

# Forest Policy and Economics

## Institutional and actor-oriented factors influencing timber legality in selected Western Balkan countries: Multiple case study of Croatia, Montenegro, Serbia, Slovenia, and the Republic of Srpska (Bosnia and Herzegovina) --Manuscript Draft--

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<b>Abstract:</b>	This paper investigates timber legality issues in the Western Balkans by examining the coherence of national policy frameworks in five Western Balkan countries (Slovenia, Croatia, Serbia, Montenegro, and the Republic of Srpska, BH) with the European Union Timber Regulation (EUTR) requirements. The study uses a multiple-embedded case study design to investigate national policies and regulations on preventing and tackling illegal logging and those dealing with the trade in timber and timber products. A qualitative content analysis of retrieved documents was conducted to check the extent to which EUTR requirements are covered. Interviews with 36 key actors across selected countries were conducted to analyse their perceptions of the EUTR and the recently approved European Union Deforestation Regulation (EUDR), focusing on awareness, transparency, information flow, resources, and challenges of ensuring timber legality. The study also distinguished institutional and actor-oriented factors influencing the transposition of EUTR and forthcoming EUDR requirements into national policies and forest management practices. The contribution offers a comparative gap analysis of EU requirements' incorporation within targeted countries' national policy frameworks and an overview of common and opposing perceptions on timber legality and legitimate forestry practices among key stakeholders in five Western Balkan countries.
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**Cover letter for submission of a paper**

**“Institutional and actor-oriented factors influencing timber legality in selected Western Balkan countries: Multiple case study of Croatia, Montenegro, Serbia, Slovenia, and the Republic of Srpska (Bosnia and Herzegovina)”**

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October 23, 2023

Dear Editor in Chief, dear Editors,

I am submitting a paper entitled “*Institutional and actor-oriented factors influencing timber legality in selected Western Balkan countries: Multiple case study of Croatia, Montenegro, Serbia, Slovenia, and the Republic of Srpska (Bosnia and Herzegovina)*”. This Manuscript is coauthored by me and *Todora Rogelja, Mauro Masiero, Dragan Čomić, Branko Glavonjić, and Davide Pettenella*.

In our paper, we analyse stakeholder perceptions of EUTR and EUDR in five Western Balkan countries and categorise factors influencing timber legality according to the ACI framework. Our study confirms that legislation, enforcement, political will, collaboration and capacity building are key for implementation. Yet, corruption, limited resources, and complex, multi-level bureaucracy prevail as the main impeding factors in this region.

We believe this paper might be relevant for audiences (researchers, professionals and students) in forestry and forestry-related sectors, particularly those interested in Southeast Europe and Western Balkan countries and scholars working on policy coherence and timber legality topics. As we present the results for five countries, the article is slightly longer than indicated in the guidelines. If the paper is with favourable decision, we will make further efforts to reduce the manuscript and revise the English language using professional language editing services.

I also confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere. All authors declare no conflict of interest with respect to the conducted study. I also declare the use of applications using AI technologies (Bing Chat+, Bard, Chat GPT3.5, Grammarly) with the purpose of improving the language clarity, conciseness and grammar.

This manuscript is based on Ph.D thesis (in process of finalisation) of the lead author. Ph.D. is funded under CARIPARO Foundation PhD scholarship (University of Padova).

Please address all correspondence concerning this manuscript to me at [maja.radosavljevic@phd.unipd.it](mailto:maja.radosavljevic@phd.unipd.it).

Thank you for your understanding and for taking our manuscript into consideration for publication in the Journal of Forest Policy and Economics. In the hope of an efficient review process and a positive outcome

Best regards,

Maja Radosavljević

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1   **Highlights:**

- 2       • We analysed stakeholder perceptions on EUTR and EUDR in five Western Balkan
- 3       countries.
- 4       • We categorised factors influencing timber legality according to the ACI framework.
- 5       • Legislation, enforcement, political will, collaboration and capacity building are essential
- 6       for implementation.
- 7       • Corruption, limited resources, and complex, multi-level bureaucracy are the main
- 8       impeding factors.
- 9       • Regional collaboration among Western Balkan countries is essential for combating
- 10      illegal logging.
- 11      • Ensuring policy coherence and improving cooperation remain critical challenges for
- 12      timber legality and sustainable forestry.

