. In the land-use and forestry sector, Montenegro intends to increase the share of highly productive forests, to rehabilitate damaged forests and to preserve woodland habitats (UNEP 2012). Two relevant actions for addressing climate issues were envisaged for 2013: the establishment of the National Council for Sustainable Development and Climate Change; and the start of work on the National Climate Change Strategy up to 2030.

Among the countries of SEE, Serbia stands out in terms of progress made in climate change policies, as stated in its EC progress report. Serbia ratified the UNFCCC in March 2001 as a non-Annex I party, and the Kyoto Protocol in January 2008. The Ministry of Energy, Development and Environmental Protection (MEDEP) is the focal point for the UNFCCC and the Kyoto Protocol. Since the ratification of the UNFCCC, Serbia has made considerable efforts Serbia to fulfil the convention’s requirements. The preparation of the first biennial update report, an obligation under the UNFCCC, has started, and the National Appropriate Mitigation Action (NAMA) Development Guideline has been prepared. The first national communication to the UNFCCC was submitted in 2010, and the government is currently working on the second communication. In the period 1990–1998, Serbia was able to achieve a 22 percent reduction in its GHG emissions, mostly in relation to the energy sector (UNEP 2012). According to the initial national communication to the UNFCCC (former Ministry of Environment and Spatial Planning, fMESP, 2010), in 1998 the largest share of GHG emissions was generated by the energy sector (76.1 percent), followed by agriculture (14.3 percent). Emissions from industrial processes contributed 5.4 percent and the waste sector 4 percent. The initial communication states that in 1998, the decrease in GHG emissions in Serbia was 28.5 percent with respect to 1990 levels, taking into account amounts removed by the forestry sector.

The preparation of the Climate Change Strategy and associated action plan is foreseen and will include an examination of basic needs in terms of climate change adaptation in order to define a sustainable path towards GHG emissions reductions. The strategy and action plan will determine GHG levels, along with GHG emissions reduction targets by 2020 and 2030. Regulations in specific sectors, including energy, waste, air, transport and industries, are contributing to climate change mitigation, while policies in the forestry sector include certain adaptation measures. In the transport sector, Serbia is aiming to re-establish an efficient international rail system,
repair roads, increase the level and efficiency of river transportation, and cease production of leaded gasoline. The country is willing to invest in waste technology, while in the agricultural sector the use of biogas in the production of heat and power for local consumption in large livestock operations is a key step towards reducing agricultural emissions. In terms of forestry and land use, the optimal strategy is afforestation.

The National Environmental Protection Programme (2010) and the Sustainable Development Strategy (2008) consider climate change as an important environmental challenge. The Strategy for Energy Development up to 2015, the Strategy for Scientific and Technological Development, and the Strategy for Forestry Development have also been developed and refer to the importance of mitigation and adaptation activities along with economic development in the energy and forestry sectors. In 2010, Serbia adopted the first Energy Efficiency Action Plan (LOCSEE-RS 2013). As a contracting party to the Energy Community, Serbia has ambitious targets by 2020, including a 27 percent share of renewables, and a 10 percent share of biofuels in the transport sector. The energy efficiency target is similar to that of other SEE contracting parties (9 percent by 2018).

Overview of the LOCSEE project: Main outputs to improve policies related to climate change and low-carbon development in SEE

In the context outlined above, the Low-Carbon South Eastern Europe (LOCSEE) project aims to strengthen the capacities and knowledge of public authorities and other institutions dealing with climate change in selected SEE countries (Albania, the former Yugoslav Republic of Macedonia, Montenegro and Serbia), old EU member states (Austria, Italy and Greece) and new members states (Croatia, Hungary and Slovenia). The LOCSEE project tackles regional challenges such as the differing levels of experience related to low-carbon policies, the lack of a systematic approach to the creation of low-carbon policies, the lack of capacity in the public authorities, and the lack of any coordinated transfer of EU climate legislation. The project is financed by the South East Europe Transnational Cooperation Programme and the European Union.

The two-year LOCSEE project was launched in December 2012 with the goal of developing a systematic cross-sector approach to the creation of low-carbon policies. It promotes the involvement of stakeholders in policy development in line with the Europe 2020 Strategy through national and regional working groups and through the transfer and exchange of innovative good practices to capitalise on the results of past activities. The added value of LOCSEE is the implementation of integrative and participatory cross-sectoral approaches and the involvement of key organisa-
tions responsible for climate change that are able to transfer know-how to institutions and develop policies. The project combines progress towards EU integration and the progress of all beneficiary countries in the framework of the international climate change negotiations.

The LOCSEE partnership comprises 11 project partners and six observing partners (from Austria, Belgium, Greece, Italy and Slovenia), including key actors dealing with climate change, such as national ministries, government offices, university and research organisations and international organisations. (For a list of partners, see the project website at www.locsee.eu.) The LOCSEE outputs will have an impact on the development of climate change and low-carbon policies in beneficiary countries, although the scope of actions and benefits is broader, as certain project outputs, as described below, will be transferable and available to other regions as well.

State-of-the-art analysis
This comprises 10 country analyses and a regional report on the existing situation in terms of climate change and low-carbon policy development in all project beneficiary countries, taking into account the international, national and local institutional set-up. The analyses contain information on economic, political and social aspects, and on sectors involved, or potentially involved, in low-carbon policies. These documents provide the basis for future project activities, which will be built on the needs and sectors identified in analysis. The structure of the documents can also help other countries (within and outside the SEE region) to describe in a comprehensive way the current status of climate change policy development in order to effectively communicate information among decision makers in relevant sectors connected to climate policies.

Good practice exchange platform
The platform will encourage the pooling, transfer and exchange of innovative and efficient practices by means of a collection of 45 good practice examples. A good practice is defined as a process or methodology that works well and produces good results. The majority of the examples are in the field of climate change mitigation and GHG emissions reduction policies (e.g. renewables, energy efficiency, regulation). The LOCSEE strategy to facilitate the identification and sharing of good practice initiatives in selected SEE countries comprises two key elements. The first element is the creation of the good practice database, providing people with information about successful ideas and initiatives, about how EU legislation is being successfully applied in a specific region, and about factors crucial to successfully connecting people with information. The second element is to enable an exchange of information and knowledge via a knowledge-sharing forum (JR 2013).
National working groups

The presence of climate change experts, public authorities and decision makers at meetings and consultations is crucial in shaping and developing low-carbon policies, as these stakeholders can provide recommendations for the development of project outputs. National working groups (NWGs) have been established in all project beneficiary countries, and the members have jointly discussed how to improve living conditions while maintaining low levels of energy consumption, and how to export technical expertise and national and regional experiences. Austria, for example, expressed interest in transferring knowledge on biomass combustion. The identification of crucial sectors for the development of low-carbon policies is also essential for LOCSEE target countries. At recent NWG meetings, sectors have been identified where improvements to low-carbon policies are needed: these include the waste sector in Serbia, the transport and waste sectors in Albania, the transport sector in Croatia, and the building sector in Montenegro and the former Yugoslav Republic of Macedonia.

Guide to the coordinated cross-sector transfer of EU directives in the field of climate change

This output is based on the legally binding goals adopted by the EU, including the 20-20-20 targets. The EU is committed to the transformation to a low-carbon economy, therefore SEE countries are also taking actions to reduce their GHG emissions. This guidance on the coordinated transposition of EU climate legislation will therefore focus on the candidate and potential candidate countries and will cover cap setting, free allocation, auctioning, monitoring and reporting, verification and accreditation, and the registry of the EU-ETS. Other areas addressed will be carbon capture and storage technology, binding GHG targets in the transport sector and legislation to protect the ozone layer. The guidance will also contain a list of relevant climate and energy legislation that has not yet been transposed, a description of the particular EU legal act and the authorities involved. It will also contain data about the actual implementation process, such as cost and the human resources and institutional efforts required for the successful transfer of EU directives.

Cross-sector step-by-step manual on creating low-carbon policies

This will be a detailed guide for countries looking towards EU membership (Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Montenegro and Serbia, as well as Kosovo*), although it can be used by other countries or regions interested in improving their low-carbon practices. The manual is based on the ex-
experience gained by EU member states in the region that have already implemented low-carbon policies, and it takes into consideration the real needs, gaps and barriers in SEE countries. It describes the broader climate change scene; international and EU commitments and requirements for candidate and potential candidate countries; and requirements, methodologies and tools for analysing past and current GHG trends. It also contains steps for assessing the potential and impacts of low-carbon measures; and methods for developing GHG projections, selecting low-carbon targets and appropriate measures, and implementing and monitoring low-carbon policies.

Regional Policy Network

The Regional Policy Network (RPN) will enable collaboration between countries on climate change mitigation and adaptation. Activities, inputs, contributions and recommendations can be channelled through the RPN in a number of areas that can significantly support national activities related to climate change and maximise the cumulative result of actions across the whole European area. Potential participants in the network include members of existing NWGs established during the implementation of LOCSEE, government officials directly or indirectly dealing with mitigation and adaptation, high-level officials from independent units with an influence on the development of low-carbon policies, representatives of local administrations, research centres and academic institutions, and NGOs. Ideally the RPN will also include representatives from the SEE Transnational Cooperation Programme, the EC, and European associations in the fields of renewables and energy saving.

The RPN aims to accelerate the development and implementation of low-carbon policies in SEE countries and to ensure the transferability and sustainability of project results. It also aims to bridge the gap between policy makers and experts working in the field of climate change through the collaborative exchange of knowledge and the dissemination of information on the social and economic benefits of low-carbon policies. The RPN will promote the identification and implementation of best practices for GHG emissions reductions in SEE countries and will help to identify less-effective practices in order to design actions that can help each country to achieve its GHG emissions reduction potential. It is planned to establish working groups within the RPN on topics such as renewables, energy efficiency, adaptation, the legal and institutional framework and financial instruments.

Final remarks

In Albania, Bosnia and Herzegovina, Kosovo*, the former Yugoslav Republic of Macedonia, Montenegro and Serbia, it is important to strengthen institutions,
capacities and policies in the field of climate change. The analysis of institutional structures and political and economic sectors needs to be integrated in any evaluation of potential climate change strategies, for either mitigation or adaptation. It is also crucial to enhance the participation of civil society through awareness-raising activities, as this area is currently deficient in the SEE region. Although efforts are actively being made to comply with EU standards (the climate acquis), there is an increasing focus within public institutions on carrying out climate actions in the international arena. The problem is that some of these actions are not directed in a uniform manner, or that efforts are insufficient, requiring further coordination, cooperation and financing and a long-term vision. This is why projects such as LOCSEE bring substantial benefits to the SEE region in terms of progress towards EU integration and attempts to coordinate low-carbon strategies with a cross-sectoral focus.

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CHAPTER 8

Waste Management in South Eastern Europe

BY MARIA BEATRIZ ROSELL PEREZ
Introduction

In the quest for sustainable development, it is necessary to reconsider the handling of unwanted substances generated by anthropogenic activities. Indiscriminate resource utilisation has profoundly disturbed the environment, putting in jeopardy ecosystems and people’s health and quality of life (Srivastava et al. 2005). In spite of the increased generation of waste, and the inappropriate disposal of hazardous substances, there is a growing interest in minimising waste, upgrading recycling and energy recovery infrastructure, and giving greater emphasis to the responsibility of industries. Worldwide, the management of waste streams, including hazardous, industrial and household waste, has become a permanent element in public planning efforts and private investments. Successful waste management practices in developed countries such as EU member states are evident through the adoption of clear legal mandates and enforcement, strategic national and local planning, significant improvements to operational procedures, investments in new and clean technologies, and the involvement of civil society in minimising waste generation.