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1 **Institutional and actor-oriented factors influencing timber legality in selected Western Balkan**  
2 **countries: Multiple case study of Croatia, Montenegro, Serbia, Slovenia, and the Republic of**  
3 **Srpska (Bosnia and Herzegovina)**

4 **Abstract:**

5 This paper investigates timber legality issues in the Western Balkans by examining the coherence of  
6 national policy frameworks in five Western Balkan countries (Slovenia, Croatia, Serbia, Montenegro, and  
7 the Republic of Srpska, BH) with the European Union Timber Regulation (EUTR) requirements. The  
8 study uses a multiple-embedded case study design to investigate national policies and regulations on  
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10 qualitative content analysis of retrieved documents was conducted to check the extent to which EUTR  
11 requirements are covered. Interviews with 36 key actors across selected countries were conducted to  
12 analyse their perceptions of the EUTR and the recently approved European Union Deforestation  
13 Regulation (EUDR), focusing on awareness, transparency, information flow, resources, and challenges of  
14 ensuring timber legality. The study also distinguished institutional and actor-oriented factors influencing  
15 the transposition of EUTR and forthcoming EUDR requirements into national policies and forest  
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18 opposing perceptions on timber legality and legitimate forestry practices among key stakeholders in five  
19 Western Balkan countries.

20 **Keywords:** forest governance, actor-centred institutionalism (ACI), policy coherence, European Union  
21 Timber Regulation (EUTR), European Union Deforestation Regulation (EUDR)

1 **Institutional and actor-oriented factors influencing timber legality in selected Western**  
2 **Balkan countries: Multiple case study of Croatia, Montenegro, Serbia, Slovenia, and the**  
3 **Republic of Srpska (Bosnia and Herzegovina)**  
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# **Institutional and actor-oriented factors influencing timber legality in selected Western Balkan countries: Multiple case study of Croatia, Montenegro, Serbia, Slovenia, and the Republic of Srpska (Bosnia and Herzegovina)**

## **1. Introduction**

Despite all the efforts to address deforestation and forest degradation (Bager et al., 2021), unsustainable forest management practices and illegal logging remain a widespread problem (Masiero et al., 2015), representing a major threat to the world's forests (Segato, 2007 and 2017; Paluš et al., 2018; WWF, 2019). Fuelwood and industrial wood harvesting and trade have been identified as direct deforestation and forest degradation drivers (FAO, 2010 and 2020; Sotirov et al., 2020), and their impacts may be emphasised by the illegal practices often associated with them (Kouelis, 2015; FAO, 2023)

To ensure the legality and sustainability of timber and timber products placed on the internal market, the European Union (EU) adopted several regulations, such as the EU Forest Law Enforcement, Governance, and Trade (FLEGT) Action Plan in 2003 and the EU Timber Regulation (EUTR) in 2013. Legislation banning illegally logged timber and related products from entering the EU should safeguard the sector from illegal trade and form part of the regulatory framework that promotes sustainable forest management (European Commission, 2010).

However, despite the EU's efforts to stop the flow of illegally sourced timber and timber products, EU consumption plays a significant role in global deforestation. EU responsibilities go beyond wood and are linked to international trade and agricultural expansion for producing several key commodities, with soya, beef, and palm oil accounting for about 80% of tropical deforestation worldwide (European Commission, 2021). In 2022, within the broader framework of the Green Deal, the EU adopted the EU Deforestation Regulation (EUDR) (EC, 2023). Since the EUDR is a relatively new regulation, the implications of its implementation are not yet fully understood. Recent studies (e.g., Berning and Sotirov, 2023) have expressed concerns and doubts about meeting the requirements of the EUDR. Implementing the regulation may be perceived as complex by actors in need to demonstrate compliance (Lidskog et al., 2013). Challenges in achieving compliance could be related to ensuring complete transparency in the supply chain (Apeti and N'doua, 2023), managing increased administrative responsibilities (Henn, 2021) and likely hardening of corporate accountability (Berning and Sotirov, 2023).

In light of such challenges associated with EUDR (i.e., policy spill-overs, perverse subsidies, etc.), particular attention should be given to countries where corruption and inadequate forest governance are associated with illegal practices, such as developing countries and countries in transition (Chatham House, 2018). Western Balkan countries targeted by our research – i.e., Serbia, Bosnia and Herzegovina, Montenegro, Croatia and Slovenia - are characterised by shared history, similar cultures, political and economic instability, and different EU membership statuses. They are also known as an

1 area exposed to a high risk of corruption (Forest Europe, UNECE & FAO, 2016; European Commission,  
2 2020; Transparency International, 2021), with illegal activities being recognised as one of the key  
3 3 problems for the forestry sector in the region (Balkan Investigative Reporting Network, 2018). Due to  
4 4 their strategic geographical position, failing in implementing legality and sustainability standards like  
5 5 those set within EUTR and EUDR might transform international timber flows by opening the doors of  
6 6 opportunity to other countries or operators with less stringent legality requirements.

7 Although Western Balkan countries are regarded as priority areas for improving legality monitoring  
8 8 systems in line with EUTR requirements, research on timber legality in these countries is still patchy  
9 9 and shows several gaps. Researchers mostly looked into forest certification as a means of sustainable  
10 10 forest management (Keary and Strand, 2011; Poje and Mavsar, 2014; Pezdevsek-Malovrh, et al., 2019;  
11 11 Avdibegović et al. 2021) including chain of custody certification (Penikar et al., 2012; Nasto and Poje,  
12 12 2014) and trade of timber and timber products (Nasto and Poje, 2014; Čomić et al., 2021a and 2021b).  
13 13 A limited number of studies (Nonić et al., 2011 and 2016; Avdibegović et al., 2012; Dobšinská, 2015;  
14 14 Giurca et al., 2016; Matović et al., 2017; EFI, 2018) analysed the adaptation of national forest sectors  
15 15 to the newest European laws on the legality of timber and timber products (e.g., EUTR and EUDR).  
16 16 Our study aims to contribute to the literature on timber legality by exploring policies and actors that  
17 17 influence timber legality in five Western Balkan countries: Croatia, Montenegro, Serbia, Slovenia, and  
18 18 the Republic of Srpska (Bosnia and Herzegovina). Grounding its theoretical framework in actor-centred  
19 19 institutionalism (Scharpf, 1997), this paper investigates key actors' perceptions with the aim of  
20 20 answering the following research question:

21 *What institutional and actor-oriented factors influence the transposition of European timber*  
22 *legality requirements in selected Western Balkan countries?*

23 In Section 2 we briefly present European timber legality requirements, also reflecting on the Western  
24 24 Balkan region in relation to illegal activities in forestry, while in Section 3, we describe the actor-centred  
25 25 institutionalism (ACI) framework that guided our data collection and analysis. In Section 4, we outline  
26 26 our methodology and methods, while in Section 5 we present results on institutional and actor-oriented  
27 27 factors organised country by country. Section 6 discusses the findings, examining similarities and  
28 28 differences among the analysed countries and the relevant literature. Finally, in Section 7, we draw  
29 29 conclusions and make recommendations for policy and practice.

## 30 **2. European requirements on the legality of timber and timber products**

31 On May 31, 2023, the European Parliament and the Council of the European Union adopted Regulation  
32 32 (EU) 2023/1115 on the making available on the Union market and the export from the Union of certain  
33 33 commodities and products associated with deforestation and forest degradation (in short, EUDR) and  
34 34 repealing Regulation (EU) No 995/2010 (EUTR). The EUDR (EC, 2023) entered into force on June 29,  
35 35 2023, although the main prohibitions and obligations will not apply until December 30, 2024. The



1 EUDR aims to minimise the Union's contribution to deforestation and forest degradation worldwide  
2 and reduce the Union's contribution to greenhouse gas emissions and global biodiversity loss.