EU waste standards and an overview of waste management in South Eastern Europe

Waste prevention and management are among the four main priorities in the EU’s Sixth Environmental Action Programme. The EU follows various principles for integrated waste management, one of which is the ‘waste hierarchy’. This is a five-step pyramid of actions where waste prevention is the best option, followed by re-use, recycling and other forms of recovery, with waste disposal, including landfilling, as the least desirable method. According to the EU’s 2020 waste targets, 50 percent of household waste and 70 percent of construction and demolition waste must be recycled. By 2006, the amount of biodegradable waste sent to landfill had to be reduced by 25 percent, with a 50 percent reduction by 2009 and a 65 percent reduction by 2016 (EC 2013). Additionally, by 2020 all EU member states should have waste prevention plans. Separate collection (waste separation) is defined in Article 3 of the Waste Framework Directive, as “a collection where a waste stream is kept separate from waste of a different type or nature so as to facilitate a specific treatment”. This is a crucial step in facilitating the re-use, recycling and recovery of material and to eliminate hazardous waste compounds.

Accession to the EU is one of the main drivers for improving waste management in the South Eastern Europe (SEE) — Albania, Bosnia and Herzegovina, Kosovo*, the former Yugoslav Republic of Macedonia, Montenegro and Serbia. Current waste management conditions in the SEE vary significantly in terms of EU alignment:
<table>
<thead>
<tr>
<th>COUNTRY/FOCUS</th>
<th>ALIGNMENT: LEGISLATION, IMPLEMENTATION AND PLANNING</th>
<th>CAPACITIES</th>
<th>SEPARATION AND RECYCLING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>Legislation has been adopted and management plans prepared. To date, only two sanitary landfills comply with EU standards.</td>
<td>Municipalities have weak capacities to manage waste, including final disposal.</td>
<td>Separation has not yet started and recycling rates are very low. The recycling industry is a new business. New investment is necessary for separation and recycling.</td>
</tr>
<tr>
<td>Kosovo*</td>
<td>A number of administrative instructions and acts have been adopted on waste (Act on Management of End-of-Life Vehicles).</td>
<td>Very weak municipal capacities for waste management.</td>
<td>Very low rates of separation and recycling.</td>
</tr>
<tr>
<td>FYR Macedonia</td>
<td>Alignment with the acquis continues, with the implementation of waste legislation.</td>
<td>Few efforts to strengthen administrative capacities.</td>
<td>Investment in separation and recycling needs to be increased.</td>
</tr>
<tr>
<td>FINAL DISPOSITION/ ILLEGAL DISPOSAL</td>
<td>HAZARDOUS WASTE: BASEL CONVENTION AND SHIPMENT</td>
<td>STATUS/OTHER ASPECTS</td>
<td></td>
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<td>-------------------------------------</td>
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<tr>
<td>Most waste is still disposed of unsafely in illegal dumps, or burned. The construction of one landfill is under way. There are no clear procedures for the management and control of landfills.</td>
<td>There is no national strategic plan for hazardous waste, and no facilities for hazardous, medical and construction waste. According to its 2010 Basel Convention report, Albania has taken some steps towards compliance with the convention. Waste is shipped to developed countries for incineration due to lack of experience in Albania in treating waste.</td>
<td>Waste remains a serious concern. Sustainable investment in the field of waste management is needed.</td>
<td></td>
</tr>
<tr>
<td>Some studies have been undertaken on selected locations for future regional sanitary landfills.</td>
<td>No strategy has been adopted to manage radioactive waste and there are no facilities for medical waste. Transposition rate of the Hazardous Waste Directive is 90%.</td>
<td>No national waste strategy.</td>
<td></td>
</tr>
<tr>
<td>Regulated waste disposal prices do not fully cover costs.</td>
<td>No licence for storage of radioactive waste.</td>
<td>Steps taken to set up an integrated regional waste management system.</td>
<td></td>
</tr>
</tbody>
</table>
legislation, strategic planning, policy setting, infrastructure and the use of technology. This can be explained by the different socioeconomic conditions, institutional support from international and regional organisations, and political commitment to comply with existing waste and environmental legislation (Vujic et al. 2013). The levels of waste separation, collection, transportation, treatment and disposal in these countries are below the EU standards. Waste management facilities and capacities for the treatment and disposal of waste are inadequate; legislation and standards are not effectively enforced; illegal shipments of waste are still a problem; and current waste management practices are contributing to the pollution of air, land and water resources. Although the overall situation has improved, the majority of these problems persist, as stated in the European Commission 2013 progress reports for all six countries. Table 1 shows the progress to date and the existing issues that need to be addressed by SEE countries in order to comply with EU standards.

### Table 1: Waste and the EU Environmental Acquis (Continued)

<table>
<thead>
<tr>
<th>COUNTRY/FOCUS</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Montenegro</td>
<td>Legislation on waste oil, packaging, construction waste, cement and asbestos has been adopted. Further efforts are needed for implementation and enforcement.</td>
<td>Cooperation between state and local authorities needs to be strengthened.</td>
<td>New investments are needed in the area of separation and recycling.</td>
</tr>
<tr>
<td>Serbia</td>
<td>Full alignment is yet to be achieved. An investment pipeline linked to strategic priorities has to be developed.</td>
<td>Collection rate of household waste has increased from 72% to 78%.</td>
<td>New regional waste management centres have been opened. New investment in separation and recycling is needed.</td>
</tr>
</tbody>
</table>

Sources: EC progress reports 2013; National Basel Convention reports and database; European Environment Information and Observation Network (Eionet)
### Final Disposition/Illegal Disposal

First IPPC licences issued for three landfills, but waste continues to be disposed of in illegal dumps and open-air landfills.

### Hazardous Waste: Basel Convention and Shipment

No information available.

### Status/Other Aspects

Early stages of an integrated waste management system.

### Waste Profiles and Good Practices from SEE Countries

In order to highlight the strengths and limitations of the waste sector in each selected SEE country, a brief description is provided based on information that is publically available in reports from international and regional organisations, including the Central Intelligence Agency (CIA) World Factbook country profiles (2013), the United Nations Development Programme website, the United Nations Economic Commission for Europe environmental performance reviews, the European Environment Agency, the European Environment Information and Observation Network, as well as official and draft government documents available on ministry websites.

Albania has a population of 3.01 million inhabitants, with a growing free-market economy based on agriculture as the main economic sector. In the second national communication to the UNFCCC in 2009, the Ministry of Environment, Forest and Water Administration (the entity responsible for waste management) stated that...
waste is not among the main contributing sectors to greenhouse gas (GHG) emissions but is a significant contributor (8 to 22 percent) of emissions of CH₄. By 2010, the daily average generation per capita was 0.94 kg. In 2012, the implementation of a National Plan for the Approximation of Environmental Legislation (INPAEL) project reported the proportions of Albania’s solid waste streams as organic 47.3 percent; paper and cardboard 13.5 percent; plastics 13.2 percent; inert waste 7.2 percent (including construction debris); glass 5.7 percent; textiles 5.2 percent; and metals 1.1 percent. Among other categories, the share of healthcare waste and sanitary towels, nappies and incontinence pads (known collectively as sanpro waste) was 3.4 percent; and the share of batteries and e-waste 0.3 percent. By 2007, a total of 2,531 tonnes of hazardous waste had been generated.

The waste management system is not adequate: there is a poor level of waste collection in urban areas and almost no collection in rural zones. Tariffs for municipal waste collection and disposal are still below cost recovery levels and the causes are many: non-payment, low enforcement, lack of sanctions, and lack of metering. Waste reduction through recycling and incineration is one priority under environmental management, although currently there are few recycling and re-use systems. On the other hand, illegal waste disposal is a major problem: there are 61 illegal dumps in the country, two rehabilitated landfills, two new compliant landfills, and 20 percent of the remaining waste is illegally disposed of at unknown sites (Slushaj and Arapi 2012). In 2012, a total of 35,928 tonnes of waste were illegally disposed of in Albania (Let’s Do it 2009). Albania signed the Basel Convention in 1999, and the country has a mandate to annually report transboundary waste movements. According to a communication from 2010, Albania has made some efforts to comply with the convention. Regarding waste policies, the National Waste Management Strategy for the period 2010–2025 aims at the full implementation of the EU Waste Framework Directive, with the following targets: 25 percent of waste should be recycled or composted by 2015, and 55 percent by 2020 (Slushaj and Arapi 2012). The document also establishes 12 waste areas on the basis of waste profiles with specific needs and solutions by zone (Eionet). The Law on Integrated Waste Management was adopted in 2011 and is in line with EU standards for hazardous waste management, although its implementation is not complete. A request to establish separate collection systems for household waste has come from municipal authorities, aimed at recycling dry residues such as plastic, glass, metal and paperboard. This suggests that there is growing political will and understanding on the part of local government representatives of the potential for waste prevention and recycling.

Albania is part of the Let’s Do It initiative, which brought together 147,000 volunteers to clean up urban areas. More than 31,000 tonnes of waste were collected in 2013. Almost a decade ago, the project Let’s Work Together for Better Waste Man-
management was implemented by the NGO Association for the Protection and Preservation of Nature (PPNEA), aimed at upgrading the waste collection infrastructure (55 waste containers were set up in Tirana). The project also raised awareness via campaigns (150 participants, dissemination of educational materials), and strengthened institutional cooperation among communities, local authorities and NGOs dedicated to waste management activities (REC 2004). The PPNEA is implementing the project Institutional Support to the Albanian Ministry of Environment for Sustainable Biodiversity Conservation and Use in Protected Areas and the Management of Waste for the period 2011–2013 (PPNEA website). In 2011, the World Bank coordinated the clean-up of the Porto Romano area, collecting 45,000 m³ of hazardous waste, after which the waste was safely disposed of.

Bosnia and Herzegovina has a population of 3.8 million people. The country has a transitional economy that relies heavily on exports of metals and foreign aid. Waste management remains a significant challenge, due to inadequate disposal, inadequate management and infrastructure, along with poor environmental awareness. According to the second national communication to the UNFCCC (2013), the waste sector contributes 6.2 percent of GHGs, compared to 2009 data (3 percent); while total emissions of CH₄ were 47.05 Gg. The communication also shows that 92.4 percent of waste comprises municipal mixed residues; 6 percent of the total waste has the potential for recycling; garden waste comprises 1.1 percent; and 0.4 percent is packaging waste that cannot be recycled. The amount of waste disposed of in 2010 was 6.6 percent higher than in 2009. Daily average waste generation in 2010 was 1.08 kg per capita, and 120,000 tons of non-hazardous waste were disposed of in landfills in 2009. In 2007, the annual rate of hazardous waste generated was 8,636 tonnes.