3 The new Regulation will repeal EUTR and prohibit placing or exporting certain products in the EU  
4 market unless they meet specific criteria: they must be deforestation-free, adhere to their production  
5 country's laws, and require a due diligence statement confirming compliance. The EUDR requires  
6 operators and large<sup>1</sup> traders to conduct an extensive due diligence process regarding all relevant  
7 products supplied by suppliers and provide geolocation information on all plots of production land. This  
8 process includes information gathering, risk assessment, and risk mitigation. Simplified requirements  
9 apply to products from low-risk countries, while small and medium-sized enterprises (SMEs), as  
10 defined by Directive (UE) 2013/34, must collect identity information and due diligence references (EC,  
11 2023).

12 The Regulation establishes an extensive enforcement framework, with competent authorities in member  
13 states conducting checks based on risk levels to ensure compliance. Investigative powers are granted to  
14 authorities, and minimum check thresholds are set for different product risk categories. Corrective  
15 actions and penalties for non-compliance are defined, including fines and temporary exclusion from  
16 public procurement. Reporting mechanisms enhance enforcement transparency. Entities subject to the  
17 Regulation must assess their due diligence mechanisms by December 30, 2024, considering  
18 complexities in supply chains, compliance risks, and relevant laws. Producers should ensure compliance  
19 and provide necessary information to customers.

### 20 **3. Actor-centred institutionalism**

21 Given the perverse nature of the illegal trade of timber and timber products, it is important to understand  
22 the institutional setting around timber legality. Drawing on core concepts of the actor-centred  
23 institutionalism (ACI) framework (Scharpf, 1997), the following analysis centres on the two key  
24 elements of (1) institutions and (2) actors. According to the ACI framework, institutions can be defined  
25 as formal and informal rules and/or a system of procedures that structure social interactions and shape  
26 the courses of action that actors may choose (Scharpf, 1997). The interaction among actors and their  
27 institutional environment is a multi-faceted process, and actors both respond to and modify the  
28 institutional environment in which they are embedded over time to maintain competitive advantages  
29 (Hollingsworth, 2000).

30 We considered both the formal and informal institutional and actor-oriented factors at the respective  
31 national levels related to ensuring timber legality. With regard to the formal institutions, the focus was  
32 on regulatory institutions, such as laws, policies, and strategies (binding and non-binding), as well as  
33 the monitoring and fines arising from government regulations, based on a literature review. Formal

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59 <sup>1</sup> i.e., trading companies that do not qualify as small and medium-sized enterprises according to Directive (UE)  
60 2013/34.  
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1 institutions reflect the official 'rules of the game' that affect actors' behaviour by specifying required,  
2 prohibited, or permitted actions.

3 Informal institutions refer to more implicit, slowly changing, culturally transmitted, and socially  
4 constructed rules (Scott, 2005). Informal institutions were analysed by looking at the organisational  
5 culture in the five targeted countries based on the governance arrangements and exchange of  
6 information.

7 When examining actors, we followed the ACI framework and concentrated on two main categories –  
8 actor's roles and attitudes (Scharpf, 1997; Baycheva-Merger et al., 2018). Each category was further  
9 divided in subcategories, i.e., (i) responsibilities and resources and (ii) awareness and perceptions,  
10 respectively. These categories and sub-categories provided the framework for structuring, organising,  
11 analysing, and interpreting the empirical data from interviews and two previous studies (Radosavljevic  
12 et al., 2021 and 2023) on formal institutional factors in the five selected countries.

## 13 **4 Methodology and methods**

14 In this section, methodological approaches and methods adopted for the research are presented in two  
15 subsections.

### 16 **4.1 Data collection and analysis**

17 This analysis used an exploratory research approach with combined deductive and inductive reasoning.  
18 We used a multiple-embedded case study design (Yin, 2009) to analyse institutional and actors-oriented  
19 factors and draw a single set of cross-case conclusions. Within each case, units of analysis included  
20 formal and informal institutions that influence legality according to European requirements and as  
21 actors' roles, namely responsibilities and perceptions. Data on an analysis of formal institutional and  
22 actor-oriented factors was grounded in previous research, which in-depth investigated timber legality  
23 in relation to European requirements in accordance with the regulation in force (at the time of the  
24 research, the EUTR). As methodological details of policy content analysis as well as results are already  
25 detailed in two previous studies (see Radosavljevic et al., 2021 and 2023), we synthesised and  
26 reorganised them according to the ACI framework, obtaining results on formal institutional factors as  
27 well as on actors' mandated responsibilities and resources based on previous research. To investigate  
28 informal institutional and actor-oriented factors, we conducted a total of 36 semi-structured face-to-face  
29 interviews with policymakers and other key actors (see Table 1) in two waves. Initial respondents were  
30 selected based on a policy analysis – i.e., actors with mandated roles - and previous studies, while others  
31 were identified using snowball sampling – i.e., a non-probability sampling technique in which existing  
32 subjects provide referrals to the next suitable person to be interviewed (Christopoulos, 2009). The first  
33 wave of interviews took place in the spring and summer of 2022 across all five countries; the second  
34 wave took place online during the spring of 2023. Questions were related to the respondents' knowledge  
35 and perceptions on 1) timber legality and awareness of EU regulations on force; 2) organisational roles

as well as activities and procedures for ensuring timber legality, due diligence, and traceability; 3) availability and adequacy of resources; 4) challenges related to ensuring timber legality; and 5) future steps, policies, and projects.

Table 1: Stakeholders interview table - number of interviews per type of actor and per country

Country/ Institution	Ministry of Agriculture, Forestry and Water	General Inspectorate , Inspection Unit for Forestry	State Forest Managem ent Organizatio n	Ministry of Finance	Industry of Chamber, Section for forestry and timber industry	NGO	Scientific Institution	Private Company	Total number of respondents /Interview	Total number of respondents /Survey
Slovenia (SLO)	1	1	2	1	1				6	3
Croatia (CRO)	2	-	1		1	1	1	1	7	5
Serbia (SRB)	1	1	2	-	1	1	1	1	8	6
Montenegro (MNE)	4	1	n/a	1	1	1		1	9	5
Republic of Srpska (BiH)	1	1	1			2	1		6	6
<b>TOTAL</b>						<b>36</b>				<b>25</b>

<b>Legend:</b>	
X	interviewed (the number of X represents the number of respondents)
-	not interviewed (no response or decline)
n/a	not applicable (the organisation does not exist in the country)
<b>Ministry responsible for forestry:</b>	Ministry of Agriculture, Forestry, and Water Management, Directorate for Forests (SRB) Department for Forestry, Hunting and Wood Processing (RS-BH) Directorate for Forestry, Timber Industry, and Hunting (MNE, CRO, SLO).
<b>Inspectorate responsible for forestry:</b>	General Inspectorate, Inspection Unit for Forestry
<b>Forestry chamber:</b>	Industry of Chamber, Section for Forestry and Timber Industry (SLO, SRB, MNE) Chamber of Forestry and Wood Technology Engineers (CRO)
<b>Ministry responsible for customs:</b>	Ministry of Finance (SLO) or Custom Administration (MNE)
<b>State Forest Management Organisations</b>	State Forest Management Organisation (SRB, CRO, RS-BH) or Slovenski drzavni gozdovi doo (SLO) or Slovenian Forest Service (SLO)

Source: Own elaboration

## 4.2 Case study area: Countries' backgrounds

This sub-section presents background information on forestry and illegal activities in five selected countries. They differ with respect to forest cover, forest ownership, as well as forest management organisation. While most of the analysed countries are characterised by relatively stable sectoral dynamics, Montenegro is currently in the process of restructuring and policy reformulation (MAFWM, 2022). Additionally, illegal forestry activities are present in all countries, although the number of illegal activities, the amount of illegally harvested timber and related forest area vary from country to country. Basic data on forestry and illegal activities per country are presented in Table 2.