One cause of concern is that only 68 percent of the population have access to waste collection services, illustrating the general limited capacities of the waste sector in Bosnia and Herzegovina in all the conventional phases of the waste management process (collection, transportation and disposal). The waste management system is heavily reliant on landfills, although the majority of these facilities do not comply with the existing legislation. There are also many dumps, open-air landfills and only a few sanitary landfills. The amount of waste illegally disposed of in 2009 was 55,402 tonnes. Separate collection and recycling remain at a very early stage. The country has been a party to the Basel Convention since 2001 and a significant amount of hazardous waste is exported to Austria, France, Germany and Slovenia for treatment. In 2006, there was an attempt to illegally transport crushed lead-acid batteries (hazardous waste) to Croatia. The public authorities in the new EU member state carried out an inspection and the shipment was returned to Bosnia and Herzegovina (Pasalic et al. 2006). The existing legal framework for waste is only partly compliant with EU standards. A few specific regulations on packaging, landfills and
incineration have been created, but no actions have been taken to address the transposition gaps (Eionet). The Federal Waste Management Plan of the Federation of Bosnia and Herzegovina (2011–2016) was created in 2011, establishing descriptive targets such as total waste disposal capacity by 2016. It also aims at the closure of all illegal dumps and the rehabilitation of the sites; and an increase in selective separation, recycling and waste-to-energy treatment.

Waste management projects have been implemented with international cooperation. Through a 2011–2014 project, the World Bank is assisting the country in the rehabilitation and construction of six regional landfills. Projects have also been implemented with the support of the Swedish International Development Cooperation Agency (Sida) and the EU Phare programme. In 2007, the ministry responsible for waste management started the collection of paper and cardboard, plastic (PET) and cans in three municipalities with the participation of 85,000 residents and 30,000 students who volunteered to collect the waste. The small-scale collection of paper in the city of Maglaj and the collection of metal residues in the town of Doboj have been launched, and a new waste separation centre in Doboj has been established. In spite of these positive actions, the involvement of all local stakeholders should be enhanced. The profitability of the projects should also be assessed in order to encourage investments from the private sector in waste separation, recycling and waste to energy. The Let’s Do It initiative is also implemented in Bosnia and Herzegovina: the last clean-up organised in Sarajevo was on March 18, 2013, with the participation of 47,970 volunteers from 107 municipalities who collected 5 tonnes of waste.

Kosovo* has a population of 2.20 million inhabitants, with an economy based on services (64.5 percent), industrial activities (22.6 percent) and agriculture (12.9 percent). It is in transition and most of its territory has only partial international recognition. Inappropriate waste management is one of the main factors increasing land loss in Kosovo*. The waste sector contributes 3 percent of total GHGs, and in 2009 the sector emitted 292.9 CO₂-eq. The emissions come from wastewater treatment and discharge in first place; secondly from solid waste disposal; and thirdly from incineration and open waste burning (UNDP Kosovo 2012). Waste streams in Kosovo* can be classified as household waste 18 percent (organic 35.3 percent, glass 21 percent, wood 11 percent, plastic 9.4 percent, metal 9.3 percent, textiles 8.3 percent, and others 5.3 percent); commercial waste 12 percent; construction and demolition waste 10 percent; ash and sludge 45 percent; and other types 18 percent. Daily average waste generation is 2.05 kg per capita. Nationally, the average coverage of the waste collection service was 42 percent in 2007 and 39 percent in 2008. In Pristina, the rate is higher (64 percent) in contrast with rural areas (10 percent). In 2009, 26 of the 29 municipalities had open-air landfills. Mixed waste is disposed of at these sites, including medical waste. Kosovo* is a party to the Basel Convention.
Scavengers are commonly seen at landfills collecting cans, paper, plastic and metals. In 2009, 110 hotspots were detected in Kosovo*. In April 2013, a total of 1,623 illegal dumpsites were registered as part of the Let’s Do It initiative, involving volunteers from different public and private entities. In 2007, a total of 548,900 tonnes of hazardous waste were generated.

Kosovo* is at a very early stage in terms of compliance with EU standards and capacities at local level related to waste separation, recycling (26 companies collect different materials), treatment and proper disposal are very low (EC-KS 2013). Nevertheless, Kosovo* has 18 administrative instructions on various types of waste and their management (Eionet 2012). The draft Kosovo Waste Management Strategy (2011–2021) sets 19 targets for improvements to waste management aspects; by 2011, the collection of municipal waste had to reach 50 percent; by 2013 70 percent; by 2016 80 percent; and by 2021 90 percent. With respect to waste separation, a target of 20 percent had to be achieved by 2013; 30 percent by 2016; and 50 percent by 2021. Concerning waste treatment, a target of 10 percent should be achieved by 2011; 20 percent by 2013; 35 percent by 2016; and 40 percent by 2021. In terms of proper waste disposal, a target of 90 percent had to be met by 2011; 80 percent by 2013; 65 percent by 2016; and 60 percent by 2021. Finally, in terms of the amount of landfilled organic waste, the target was 95 percent in 2011; 80 percent in 2013; 70 percent in 2016; and 40 percent by 2021. Kosovo* has no regional plans (Eionet 2012).

Since 2004, Kosovo* has received support from various international organisations: the German Technical Cooperation Agency GTZ, for example, supported the rehabilitation of the Suhareke landfill, and in 2007, 2008 and 2009, a further six projects were implemented to improve conditions at landfills. The EU has supported Kosovo* in 11 landfill closure/rehabilitation projects. By 2009, the Kosovo Environmental Protection Agency (KEPA) was implementing five priority projects to build a storage facility for hazardous waste, rehabilitate old landfills, and expand household waste collection and the re-use of organic waste. For the period of 2014–2018, the US Agency for International Development (USAID) will provide assistance to build institutional capacities for improving the public waste collection service. Between 2002 and 2003, the Regional Environmental Center for Central and Eastern Europe (REC) implemented a pilot project on household waste separation. In 2001, various NGOs promoted the collection and recycling of aluminium. The NGO Ideas Partnership recently launched two linked projects: Say No To Plastic Bags, which promotes the use of textile shopping bags; and Buy a Nice Thing, Do a Nice Thing, which promotes the micro-financing of the textiles bags and other products made from recyclable materials (Ideas Partnership 2013). Kosovo* is also part of the Let’s Do It initiative, and the initiative’s 2014 Clean World Conference will be held in February in Pristina. This year’s clean-up activity attracted 132,000 volunteers.
The former Yugoslav Republic of Macedonia has a population of 2.08 million, with an economy based on trade. Contributions to GDP by sector are services 62.8 percent; industry 25.8 percent; and agriculture 11.4 percent. The waste sector contributes 6 percent of GHG emissions: In 2009, total methane emissions were 880.85 CO$_2$-eq, and 86 to 89 percent of these emissions were from solid waste disposal sites. The annual amount of waste generated per capita in 2011 was 375 kg (EEA 2013). Waste streams are made up of 26 percent organic waste; 11.0 percent paper and cardboard; 9.6 percent plastics; 3.5 percent glass; 2 percent textiles and metals; 2.2 percent composite packaging; and 7.5 percent other types of waste; along with 30 percent fine mixed particles, 18 percent of which are potentially biodegradable. In addition, 12,000 tons of e-waste were generated in 2009 (Ignatova 2012). The coverage of the collection service in 2011 was 77 percent, and in 2012 a total of 99.74 percent of waste was landfilled, the remaining 1.26 percent being recycled or composted. In 2010, 500 tonnes of industrial hazardous waste were illegally landfilled, and 27,525 tonnes of waste were illegally disposed of in the country in 2009. The Let’s Do It initiative has mapped approximately 1,440 illegal dumps. The recycling of packaging waste is advancing: 2,625 tonnes of waste were recycled in 2011 and 3,054 tonnes were exported for recycling. In 2013, it was reported that 5,680 tonnes of waste were recycled, corresponding to 11 percent of the total packaging material on the market. Recycling rates for each material were 19 percent for plastics, 17 percent for paper and cardboard, 3 percent for metal, and less than 1 percent for glass. The current figures for recycling can be considered underestimates, as a proportion of recycled packaging materials are not reported. In 2007, a total of 9,000 tonnes of hazardous waste were generated.

The Law on Waste (2004) contains three priorities: to reduce waste; to reduce the impacts of waste on public health and the environment; and to improve technology and eco-design, reduce packaging, and increase re-use, recycling and energy recovery activities. The government passed more than 14 laws and national acts to regulate specific waste streams between 2007 and 2011. In terms of policy instruments, the National Strategy for Waste Management 2008–2020 defines long-term needs as well as the improvements needed in the fields of legislation and enforcement. It presents an assessment of the current state of waste management and sets out a roadmap to prioritise actions up to 2020. It also promotes cooperation among stakeholders and the implementation of joint projects. The National Waste Management Plan 2009–2015 sets goals and management mechanisms for improving waste management. Among its targets, 90 percent of municipal solid waste should be collected by 2014, and level of separation of hazardous and non-hazardous waste was to reach 100 percent by 2010. Regarding landfilling, 100 per-
cent of hazardous waste has to be collected in 2014 and can be placed in temporary facilities, but by 2014 half of all landfills have to comply with EU standards. By 2014, the target for the reduction of GHG emissions from waste disposal activities is 25 percent, and by 2027 a 65 percent reduction is envisaged in the amount of organic waste going to landfill.

In 2010, regional networks of waste treatment and disposal facilities were established in the form of public-private partnerships in two Macedonian regions. The construction of waste collection and treatment facilities and landfills is envisaged, which will benefit 200,000 inhabitants. The remediation of 23 contaminated sites and non-compliant landfills is also a government priority. The project We Are All in the Cycle aimed to establish a successful waste selection model and to collect PET bottles at high schools in Gostivar. The goal was to collect 14,400 kg of plastic, saving 480m³ of landfill space. The Let’s Do It initiative is quite active in the country; a clean-up event was held in 2013, and in October 2012 a total of 55,000 volunteers collected 210 tonnes of waste from 440 sites. The REC has contributed to the initiative by providing educational materials in the form of its environmental education toolkit Green Pack. In 2004, the environmental association Izgrev, in cooperation with the REC, implemented a project for rural clean-ups to stop illegal waste dumping in Sveti Nicole and to raise public awareness about waste management issues. Following the principles of the Aarhus Convention, it also aimed to promote public participation in the preparation of solid waste management strategies (REC 2004). In 2013, there were four entities treating packaging waste: Pakomak, Euro-Ekopak, Ekosajk and Eko Pak Hit.

Montenegro has a population of 653,474 inhabitants, and its economy is based on services (87.9 percent) and industry (11.3 percent), with agriculture contributing less than 1 percent of GDP. The waste sector contributes 2.3 percent of total GHG emissions (initial communication to the UNFCCC 2012). The proportions of waste generated by stream are organic waste 28 percent; paper and cardboard 18 percent; plastics 12 percent; glass 8 percent; textiles 5 percent; metals 4 percent; and other types of waste 25 percent. The daily amount of waste generated per capita in 2012 was 1.23 kg, which was 6.1 percent less than in 2011 (Montenegro Statistical Office 2012). Waste management remains a challenge for the country, due to the limited capacities of the responsible entities, obsolete waste collection technology, poor infrastructure at waste disposal sites, and insufficient emphasis on the promotion of waste separation and sustainable consumption in society. The Montenegro Statistical Office figures for 2012 show a waste collection service coverage rate of 74 percent. According to the UNDP, there were 170 illegal dumps in 2013, many of them in big cities such as Podgorica (33), Kotor and Tivat (32) and Berame (26). In 2007, the
annual amount of hazardous waste generated was 192,000 tonnes. Montenegro became a party to the Basel Convention in 2006.

The 2008 Law on Waste Management established the competencies of entities in the waste sector. It regulates waste management planning and the conditions for waste collection, transportation, treatment, storage and disposal. Various national acts regulate and set out principles for the management of specific waste streams. The decree on the criteria, amount and manner of fee payment for waste management activities integrates the polluter pays principle, stipulating costs for preventive and recovery measures. In terms of policy instruments, the Waste Management Strategy is based on the 2004 National Waste Management Policy; the National Strategy for Medical Waste Management (2008); and the Republic Level Strategic Master Plan for Waste Management (2005). The National Waste Management Plan (2008–2012) stipulates mid-term objectives to achieve rational and sustainable waste management in the country. The plan encompasses long-term and short-term measures, financial assessments for implementation, responsible institutions, and public awareness raising on integrated waste management. One limitation of these documents is that they lack indicative targets regarding selective collection, recycling, treatment and final disposal. As stated in the 2013 progress report, there should be greater government support for recycling and waste separation, in spite of the investments needed to improve landfills. Cooperation between the government and waste companies should also be enhanced, along with efforts to collect data on specific waste streams such as construction waste.

In recent years, various activities have been undertaken to improve waste management planning and infrastructure in Montenegro. The EU supports the Ministry of Sustainable Development and Tourism in the preparation and implementation of national and local waste management plans. Feasibility studies, environmental impact assessments and short-term investment programme preparation for a project focusing on a regional landfill for the municipalities of Niksic, Pluzine and Savnik are also planned. The Regional Office for South East Europe of the international engineering, architecture, consulting and information technology company EPTISA is also involved in the preparation and implementation of the National Strategic Master Plan. During 2013, the World Bank implemented a project on industrial waste management and a project for an environmental and social impact assessment of the remediation of five contaminated sites. In April 2013, the EPA carried out a campaign to report illegal dumpsites in Montenegro.

Serbia has a population of 7.24 million inhabitants, with an economy based on services (60.7 percent), industrial activities such as mining, metallurgy and chemicals (31.7 percent) and agriculture (7.6 percent). The waste sector contributed 4 per-
percent of GHG emissions in 2010, 18.55 percent of methane emissions (80.22 Gg). In 2009, the daily amount of waste generated per capita was 0.87 kg, and the total annual amount of municipal solid waste generated in 2009 was 2,374,374 tons. Organic waste is the dominant waste stream (37.6 percent), followed by plastics (15.7 percent, comprising 5.6 percent bags; 3.3 percent hard plastics; and 3.7 percent plastic packaging). Other streams include garden waste (12.1 percent), cardboard (6.1 percent), glass (5.4 percent), paper (5.3 percent), metals (1 percent), and fine particles (7.8 percent). In 2007, a total of 460,000 tonnes of hazardous waste were generated, and in 2009 a total of 30,000 tonnes of e-waste were generated (Ignatova 2012). According to the National Waste Strategy for the Republic of Serbia 2009–2019 (NWSS), 334,500 tonnes of residues were recycled in 2009. Although this can be regarded as a positive indicator, greater investment is needed in waste separation and recycling. Collection service coverage increased 6 percent in 2013 (to 78 percent), although there are still too few inadequately distributed containers, inappropriate vehicles for waste transportation, and infrequent waste collections. One reason for this is the low fee charged for waste collection services. There are approximately 3,500 uncontrolled disposal sites, and only 3.5 percent of generated waste is disposed of in sanitary landfills (Vujic et al. 2013). Before 2009, final disposal sites in Serbia did not comply with EU standards and there was no system for landfill gas collection or treatment.

The 2009 Law on Waste Management sets the framework for waste management activities in line with EU standards. The first NWSS was created in 2003 with the aim of fully aligning the waste management system with the EU Waste Directive. In 2008, the strategy was revised and further changes were made in order to achieve compliance with EU standards. The NWSS follows the principles of sustainable development, the waste hierarchy, safety, a regional approach to waste management, and the polluter pays principle. The following targets are contained in various policy instruments: by 2014, 30 percent of packaging should be recycled; between 2012 and 2016 there should be a 25 percent reduction in the amount of biodegradable waste sent to landfill; with a 50 percent reduction by 2019 and a 65 percent reduction by 2026. Public awareness should also be raised in order to encourage waste prevention. In 2009, an action plan was adopted based on the three pillars of economic growth, social balance and environmental protection. In terms of economic instruments to reduce waste, the government has proposed the application of a tax on landfilling and the introduction of an eco-tax on packaging products. A strategy for cleaner production has been adopted in order to prevent the generation of industrial waste.

Sida has recently supported the Ministry of Natural Resources, Mining and Spatial Planning in a project to build the capacities of staff within the Department of Project Management and to provide municipalities and companies with tools to im-
prove waste management planning. Under the same project, Sida provides financial assistance for the upgrading of waste management infrastructure and services, for example to extend the coverage of municipal waste collection services to 75 percent; to increase the rate of recovery and recycling of waste packaging to 25 percent; to improve hazardous waste disposal and treatment regionally and at local level; and to boost investments in the waste sector (Sida 2013). Civil society organisations have also undertaken activities to change people’s attitudes to waste management. The project Local Actions for Sustainability, for example, aims to change consumption patterns among the population of the municipality of Novi Beograd. Projects such as I Don’t Want a Plastic Bag, Green Eco-Basket, and Recycling towards a Sustainable Paracin promote waste minimisation (REC Green Pack online). The ReCan Fund has also supported projects such as Basket for a Clean City; Campaign for Waste Separation in Zrenjanin; and Recycling Reduces Poverty. The project Waste Management for Inland Navigation on the Danube (WANDA) focuses on the collection of various waste streams at reception facilities along the Danube, including six stations in Serbia. The United Nations Industrial Development Organisation (UNIDO) implemented a pilot project with Serbian industries to reduce waste in the framework of the Strategy for Cleaner Production.

Illegal waste practices: Disposal and shipment

An estimated 98,995,672 tonnes of waste were illegally dumped worldwide in 2012. According to the Let’s Do It initiative’s database, Albania, Bosnia and Herzegovina and the Former Yugoslav Republic of Macedonia illegally disposed of 118,855 tonnes of waste in 2009. From the country review above, it is clear that illegal waste disposal is a common practice. In 2013, for example, 1,623 illegal dumpsites were identified in Kosovo* and 170 in Montenegro. According to Vujic et al. (2013), there are approximately 3,500 non-compliant final disposal sites in Serbia, including illegal dumps. The waste management systems in these countries are highly reliant on the least desirable option in the waste hierarchy. Drastic upgrades are needed to the infrastructure for waste treatment and disposal in SEE countries to bring it in line with EU standards. Existing open-air sites need to be closed and illegal waste dumping prevented, and the activity of scavengers at waste disposal sites needs to be addressed by social inclusion measures, (the creation of door-to-door collection systems, and the establishment of collection centres) to successfully reduce illegal activities in landfills and increase recycling and material recovery. The authorities need to take action to identify illegal dumpsites, as the reporting and cleaning up of dumpsites by civil society groups are far from sufficient measures to address the
problem, although such activities are positive indicators that citizens are becoming increasingly aware of waste management problems in the SEE region.

The illegal disposal and ‘trafficking’ (illegal shipping) of waste are interlinked and can be seen as part of organised crime. Abandoned industrial facilities, open cast mines, and extraction pits are being converted into illegal dumpsites, and criminals are involved in the collection, transportation and recovery of waste. Illegal waste shipments are one of the fastest growing areas of organised crime in Europe due to the low risk and high profit margin. There is also a growing demand for illegal waste disposal services, as stricter regulations are being introduced and prices for legal waste treatment and disposal are rising. Data on this type of crime are limited: most information comes from news items, the European Union’s law enforcement agency Europol, and organisations active in the fight against the illegal shipment of waste. Waste trafficking can be very profitable for the criminals involved, while causing severe pollution and negative environmental impacts due to the inappropriate treatment and disposal of hazardous waste (Zero Waste Europe 2012). Household and industrial waste are moved within the EU, while electronic and hazardous waste are usually shipped to Africa and Asia (Europol 2013). In northeastern Europe, for example, 134,000 tons of waste were dumped in a large gravel pit in 2011; and Europol has identified EU member states in Central Europe as transit countries and as the most affected by internal EU waste trafficking. There is evidence that 70 percent of European waste shipped through the Netherlands to developing countries is being transported illegally (Hanfman 2012). Companies can disguise hazardous waste as recyclables by baling it together with other types of waste. It can also be disguised as donations (Hanfman 2012). Hazardous waste is shipped from Southern Europe to SEE, Romania and Hungary as well as to other member states. According to the documentary “Toxic Europe”, which exposes illegal waste management practices in Europe, the custom authorities in Antwerp (one of Europe’s biggest ports) control just 2 percent of incoming waste and 1 percent of outgoing waste, and 225 million tons of waste are untreated in the EU (Zero Waste Europe 2012). The International Criminal Police Organisation INTERPOL is currently implementing the project Countering WEEE Illegal Trade to track illegal shipments and disposal of waste electrical and electronic equipment.

Illegal shipments of waste coming from Italy have been identified in Albania, including hazardous waste, lead batteries, expired medicines and oil residues. In 2007, 2,500 tonnes of bilge oil were illegally shipped from Italy to Albania, in spite of the 2003 ban on waste imports (with the exception of cases of special permission). In 2009, Italy exported to Albania 2 tonnes of waste paint and varnish, 200 kg of e-waste, 500 kg of toxic lead batteries, 50 kg of mercury-containing waste, 1,500 tonnes
of bilge oil and 760 kg of used cooking oil (Baggi 2012). In 2012, a case arose involving the French Government with respect to a shipment of 588 tonnes of hazardous waste from France to Albania for treatment. The EU subsequently clarified that the shipment went to Germany for treatment, not to Albania (Balkan Insight 2012a). In July 2012, Italian authorities in Bari collected 21 tonnes of non-hazardous waste to be shipped to Albania without the required permit (Balkan Insight 2012b). In October 2013, the prime minister of Albania made a public statement in relation to illegal waste shipments, announcing that the Albanian Parliament had completely banned waste imports (Imeri 2013). Information concerning the other selected SEE countries is very limited. In Bosnia and Herzegovina there was an attempt to illegally transport lead acid batteries to Croatia, but the Croatian authorities returned the waste. No information has been found regarding illegal waste activities in Kosovo*, although representatives from the government have participated in initiatives to tackle illegal waste shipments as well as other environmental crimes. In 2006, a case arose in the former Yugoslav Republic of Macedonia regarding the import of 296 tonnes of waste metal from Serbia. The shipment was returned to Serbia, as the level of radioactivity was higher than permitted in the former Yugoslav Republic of Macedonia (Petkovic 2006). In 2011, authorities from both countries as well as representatives of Montenegro took part in the project European Waste Enforcement Actions: Joint Inspections of Waste Shipments, implemented by the EU Network for the Implementation and Enforcement of Environmental Law (IMPEL).