Table 2. Basic data on forestry and illegal activities per country

Country	Slovenia	Croatia	Serbia	Montenegro	Republic of Srpska (BH)
<b>Forest Area<sup>1</sup> (1000 ha)</b>	<u>1237.83</u> (61.47%)	1939.11 (34.65%)	<u>2722.65</u> (31.13%)	<u>827.00</u> (61.49%)	<u>1309.79</u> (53%) <sup>2</sup>
<b>Ownership<sup>3</sup> (% state: private)</b>	<u>23:77</u>	<u>76: 24</u>	<u>53: 47</u>	52:48	77:23
<b>Certified forest area (1000 ha)<sup>1</sup></b>	292.20	2044.67	948.10	0.00	1011.2 <sup>4</sup>
<b>FSC (%)<sup>4</sup> PEFC (No of certificates)<sup>5</sup></b>	22% FSC 116 PEFC	74% FSC 24 PEFC	38% FSC 5 PEFC	n.a.	100%FSC 2 PEFC
<b>Amount of illegally harvested timber (m<sup>3</sup>/year)</b>	23397 <sup>6</sup>	not available	197 774 <sup>7</sup>	6 037.50 (state forests), 436.08 (private forests) <sup>8</sup>	92 977 <sup>8</sup> (approx. 240 000 estimates FAO, 2020)
<b>EUTR Implementation Year</b>	2013	2013	N/A (pre- accession period)	N/A (internal reorganization)	N/A (pre- accession period)
<b>Legal Basis for EUTR implementation</b>	Forest Act, by laws	Forest Law, by laws; Law on EUTR Implementation	Forest Law, by laws	Forest Law, by laws	Forest Law, by laws
<b>Main Forest Management Organizations</b>	Slovenia Forest Service, PE Slovenski gozdovi	PE Hrvatske sume	PE Srbijašume; PE Vojvodinašume	Directorate fo Forests, Ministry of AFWM	PE Šume Republike Srpske
<b>Competent Authority</b>	Ministry responsible for forestry; Inspectorate for forestry; Financial Administration – Customs office	Ministry responsible for forestry; The Ministry of Finance – Customs office.	Ministry responsible for agriculture and forestry	Ministry responsible for agriculture and forestry	Ministry responsible for agriculture and forestry
<b>Data sources</b>	1 - FAOSTAT, 2023; 2- Petrovic, 2022; 3 - GFRA 2020; 4 - FSC, 2023; 5 - PEFC, 2023; 6 - Zavod za Gozdove Slovenije, 2023; 7 - Birou of Statistics of Republic of Serbia, 2022; 8 - Bjegovic et al, 2021				

Source: Own elaboration, 2023<sup>2</sup>

## 5. Results

Results are presented regarding key actors' perceptions of timber legality and European requirements in each selected country.

### 5.1 Croatia

According to all seven respondents, the EUTR requirements have been completely transposed nationally. The Customs Administration provides information on imports to the Ministry of Agriculture, Forestry, and Water Management, performing risk analyses to identify areas needing attention. However, according to two respondents, enforcement might be enhanced, especially with regard to the

<sup>2</sup> The data presented in the table is derived from official statistics and national reports for the years 2020 and 2022. It is important to note that the information will undergo further updates before publication.

1 penalties and oversight procedures. The absence of preventive measures against illicit activities and the  
2 increased costs for private forest owners were cited as relevant issues by three respondents. Three  
3 respondents point out that the presence of inspections and the police in the field is also questionable and  
4 infrequent.

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7 5 Five respondents said that with some assistance from the Ministry of Internal Affairs and the Customs  
8 Administration, the forestry inspection and the state inspectorate are in charge of addressing the problem  
9 of illegal logging. Concerning the Forest Stewardship Council (FSC) certification approach, two  
10 respondents voiced worry that unlawful commodities would mix with certified goods at sawmills or  
11 warehouses.  
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16 10 Five respondents emphasise that the competent Ministry of Forestry has one person responsible for  
17 matters related to EUTR, but other competent institutions are not clearly defined. They also note that  
18 the human resources capacity in the forestry sector is insufficient for successfully implementing the  
19 EUTR. They believe that the competent ministry is the main responsible and the most relevant  
20 institution in this case, but there is also a responsibility on the customs, police, and other institutions  
21 when it comes to the practical implementation of these regulations. Based on their previous experiences,  
22 four respondents believe that information about illegal activities should be more accessible and  
23 centralised, with multiple data sources.  
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30 18 Three respondents noted the war in Ukraine and its effects on the European wood industry, as they  
31 predict that this will result in a lack of raw materials and further strain Europe's current wood supplies.  
32 They also pointed out that businesses in the Western Balkans are ill-equipped to respond to the current  
33 situation. To promote greater value-added outputs, they recommended better allocation of wood  
34 resources among local companies. One person brought up that, in general, the European consumer  
35 culture promotes over-exploitation and deforestation for agricultural purposes. Additionally,  
36 respondents noted the pressure from the abundance of readily accessible wood supplies, producer  
37 overproduction, yearly logging restrictions, and low-value finalisation. They contend that wages for  
38 forestry workers are insufficient, rules are rigid and do not allow for flexibility in response to changing  
39 circumstances.  
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## 47 **5.2 Montenegro**