Closing remarks

The development of appropriate waste management systems in the selected SEE countries will depend on their capacity to solve existing challenges. The first problems to be tackled are the low level of public awareness about sustainable consumption and production, and the lack of campaigns focusing on waste minimisation and prevention. A higher level of public participation is crucial in changing attitudes towards waste generation. Secondly, waste separation (at the source and via the establishment of collection centres) should be encouraged. Thirdly, waste collection services must be provided for the entire population. The average waste collection coverage in the selected SEE countries is currently 68 percent, with significant differences between higher urban collection rates and largely deficient services in rural areas. In general, there are inadequate economic, technical and human capacities for the administration of waste management systems. There are different levels of strategic planning within the region: some countries have national strategies with defined targets and policy instruments at the munici-
pal level to implement and reach EU standards, while other countries lack clear goals or timelines for plan implementation. Illegal waste management practices (disposal and shipment) are widespread, and the high reliance on landfills needs to be reduced. The countries need to make greater efforts to align their waste management systems with EU standards, in accordance with their financial capacities. A proper orientation towards research and the discovery of new cost-efficient technologies is also essential. This will enable the selected SEE countries to identify affordable solutions to their waste management problems and will set them on the path towards integrated and environmentally sound waste management practices.

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CHAPTER 9

The Development of Renewable Energy in Central and Eastern Europe and South Eastern Europe

BY ANAMARIA STROIA
Introduction: A global outlook on renewables

Electricity generation based on renewables is becoming a significant factor in electric power systems. Global demand for renewable energy has risen in recent years, with renewables supplying an estimated 19 percent of global final energy consumption in 2011, with a little less than half from traditional biomass. Useful heat energy from modern renewable sources accounted for an estimated 4.1 percent of total final energy use, while hydropower provided around 3.7 percent of electricity and wind, solar, geothermal, biomass and biofuels an estimated 1.9 percent.

Total renewable power capacity worldwide exceeded 1,470 GW in 2012, an increase of about 8.5 percent from 2011. Hydropower capacity rose 3 percent to an estimated 990 GW, while other renewables increased 21.5 percent to exceed 480 GW. Globally, wind power accounted for about 39 percent of additional renewable power capacity in 2012, followed by hydropower and solar photovoltaics (PV), each accounting for approximately 26 percent.

Renewable energy sources (RES) made up just over half of total net additions to electricity generating capacity from all sources in 2012. By the end of 2012, they comprised more than 26 percent of global generating capacity and supplied an estimated 21.7 percent of global electricity, with 16.5 percent of electricity provided by hydropower. Industrial, commercial and residential consumers are increasingly becoming producers of renewable power in a growing number of countries.

Renewable technologies are in general still more expensive than nuclear or fossil-based production. This can mainly be explained by the fact that these technologies have a much shorter development history than traditional forms of electricity generation. Within the renewable pool, photovoltaic technology is the most expensive production option, although over the last 20 years there have been impressive price reductions. With each doubling of the cumulative volume of PV sold on the market, the price of PV modules decreased by 20 percent due the significant learning factor in relation to this technology. The average price of a PV module in Europe in mid-2011 was around EUR 1.2/W, which is approximately 70 percent lower than 10 years ago. Thanks to ever-improving technology and economies of scale, there is huge potential for further generation cost decline: around 50 percent by 2020. It can be expected that, with continuous cost reductions, renewable technologies will, at a certain point, require no financial support.

The underlying broad policy goals behind efforts to increase the share of renewable energies in overall energy consumption/production are to increase security of supply, sustainability and competitiveness. Renewable energy sources are inherently local/national. In countries that are net energy importers, increasing RES production therefore can substitute increases in the volume of electricity and/or fossil fuel imports, thus reducing import dependence, which is often accompanied by political and price risks. As far as the sustainability goal is concerned, renewable
technologies have negligible environmental effects, which are mainly connected to production processes (system parts, concrete, roads etc.). Most importantly, during their operation they do not emit carbon dioxide. The renewable industry is often seen as a leading innovative industrial sector that contributes to the competitiveness of the countries leading the technology development process.

**Renewable energy in Central and Eastern Europe**

In the last five years, the Central and Eastern European region (CEE) has experienced a rapid change in terms of RES policy. Discussions on renewables as a way to complement the energy mix in these countries had started a decade earlier, although no progress had been made in practice. The situation changed with the adoption of the EU Energy and Climate Package in 2009, which set binding national targets for renewable energy as a means of reducing greenhouse gas emissions. The ultimate goal was to increase the average share of renewables across the EU to 20 percent of gross final energy consumption by 2020 (from the 9.2 percent level in 2006). National targets range from a 10 percent share of renewables in Malta, to a 49 percent share in Sweden. The Energy and Climate Package provided an important political signal to EU countries and marked the start of a boom in many CEE countries.

Various support schemes were established in CEE countries, which, although different in format, all provided generous support for project developers wanting to invest in RES projects. The source of financing for price support schemes is typically the energy consumer, through a surcharge included in their energy bill. Financing modes vary between countries. Lithuania and Slovenia, for example, are among the many countries that finance support schemes for electricity produced from RES (RES-E) via specific non-tax levies paid by all consumers. Another common method is to apply a surcharge that is explicitly stated in customers’ electricity bills (e.g. the Netherlands, Czech Republic, Germany and Austria). A third method, typically used in countries with green certificate systems (e.g. UK, Poland and Romania) is to recover the cost of the support system in the form of higher electricity prices. The cost of buying the required certificates, or of paying the substitute fee for the difference between the acquired and required number of certificates, raises the price of electricity without it being explicitly stated in the electricity bill. Estonia includes the RES-E support cost in the network tariffs, while Finland simply covers this cost from general taxes, which means that the individual financial burden is not based on electricity consumption.

These support schemes have attracted significant attention and interest from major energy companies. Given the generous nature of such schemes, in practice a behind-the-scenes competition arose to be among the beneficiaries receiving the right to develop RES projects and have a connection to the grid ensured.
In many CEE countries, financial support to develop RES projects has also been granted via Structural Funds — usually via the sectoral operational programme “Increase of Economic Competitiveness”. The funds attracted extraordinary interest, with the number of funding applications sometimes exceeding the available funds by 20 times. In some instances, funding for other priority axes was reallocated to support the development of renewables.

By late 2012 and early 2013, the initial boom in the region came to a halt. The unwillingness of consumers to pay higher energy bills, problems with grid connections, and accusations and mistrust regarding the way in which developers were licensed were among the various problems that affected the implementation of RES policies. The 2012 study “Clean Energy Finance Solutions: Central and Eastern Europe” comprised an in-depth analysis of recent developments in terms of RES in the region, drawing the following conclusions on economic issues, policy developments and financial aspects, and highlighting both the opportunities and weaknesses of the process.

**Economic issues**

**GENERAL CONCLUSIONS**

- Despite the current economic recession, the demand for electricity has increased continuously in the CEE region over the last 20 years and is expected to continue to grow over the next decade.
- The decommissioning of large facilities over the coming decade will lead to a need to replace their capacity. This provides an opportunity for RES-E investments, although there is also a risk that some countries may lock themselves into high-carbon projects for many years to come.

**DECREASING THE COST OF TECHNOLOGY**

- The maturing of technologies (mostly PV, and to a more limited extent wind) is leading to a rapid decline in cost. Large-scale investments in other EU countries and new affordable Chinese technologies have contributed to a significant drop in price over the last couple of years. Lower costs improve the affordability of RES among consumers in the CEE region. The declining cost of RES and the increasing cost of fossil fuels mean that the former are rapidly becoming more attractive.

**MARKET STRUCTURE**

- Power generation in the region is dominated by big state-owned companies that operate large-scale facilities using conventional energy technologies, predominantly nuclear and coal, with high sunk costs and often significant excess capacity. These companies have a strong incentive to oppose more flexible investments.
State-owned entities have a significant influence on the government, which they use to discourage RES-E projects — often smaller in scale and developed and operated by private sector players.

- RES-E is critically dependent on grid access — particularly in light of its intermittent nature. Limited access to, and the low capacity of, transmission grids, networks and interconnections are hampering the integration of RES in the region. Efforts related to RES-E should therefore focus primarily on identifying networks, rather than being generation-related projects. Projects at the level of transmission and distribution should make networks and their operations smarter.

- Despite countries’ interconnectedness and joint EU membership, there is considerable scope to take a more regional approach to market development.

- Investor interest has been very intensive in some areas of CEE.

- Network connection quotas have been established in several cases, but transparent and predefined queue management regimes to allocate connection rights are often still missing. These should be developed and published as soon as possible.

### Policy developments

**POLITICAL AND CONSUMER ACCEPTANCE**

- In a sector dominated by state-owned companies, which often hold a monopoly in their market, inertia and vested interests work to block new entrants into the market. This is driven at least in part by employment considerations in traditional power-generation industries. A new RES industry would potentially involve a loss of jobs in certain areas — although these losses could be compensated by gains elsewhere.

- There is a perception in the region that privatisation is undertaken by foreign investors and groups, rather than national companies, which leads to growing animosity. Furthermore, clean tech markets are predominantly outside the region, therefore enhancing the view that the only reason that Western European states are pushing for decarbonisation in the region is to sell their products and companies.

- Fossil fuel subsidies still exist that favour conventional fossil fuel–based generating companies.

- Agricultural lobby groups in some countries are opposed to development, notably of biomass and PV, due to competition regarding land use.

**GOVERNMENT INCENTIVES**

- A key driver of investor interest in the RES market is the availability of government incentives. A number of schemes are in place across the region, at both national and EU level, as detailed above.
The past few years have seen significant swings in government policy. Regulation and related feed-in tariff (FIT) pricing have not been very predictable, leading to considerable uncertainty among potential investors. Where investment has been strong in recent years, it has often been driven by a rush to benefit from incentives that the market expects to be short term (fostering a ‘gold-rush’ mentality). Incentive structures should be designed for the long term.

Retroactive changes in the regulatory framework are particularly damaging to investors’ confidence. Such moves by governments can make investment in certain markets ‘out of bounds’ for investors for a long time.

Incentives to invest are mostly aimed at investors in the latter stages of the development cycle. Investments in RES are often initiated by smaller, more local players who may not have access to the incentives, or who may respond to different stimuli than bigger owners of installed capacity.

**ADMINISTRATIVE ISSUES, SECTOR KNOWLEDGE AND SKILLS**

- Licensing regimes for RES-E in the region are cumbersome, timely and expensive. A significant streamlining of licensing procedures could significantly improve the investment climate for these projects, which would enhance the ability of investors to respond swiftly to market conditions.

- The time required to permit and install RES-E generation units is often significantly shorter than that required for the network expansion and upgrades necessitated by massive new RES-E connections. It is also common for regulators to first put effective incentives in place to encourage new RES-E generation, but to neglect similarly effective remuneration schemes for transmission and distribution companies for their grid development.

- Lack of interest may correspond with a lack of skills to manage RES investments and related support schemes. This may contribute to longer approval procedures and, potentially, to ineffective policy initiatives and a lack of coordination.

**Financial aspects**

- A key element in the development of RES-E in the region is the availability of sufficient and appropriate capital, at the right cost. At present, the cost of capital for RES-E projects in CEE is high.

- The above is linked to the general situation in the credit markets, associated with the financial crisis and sovereign debt problems. Many projects, in both developed and emerging countries, are underfunded and struggling to get off the ground.

- Investment in CEE is often negatively perceived, since the returns are low while the risks are high. This relates to uncertainty in the investment climate, the insta-
The cost of capital everywhere is affected by uncertainty in the RES-E investment climate. Investors and financers are faced with swings in the regulatory framework and unpredictability in terms of the duration of incentive schemes. Given the long development lead times and complex licensing procedures, along with the long lifespans of investments, even minor changes in tariff structures (or high levels of uncertainty surrounding them) can have a highly negative impact on the appetite to invest. This uncertainty drives up the (perception of) risk to investors, and thus the return they demand. From a funding perspective, the predictability of regulation and tariff structures is therefore paramount: without it, the cost of capital and its availability will remain an impediment to development in the sector.

Sources of public stimulus for RES-E in the region are decreasing. The ability and appetite of consumers to absorb higher tariffs is facing downward pressure, and tax incentives are becoming less affordable as governments face budget squeezes. As a result, the mix of funding sources will have to broaden, and more funding will need to come from the private sector.

Bank debt and project financing are likely to continue playing a significant role for mature and proven technologies. Here, too, credit challenges exist. As repayment and interest schedules depend greatly on the predictability of future prices, uncertainty around incentives also affects investor appetite.

In terms of new and emerging technologies, there is scope to increase EU funding mechanisms.

Renewable energy in South Eastern Europe

Most countries in South Eastern Europe (SEE) adhere to the EU Energy and Climate Package and have similar renewable energy and/or RES-E targets as EU countries. The table below shows the respective targets in SEE.

Compared with most EU member states, SEE countries already have a relatively high proportion of energy from renewable sources. However, the active promotion of renewable energy sources has only recently become an issue of concern.

While all SEE countries have now initiated some form of action, by and large the policy, legal, regulatory, and institutional frameworks in the region remain at an early stage. Despite widespread support schemes for RES-E, very few projects have so far become operational. Sketchy and unclear legal and regulatory frameworks have
contributed to this failure, as well as cumbersome, non-harmonised authorisation, permitting and grid connection processes.

Progress in developing renewable energy frameworks varies. Croatia, for example, is relatively well advanced, largely driven by its EU accession negotiations. Kosovo* and the former Yugoslav Republic of Macedonia have also made good progress in developing legal and regulatory instruments.

The existing caps on wind capacities imposed in the former Yugoslav Republic of Macedonia (100 MW) and Serbia (500 MW) should be gradually removed by 2020 with the adoption of network development plans. These are designed to integrate more renewable energy into the grids via the implementation of a regional approach to balancing electricity systems.

Generation capacity limits for solar are sometimes in place in order to minimise the impact of electricity produced from RES on the price paid by end customers (e.g. in Croatia, the former Yugoslav Republic of Macedonia and Serbia). This situation may change in the future due to a sharp decrease in recent years in the investment costs for solar PV technology.

Certification schemes for RES-E still need to be implemented in almost all SEE countries. However, most of them have already assigned bodies to manage the system of guarantees of origin. Most SEE countries still need to adopt proper support schemes for all forms of RES-E, including electricity, heat and energy used for transport, in order to facilitate RES investments and to remain on track to meet the 2020 targets.

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<th>Table 1 RES 2020 Targets for SEE Countries</th>
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<td><strong>SHARE OF RES IN 2009</strong> (%)</td>
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<td>Kosovo*</td>
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* Share of energy from renewable sources in gross final energy consumption, 2009
** Target for the share of energy from renewable sources in gross final energy consumption, 2020
targets. None of the countries in the region has registered adequate progress in newly installed capacities in the last few years, and the indicative targets are at risk of not being met.

Countries need to ensure compliance with the requirements of Article 16 of Directive 2009/28/EC, which requires the reform of electricity infrastructure related to the operation and development of grids, as well as the setting of rules for grid access and cost sharing, with a view to increasing the contribution of RES-E.

Special attention must be given to reviewing access to, and the operation of, RES-E networks. Progress is urgently needed in terms of transparency, the consistency of network rules and grid connection issues. Authorisation and permitting processes also need to be coordinated and streamlined. Improved and timely cooperation is needed between stakeholders — especially authorities responsible for energy, economy, planning, water, environment, agriculture, transport and fiscal policies. Such cooperation is still not adequate in most SEE countries. The same approach to coordination and to the simplification of rules needs to be extended to other types of renewable energy used in the transport sector, such as biogas and electricity.

**Recommendations for SEE and CEE regarding the development of renewable energy**

**Build capacities**

- Knowledge and skills in the public and private sectors could be strengthened in order to ensure sufficient professional competence in the region to manage and profit from the employment and investment opportunities created by RES-E. This entails putting in place an employment transition plan from the non-RES energy sector to the RES sector in the area of electricity generation, and could include the training of government staff, state-owned enterprises, university students etc.

- Research and development capacity building is essential to ensure that RES-E technologies become competitive and cheaper, but also to create local entrepreneurship. This entails the establishment of centres of excellence linking existing academic institutions and leading companies in CEE and SEE countries.

- By broadening stakeholder engagement to include a wider range of partners such as local government, academic institutions, different sectors of industry, finance, and small entrepreneurs etc., countries will enable more producers to enter the market.

- Associations and interest groups, involving all relevant players in the sector, can be supported so that an industry voice is created and the industries’ interests can be heard by government under one renewable energy banner.
Improve grid and transmission infrastructure

- Investment in the upgrading and interconnection of transmission grids at national and regional levels is fundamental to improving the connectivity and distribution of RES-E. Grid infrastructure improvements should therefore be a priority for the region. Increasing grid capacity and addressing grid infrastructure could help to scale up investments across the whole region by giving a clear signal to investors that there is potential for a much larger customer base than might be available within each country’s own borders.

- Harmonised EU legislation regulating grid operation and the internal electricity market should be promoted.

Improve the predictability of incentive schemes and regulation

- Increasing the lifespan of incentive structures will help fund longer-term investments and provide dependable incentives, lowering the cost of capital and, as a result, the price paid by consumers.

- Designing incentive structures in a sustainable fashion will help countries to avoid becoming victims of their own success in the event that the uptake is so large that the incentives become unaffordable, and hence have to be revoked.

- Efforts are needed at EU level to promote the better integration and use of existing and proposed EU funds and the EU budget. This does not necessarily mean the creation of new funds, but the better allocation of existing funds under both the Cohesion Policy and the EU’s Multi-annual Financial Framework for 2014–2020.

Foster a domestic RES industry by supporting entrepreneurship

- The RES-E sector provides opportunities for new entrants. The development of RES is not just about large-scale, capital-intensive investment schemes, but also about small, entrepreneurial players who (particularly in the earlier stages of development) have a pivotal role in identifying opportunities, taking the first steps in licensing, land use etc. These entrepreneurs can be helped in various ways, including the creation of a favourable investment climate and tax breaks. In this respect, it is important to facilitate the selling back of energy to the state by (small) private players — something often blocked by structural and energy company interests.

- The banking sector in SEE and CEE countries is itself a significant potential investor in RES-E sector in the region.
Develop a pan-regional view
- Certain investments might not be attractive from a national perspective but may well be feasible if viewed regionally, as long as incentive schemes are properly coordinated between the different countries.
- Promoting ‘pathfinder’ projects that help to establish a track record for a technology in a market helps financiers and developers to understand how to allocate risk between project partners, and promotes projects for which it is difficult (and expensive) to access financing.

Case studies: Regional integration and the development of regional energy markets.
The Coordinated Auction Office
The electricity trade in SEE is currently hampered by the small size of individual national markets and the fact that each national electricity company manages its own cross-border connections. Years of discussion among these companies and between them and key stakeholders such as the South Eastern Europe Energy Community Secretariat, the European Commission and the European Bank for Reconstruction and Development (EBRD) led to an agreement in June 2012 by 10 regional electricity transmission system operators to establish a single agency, the Coordinated Auction Office, to manage the allocation of their cross-border capacity. Financing of EUR 660,000 from the EBRD to establish the office is playing a catalytic role in mobilising co-financing and moving the project from idea to reality. Once operational, the Coordinated Auction Office will make cross-border trade in electricity simpler, cheaper and more transparent, promoting the development of a truly regional power market.

The Dry-Run project
The aim of the Dry-Run project was to test the concept of a load flow–based coordinated allocation system in SEE, centred on a supra-national auction office. The task of the office was to manage incoming capacity bids and to optimise the allocation of respective cross-border capacities.

The Dry-Run project was launched in 2006 with eight participating transmission system operators (TSOs) from SEE, and the three-phase implementation came to an end in 2009.

In the first phase (2006–2007), the web-based auction portal DrCAT (Dry-Run Coordinated Auction Tool) was developed. The tool simulates load flow–based coordinated auctions, which lead to transmission rights in electricity networks. This is done in the absence of clearing or payment transactions.
Eight TSOs from Albania, Bosnia and Herzegovina, Bulgaria, Greece, the former Yugoslav Republic of Macedonia, Montenegro, Romania and Serbia, together with a Turkish TSO, acted as traders in a simulation of monthly flow-based coordinated auctions. In order to maximise the learning effect, each of the eight TSOs took over the role of a coordinated auction office for one month. In order to simulate greater load flow, neighbouring TSOs from Ukraine, Hungary, Croatia, Slovenia and Austria were also included in the model. The simulation comprised a monthly auction. The first phase of the project was financed by the German development bank kfW.

The second phase (2007–2008) focused on the adaptation of the DrCAT software. The simulation was extended to include the participation of traders. Additional functions, such as risk management, billing, secondary trading and scheduling, were integrated into the model with the aim of tailoring the run closer to a live situation.

During the second phase, around 40 traders took part in the simulation, bidding for physical transmission rights. By the end of 2007, eight rounds had been conducted. However, there was a decline in interest in the course of subsequent rounds. A Croatian TSO, with two borders, decided to join the simulation at the end of 2007. In early 2008, auctioning was changed from the previously used border-capacity approach to a line-wise maximum flow (MF) approach.

During the final Dry-Run phase (2008–2009), the Energy Community Secretariat issued a tender for a study on the final development and establishment of coordinated congestion management in the SEE region. The main task of this consultancy project was to assess and further develop the proposed flow-based capacity allocation approach, resulting in a blueprint and outlining how the MF approach works best in a real-run operation.

**Electricity Regional Initiatives**

European energy regulators have been working together for many years to promote regional cooperation and the integration of energy markets. The aim of the Electricity Regional Initiatives (ERI), launched by the European Regulators Group for Electricity and Gas (ERGEG) in 2006, was to bring together national regulatory authorities (NRAs), TSOs and other stakeholders in a voluntary process to advance integration at the regional level as a step towards the creation of a well-functioning internal energy market. The Regional Initiatives represent a bottom-up approach to the task, in the sense that they bring together all market participants to test solutions for cross-border issues, carry out the early implementation of the EU acquis, and come up with pilot projects that can be exported from one region to another.