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49 29 Five respondents (out of nine) stated that the Forest Administration and the Inspection for Forestry  
50 oversee the state of illicit activities within the forestry sector. According to the findings, it was reported  
51 by four respondents that the Directorate for Wood Industry, a division operating under the Ministry of  
52 Agriculture, Forestry, and Water Management, is responsible for overseeing matters pertaining to the  
53 wood industry as well as the enforcement of laws outlined in the EUTR. The respondents emphasised  
54 that sawn wood produced in Montenegro is exported to Kosovo, Albania, and South-Western Serbia.  
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1 Four respondents highlighted that improved work activities may be expected when the prerequisites for  
2 forest certification and the enforcement of the EUTR are fulfilled. Additionally, the need for technical  
3 support and the development of human resources capability were emphasised to carry out these  
4 operations effectively.

5 A total of seven respondents highlighted the constraints associated with the current organisational  
6 strategies used within the forest industry. The user highlighted the dearth of forestry and hunting  
7 inspections within the Ministry of Agriculture, Forestry, and Water Management, as well as the absence  
8 of a state-owned enterprise tasked with the responsibility of managing state forests. It has been proposed  
9 that the Forest Administration assumes a regulatory role in administrative processes pertaining to state  
10 forests, with other responsibilities being delegated to management companies.

11 Consensus was reached among all respondents about the primary obstacle encountered within the forest  
12 industry, which pertains to the institutional structure, reform initiatives, and the creation of a  
13 governmental entity responsible for forest management. The authors highlighted the need to establish  
14 regulatory entities tasked with overseeing and guaranteeing adherence to the EUTR stipulations.  
15 Additionally, they pointed out the insufficiency of both human and technological resources in fulfilling  
16 this responsibility.

17 The respondents in the study also emphasised concerns such as inadequate remuneration for forestry  
18 specialists, limited access to up-to-date computer equipment, and inadequate training in the use of  
19 modern information technology. The forest and wood industry sector in Montenegro has a certain level  
20 of familiarity with the EUTR but lack a comprehensive understanding of the Regulation's requirements  
21 and how to implement them.

22 The respondents emphasised that wood processors in Montenegro do not prioritise the EU market, hence  
23 alleviating any pressure for the adoption of the EUTR. Nevertheless, the implementation of the EUTR  
24 is a mandatory requirement during the EU admission process. The assurance of institutional capability  
25 to assist the implementation remains intact, notwithstanding the hurdles.

### 26 **5.3 Republic of Srpska (Bosnia and Herzegovina)**

27 Two respondents (out of six) point out that there is no adequate political will to eliminate illegal  
28 activities and that institutions such as prosecutors and courts are often inert and susceptible to influences  
29 that are not interested in resolving the situation in forestry. Although the development of the Forestry  
30 Development Strategy of the Republic of Srpska is in the final stage (2023) and there are indications of  
31 planning for a new Forest Law, the existing Forest Law provides already an excellent basis for the  
32 prevention and contrasting of illegal activities. Four respondents believe that it is crucial to implement  
33 a new Forest Law. This law would serve the vital purpose of establishing clear regulations concerning  
34 the import of wood assortments and the management of privately owned forests. They propose  
35 reorganising the sector whereby the responsibility for planning and monitoring tasks are shifted from

1 forest users to owners. Additionally, they suggest adopting distinct laws inspired by the Croatian model  
2 and establishing a wood processing department under the Ministry of Agriculture, Forestry, and Water  
3 Management. This department would be responsible for supervising the execution of the EU Trade  
4 Terms Regulation.