The aim of the ERI is to speed up the integration of Europe’s national electricity markets. The ERI created seven regional electricity markets in Europe, as an interim step to creating a single EU electricity market.
In each of the seven regions, regulators, companies, member states, the EC and other interested parties come together to focus on developing and implementing solutions to improve the way in which the regional energy markets develop. The seven regions have similar aims (integrating fragmented national electricity markets into regional markets), although their priorities and achievements reflect their different regional concerns. An overall monitoring process at EU level ensures that progress towards a single EU market is not hampered, and that there is convergence and coherence across the regions.

While the degree of market development in a region varies from country to country, the integration of old and new EU member states can be an example for other areas of EU policy. Managing congestion, increasing transparency, reducing barriers to market entry and developing regulatory competences are among the key priorities.

In the SEE region, both the Coordinated Auction Office and the Dry-Run project will feed into the creation of a new regional electricity market.

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References

CHAPTER 10

The Implementation of CITES in Montenegro from the Perspective of Montenegro’s Future EU Membership

BY VLADIMIR PAVICEVIC
Introduction

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) entered into force in Montenegro on June 3, 2007. The country faces increasing pressure on its wildlife, both directly through the destruction of natural habitats and the taking of specimens from the wild, as well as indirectly through the introduction of new species. The need to safeguard the country’s natural heritage against deterioration has been consistently recognised but adequate support has not always been given to the task.

Over the past 10 years, the number of traders and the extent of international trade in endangered species in Montenegro have increased due to the country’s transitional character.

Montenegro is a small, Mediterranean country, with an area of 13,812 km², 293 km of coastline and a large number of mountains above 2,000 metres. According to the 2003 census, the country had a population of 620,145. For a country of this size, Montenegro has an amazingly diverse climate. The combined influence of the sea and mountainous in such a small area results in Montenegro having a variety of climates that are noticeably different. A Mediterranean climate prevails in the coastal area, a continental climate in the central part of the country, and an Alpine climate in the north.

Montenegro has exceptional biological diversity and relatively well preserved wild fauna and flora. Due to Montenegro’s variety of climatic regions, there are various types of ecosystems and some components of the country’s biodiversity are unique at international level (e.g. Biogradska gora virgin forest).

Following the entry into force of CITES, the designated Montenegrin management authority was faced with a lack of qualified staff, fragmented and inadequate legislation, and undefined competencies in other sectors (customs, inspection services, scientific institutions etc.). In addition, there was little public awareness of the topic. In preparation for EU membership, state bodies, scientific institutions and the commercial sector are now facing a huge task, which has to be completed in a relatively short period of time.

Although data on legal imports and exports of CITES species into and out of Montenegro over the last two years show no significant increase, Montenegro should be aware that in the future it may face challenges in terms of CITES. Difficulties can be expected in terms of investments and CITES implementation mechanisms due to a lack of resources. Apart from the state budget, no other financial resources are available, and none are likely to become available for this purpose.
Animal and plant species in CITES appendices present in Montenegro

In Montenegro, there are 142 species listed in the CITES appendices. Of these, 70 are plant species, the majority of which belong to the orchid family. In terms of animals, there are 8 species of mammals, 53 bird species, 3 species of reptiles and fishes, 2 coral species, 1 species of leech, 1 species of insects and 1 species of molluscs.

In Montenegrin law, the protection of endangered plants and animals is regulated by the Decree on Placing Certain Species under Protection (Official Gazette of Montenegro 76/6). Some species, such as Ursus arctos and Canis lupus, are not included on the list of protected species.

Imports, exports and re-exports of CITES species in Montenegro

Although Montenegro is a country in transition, there is no indication that imports of endangered species have increased in recent years. The biggest number of species listed in the CITES appendices have been imported from Italy.

Imports of goods and products made from reptiles are currently the most frequent. Such products are mostly imported from Italy and France. Imports into Montenegro of live animals that are included in the CITES list are rare. At present, there is no information about imports of cacti, orchids and other ornamental plants.

The level of legal exports of native CITES species from Montenegro is low and does not pose any threat to these species. There are no recorded cases of the organised cultivation of CITES species for commercial, scientific or other purposes.

In recent years, the majority of re-exports are in the form of small leather products and clothing made from reptile or mammal skins.

Illegal trade and confiscations

The most well known recorded case of illegal trade in Montenegro was the confiscation of two Siberian tigers in late 2006 at the border crossing with Serbia. Apart from this, there have been several cases of illegal exports of indigenous birds. Although it is generally presumed that some endemic and autochthonous species are being traded internationally, there is no scientific evidence available to suggest that they are under threat as a result, which would support their possible inclusion in the CITES appendices.

According to statistics provided by the Agency for Environmental Protection, illegal trade does not yet present a serious problem in Montenegro. However, among the police there is relatively low level of knowledge regarding nature protection legislation and requirements, and entities protected under criminal law. In 2011 and
2012, various steps were taken to improve this situation by providing training for police inspectors at the Ministry of Spatial Planning and Tourism (MSPT). An inter-sectoral working group was also established to prevent illegal activities in this area.

The roles and perspectives of authorities responsible for the implementation and enforcement of CITES

Each party to the convention must designate one or more management authorities in charge of administering the permit system, and one or more scientific authorities to advise them on the effects of trade on the status of species.

The management authority

In accordance with Article X of the convention and Resolution Conf. 9.5 (Trade with States not Party to the Convention), Montenegro began issuing permits comparable to CITES documents in 2008. When depositing the instrument of ratification, Montenegro informed the depositary government (the Government of Switzerland) of the name and address of the management authority authorised to communicate with other parties and with the convention secretariat in accordance with Article IX (2) of the convention.

The management authority for CITES implementation is the Ministry of Spatial Planning and Tourism (MSPT) and the competent authority responsible for executive duties related to the implementation of the convention is the Environmental Protection Agency (EPA), under the MSPT. The EPA coordinates its work with other bodies and is responsible for capacity building and training in other sectors. Links are developing with enforcement bodies such as the customs authorities and the police. Cooperation with international organisations and other parties, particularly EU member states, will become far more intensive in the coming years. The management authority will be involved in the work of the bodies of the European Commission and more intensive involvement in the work of the convention’s committees can be expected.

The work of the CITES management authority in Montenegro focuses mainly on:

- processing applications and administering the permit system;
- coordinating with supervisory bodies, scientific and other institutions and individuals;
- drawing up legislation;
- providing training;
- processing and reporting data; and
- public information and awareness.
The current status of the management authority provides a good basis for operational work. However, experience shows that many solutions in this area demand greater competences. The lack of support at higher levels of the ministry is particularly obvious in the case of inter-sectoral and international cooperation. No financial support from government institutions can be expected in the near future. Bearing in mind Montenegro’s future accession to the EU, it would be very important to consider designating a new management authority. The newly established authority would be primarily responsible for communication with the European Commission, as referred to in Article 13(1) of Council Regulation (EC) No.338/97. One disadvantage of this option is that, due to the suspension of the further employment of government officials, the new management authority would have to be assisted by a person from the current management authority. Another risk is that the person at the ministry might be overwhelmed by other issues and unable to deal efficiently with CITES matters.

The management authority undertakes duties in accordance with CITES requirements. Its work is not limited to the processing of permit applications but includes a wide spectrum of activities related to the implementation of CITES. Good working relations have been forged with other sectors at the national level (particularly customs authorities). However, much work still has to be done with regard to strengthening these existing links and further building capacities. As a result of the training of customs officials, the management authority has contacts with customs officers at border crossings. Unfortunately, contacts with the police are not yet at a satisfactory level.

It is very important for the management authority to establish better connections between customs officers and the scientific authority in order to help customs officers in the identification of CITES species at border crossings.

As a result of a recent awareness-raising campaign, members of the general public are now also better informed about the provisions of the convention. However, it is still not widely known that documents are required for moving CITES species across international borders and for shipments of CITES specimens to other countries. Greater efforts must be devoted to providing traders with information, in particular to avoid the confiscation of shipments of CITES specimens in transit for export to EU member states. Information on CITES provisions and permit applications needs to be readily accessible and a special website for this purpose has been established at www.epa.org.me.

The management authority has developed close relations with the CITES secretariat and a number of management and scientific authorities in other countries. It also cooperates with the Customs Administration of Montenegro, the Veterinary Inspectorate, and the Environmental Inspectorate. These inspection bodies have participated in several CITES-related information exchange meetings and seminars.
The scientific authority

At the end of 2008, Montenegro established a scientific authority that includes two Montenegrin scientific institutions: the Marine Biology Institute; and the Nature Protection Institute (now the Sector for Monitoring and the Environment, part of the Environmental Protection Agency).

These two institutions, in synergy and through consultations with the management authority, make decisions prescribed by Resolution Conf.10.3. Tasks set out in Articles III to V of the convention are fulfilled with the scientific support of the EPA and other scientific institutions and experts.

One of the main duties of the scientific authority is the identification of specimens. The scientific authority provides appropriate training for the individual responsible for CITES (the coordinator). The first task of the coordinator of the scientific authority is to arrange for the designation of a committee of experts, who provide the necessary input concerning certain taxa and who are responsible for the identification of species. Many taxa can be covered by experts from existing national institutions, while for some taxa non-governmental organisations and individual experts will need to be involved. This is particularly important in the case of seizures of shipments presumed to be illegal. If live animals are seized, species must be identified almost immediately. Urgent assistance is also required if a major violation is discovered and if there is a possibility of a criminal offence. In this case, the person(s) involved is/are arrested and all procedures concerning prosecution must be carried out within a period of 48 hours, including the identification of the species of the seized specimens.

According to Resolution Conf. 10.3, the main duty of the scientific authority is to investigate the detrimental effect of trade on Appendix I species (Article III). Before an export permit is issued, the advice of the scientific authority in the exporting state must be sought regarding the possible detrimental effects of exports on the survival of the species concerned. The scientific authority of the importing state must report non-detrimental findings before an import permit can be issued. In the case of introduction from the sea, the scientific authority of the state of introduction advises whether this introduction will be detrimental to the survival of the species concerned. The scientific authority also ensures that appropriate shelter and care are provided for live specimens by the recipient. Prior to each export of a species included in Appendix II, the scientific authority of the exporting country advises whether the operation will be detrimental to the survival of that species. According to Resolution Conf. 10.3, the scientific authority should also monitor permits granted by the exporting country and the actual exports of the specimens concerned. If the scientific authority considers that the export should be limited, it advises the man-
agement authority about the measures to be taken (i.e. limiting the number of export permits issued for specimens of a certain species). These export limitations should be aimed at maintaining each species throughout its range at a level consistent with its role in the ecosystem and well above the level of possible inclusion in Appendix I. In the case of introduction from the sea, the scientific authority should be consulted in the same way as for species that are included in Appendix I. The scientific authority also seeks advice from other national or international scientific organisations in accordance with Article IV(7) of the convention. In order to fulfil the basic requirements of the convention, the scientific authority should comprise experts specialising in each of the higher taxa listed in the CITES appendices.

Customs authorities

Tasks related to nature protection are an additional but very important responsibility of the customs authorities. The work of the customs authorities will be even more important following Montenegro’s accession to the EU. In general, customs offices at border crossings are responsible for passenger traffic, and the inland customs offices are responsible for goods traffic. In the case of imports of live animals or plants, the border customs authorities are unable to give customs clearance for treatment or use until they receive from the competent inspectorate a certificate authorising the import. Customs authorities are able to prevent unauthorised crossings or the transport of shipments outside specified border crossings (i.e. border crossings designated for veterinary and phytosanitary controls). In the case of goods transport, it should also be checked whether approval or authorisation are needed and if any prohibitions or restrictions are applicable that are laid down in other regulations. The import of animals is only permitted by customs if the required conditions concerning animal health and protection against torture are met. The convention pays particular attention to the conditions of shipment for live specimens (Article III [2] [c] and 4 [b], Article IV [2] [c] and Article V [2] [b]). In addition, the conference of parties recommends (in Resolution Conf. 10.21: Transport of live animals) that parties take suitable measures to promote the full and effective use of CITES and IATA guidelines for the transportation of live animals.

Pursuant to Article 93 of the Nature Protection Act, in the case of criminal torture, the authorised customs officers have to seize or detain the animals, persons and vehicles concerned and immediately inform the competent inspector.

In future, Montenegro will have to provide sufficient and qualified staff for efficient control at designated border crossing points. In addition, these border crossing points will be required to have appropriate facilities for the temporary housing and care of live specimens. In 2012, Montenegro introduced a six-digit harmonised
tariff system and the Combined Nomenclature of the European Commission, which are used during the customs clearance of goods.

**Veterinary and phytosanitary control**

Veterinary inspections of shipments of live animals are carried out by official veterinaries responsible for inspection and control at veterinary border crossing points designated by the Order on the Designation of Border Crossing Points for the Export, Import and Transport of Animals, Their Parts or Products Made of Animal Origin. According to the Veterinary Law (Official Gazette of the Republic of Montenegro, No. 11/04), if a shipment arrives at a border crossing point where there is no border veterinary inspection post, the customs authorities have to redirect the shipment to the appropriate border crossing. The veterinary inspectorate has an important role in controlling the conditions provided for housing animals of protected species.

A similar regime as the one for animals and products of animal origin also applies to shipments of plants, as well as plant parts and products that could be a source of harmful organisms. These too can only be imported and exported at specific border crossings, where a phytosanitary inspector checks the documents and identifies and inspects the goods. However, according to phytosanitary legislation, the prior consent of the nature protection authority is not required.

The following border crossing points in Montenegro have veterinary and phytosanitary facilities:

- Podgorica Airport — International air traffic
- Tivat Airport — International air traffic
- Port of Bar — International maritime transport
- Port of Kotor — International maritime transport
- Port of Risan — International maritime transport
- Port of Zelenika — International maritime transport
- Debeli brijeg — Road transport to Croatia
- Bozaj — Road transport to Albania
- Sukobin — Road transport to Albania
- Dobrakovo — Road transport to Serbia
- Scepan polje — Road transport to Bosnia and Herzegovina
- Vracenovici — Road transport to Bosnia and Herzegovina
- Ilino brdo — Road transport to Bosnia and Herzegovina
- Dracenovac — Road transport to Serbia
- Kobila — Road transport to Croatia
- Sitnica — Road transport to Croatia
Police control

The main responsibility in combating illegal international trade in endangered species lies with the customs and police authorities. In this regard, cooperation between CITES, the World Customs Organisation (WCO) and the International Criminal Police Organisation (ICPO or INTERPOL) is widely recognised as essential. According to Resolution Conf. 11.3: Compliance and Enforcement, the conference of parties recommends that the management authority coordinate the governmental agencies responsible for the enforcement of CITES, particularly the customs and police authorities. The resolution further recommends parties to provide training activities and joint meetings and to facilitate the exchange of information through the establishment of inter-sectoral committees at national level.

Pursuant to the constitution of INTERPOL, each member state should set up within its police authority a central national bureau to act as contact point for the central national bureaux of other member states and to offer or request police cooperation and collaborate with the general secretariat of INTERPOL.

The Ministry of Internal Affairs of Montenegro has not adopted any legislation that would enable the implementation of actions for the protection of plant and animal species, especially in relation to their illegal trade. It is essential to harmonise the Montenegrin legal framework with the EU legal framework and to define the role of the police in terms of combating international illegal trade in endangered plant and animal species.

Rescue centres

A rescue centre is a place designated for the temporary housing and care of ill or injured animals, abandoned young animals not able to survive in the wild, and animals confiscated as a result of being kept illegally in captivity; illegal traded, imported or exported; or other reasons set out in law. The management authority should provide transport for confiscated animals and accommodation until a permanent solution can be found. The rescue centre is obliged to accept animals that have been seized or confiscated. In order to open a rescue centre, administrative permits are required from the relevant state administrative bodies.

The first option in the case of the seizure of live animals or plants is the return of the shipment back to the country of (re)export. The management authority of the ex-
porting country has to guarantee that the specimens will be returned to the wild or properly taken care of. This is particularly difficult in the case of exotic species originating from overseas. The main obstacles to this option are the fact that carriers are often not willing to take such shipments, and the high costs involved. Illegally imported dead animals and certain parts or products are normally immediately destroyed for sanitary reasons. The same applies to plants. However, if the plants are healthy, the customs authorities can offer them for sale or give them to a botanical garden.

One important organisational problem is the reimbursement of expenses incurred by the external institutions and individuals involved in the procedure (e.g. the identification of species/specimens and expert consensus). An appropriate system has to be established for this purpose. As a first option, the person committing the offence should cover such expenses. The problem arises when there is insufficient data for a prosecution. Even if a prosecution takes place, the procedure is usually very slow, especially in the case of minor offences. In the case of a criminal act, the procedure is much faster. The second option is for the management authority to cover the expense, since fines collected for related offences go into the integral state budget.

With the adoption of the Regulation on the Conditions That Need to Be Met by a Party to Store Confiscated Plants, Animals or Fungi in Terms of Space, Equipment and Personnel, the legal conditions for the establishment of a rescue centre in Montenegro have been met. The establishment of such a centre is necessary in the near future in order to appropriately enforce the implementation of the convention.

According to the Nature Protection Law (Official Gazette of Montenegro 51/08 of August 22, 2008), if an applicant meets the requirements for keeping animals in captivity, then it is required to hold a licence issued by the Environmental Protection Agency, based on the earlier opinion of the Ministry of Spatial Planning and Tourism, or the Ministry of Agriculture, Forestry and Water Management in relation to hunting species.

**Processing of permit applications**

In accordance with Article IX (4) of the convention, permit certificate forms and the signatures of those persons authorised to sign CITES documents in Montenegro have been communicated to the secretariat, together with the impressions of the seals used for this purpose. A sample of the form used for CITES documents was presented in 2007, and the Montenegrin management authority obtained a hundred security stamps from the secretariat. Montenegro uses a bilingual Montenegrin/English form printed on security paper. By the Order on the Implementation of Resolution Conf. 10.2 of the Conference of Parties to CITES, all recommendations of the Conference of the Parties concerning the standardisation, validity, application and issuing of CITES
documents are applied, and this was to be standardised with the adoption of the Decree on International Trade in Endangered Plant and Animal Species and Their Parts and Products in 2013.

According to the Law on General Administrative Procedures (Official Gazette of Montenegro 60/03), the management authority is required to process permits within 15 days of the completion of the documentation in the case of individual applications, and within 30 days in the case of group applications. If the management authority does not respond within 15 days in the case of individual applications, or within 30 days in the case of group applications, according to the Law on General Administrative Procedures the applicant has the right to appeal to the Commission for General Administrative Procedures of Montenegro.

Compliance of current national legislation with EC wildlife trade regulations

The Decree on International Trade in Endangered Plant and Animal Species (pursuant to Article 91 of the Nature Protection Law) will be the basic regulation of Montenegro regarding trade in plants and animals. It will adopt the provisions of the EC regulations governing this field, with the exception of those provisions that cannot be implemented until Montenegro accedes to the EU. The experience acquired by other countries, the model law drafted by the CITES secretariat and the characteristics of Montenegro will be taken into account. In the transitional period, the existing form will be used for CITES import and export documents. The form of the certificate for breeding in captivity, pre-convention certificates (i.e. certificates for specimens acquired before CITES provisions applied to them), and labels used in the event of exchanges of scientific material will be the same as those used in the European Community. The decree will also prohibit imports of all species of which imports into the EC are suspended.

The following regulations adopted by the Government of Montenegro are in compliance with EC standards regarding trade in wild plant and animal species:

1) Regulation on the manner and conditions for the collection and use of, and trade in, unprotected wild species of animals, plants and fungi used for commercial purposes

2) Regulation on detailed conditions to be met by legal or physical persons to store confiscated protected wild species of plants, animals or fungi in terms of space, equipment and personnel

3) Regulation on strictly protected wild species of plants, animals and fungi
4) Regulation on the manner of carrying out risk assessments for the introduction of foreign species of wild plants, animals and fungi, and the re-entry of wild species

5) Regulation on conditions that need to be met by parties for breeding or keeping protected animals, the manner of their marking and records

**Data compiling and reporting to the EC**

According to Article 15(4) of Council Regulation (EC) No. 338/97, the management authorities of member states must report to the EC all the information necessary for the EC to draw up the reports referred to in Article 7(7) of the convention, and equivalent information on non-CITES species. This information should be presented in two separate parts: the first part should include information on imports and (re)exports of specimens of species listed in the CITES appendices; and the second part should include information on trade in non-CITES species included in the annexes to the regulation. In the case of shipments of live animals, member states must also maintain records on the percentage of specimens of species listed in Annexes A and B of the regulation that were dead at the time of introduction into the EC. These records should be communicated to the EC for each calendar year before June 15 of the following year. The regulation also provides for the drawing up of biennial reports comparable to those provided for in Article 7(7)(b) of the convention. These reports must be presented to the EC by June 15 every second year. Article 15(4)(d) of the regulation states that biennial reports had to be prepared for the first time in 1999.

The existing wildlife trade database of the EPA is essential for future developments in this field. The EPA will continue to compile the data required for annual and biennial reports. At present, the database provides a basis for preparing documents in electronic format and for their printing. It also ensures that all the relevant data are collected centrally. However, the existing system requires substantial upgrades in terms of its analytical ability, which is particularly important for the compilation of annual and other reports as well as for supplying particular information to the scientific authority, other parties or international organisations (such as the TRAFFIC programme of the World Wide Fund for Nature and the World Conservation Union).

Following Montenegro’s accession to the EU, data on imports and (re)exports of species other than those listed in the annexes to EC regulations will no longer be collected. On the other hand, information on non-CITES species included in the EC regulation annexes will have to be processed more thoroughly. Capacities for the efficient preparation of annual reports to the CITES secretariat are already in place. Since the convention entered into force, Montenegro has submitted five annual reports to the secretariat. These reports were drawn up in accordance with the guidelines for the preparation and submission of CITES annual reports issued by the
convention secretariat in the Notification to the Parties No. 788/94. It should be pointed out that in many cases the information given in these reports does not reflect the actual situation due to inadequate customs controls and border crossing controls in recent years. The actual number of imported specimens may be different, since customs officers usually check the documents but often do not count the specimens in each shipment. This is normally done by the veterinary inspectors at the quarantine station. Data on imports are then collected by the Veterinary Administration of Montenegro.

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