5 According to the findings, four out of six respondents point out that wood processing operations can  
6 encounter illicit assortments of timber sourced from private forests. The aforementioned circumstance  
7 often arises due to unresolved property and legal matters pertaining to the forest owners. Issues might  
8 also emerge when importing wood from other nations due to the potential lack of correct stamping or  
9 numbering of assortments. To tackle this issue, a regulatory framework has been implemented to  
10 provide a standardised system for numbering imported timber assortments.

11 Although the Forest Law of the Republic of Srpska is well-known among key players in the forest and  
12 wood processing industries, their understanding of the precise rules outlined in the EUTR is limited.  
13 Many wood processors lack familiarity with the complex protocols for acquiring essential paperwork  
14 to put timber and wood products on the European Union market.

15 More than 50% of the respondents indicate that the state forests in the Republic of Srpska are FSC  
16 certified, which signifies their adherence to sustainable forest management practices. Implementing this  
17 certification has shown to be crucial in addressing the problem of illicit activities within the forestry  
18 sector. The same respondents state that a significant number of timber processing businesses, totalling  
19 more than 350, hold a valid FSC Chain of Custody (CoC) certificate. Additionally, one processing  
20 organisations hold a valid Programme for the Endorsement of Forest Certification (PEFC) CoC  
21 certificate.

22 Nevertheless, the administration of privately owned forests, especially those containing valuable  
23 species such as oak and noble hardwoods, presents a significant obstacle due to their lack of certification  
24 in accordance with the FSC standards. The proposed remedy under consideration is the implementation  
25 of PEFC standards, which was successful in neighbouring countries (e.g. Slovenia).

#### 26 **5.4 Serbia**

27 Four respondents noted that the Forest Law in Serbia mandates forest users to implement measures for  
28 forest protection to prevent illegal activities. Private forests, which comprise 50% of the total forests,  
29 are particularly vulnerable to unauthorised actions due to various circumstances. The distribution of  
30 private forests is slow and inefficient due to property relations and demographic changes. Private forest  
31 owners often neglect or leave their forests under inadequate supervision, failing to fulfil their  
32 obligations. To address these issues, organisational changes are needed, including creating associations  
33 of private forest owners.

1 Four respondents noted that the wood industry is not considered part of the forestry sector at the state  
2 administration level. Two respondents suggested future organisational changes, such as creating a new  
3 position i.e., an inspector responsible for checking the EUTR at wood processing facilities. Forestry  
4 inspectors in Serbia are primarily responsible for enforcing legal obligations and the Forest Law and  
5 generating monthly reports, but their number is insufficient. There is a plan to employ inspectors  
6 specialised in wood processing instead of forestry engineers, as the latter lack the necessary training for  
7 wood gradations and assessments. Inspectors' safety during the seizing of timber is often compromised  
8 due to the value of the goods and the potential fines involved. Seizing timber on forest truck roads also  
9 poses challenges, requiring the involvement of traffic police for safety reasons. Confiscation of timber  
10 raises issues related to storage and transportation.

11 Illegal logging in Serbia primarily occurs in the land security zone (Integrated Border/ Boundary  
12 Management between Serbia and Kosovo)<sup>3</sup> and involves organised armed illegal loggers, posing a  
13 direct threat to the safety of forest guards, inspectors, and others. Restricted movement of  
14 representatives of Serbian institutions in this security zone often leads to forest devastation.

15 All respondents emphasised that forest users are familiar with the process of timber legality, while  
16 private forest owners lack sufficient information. Producers are aware of the EUTR but may not fully  
17 understand its importance or are unaware of how to implement it. The lack of cooperation between  
18 institutions results in the export of high-quality industrial timber, negatively impacting the national  
19 industry. Serbia also exports large quantities of sawnwood instead of further processing it, thus affecting  
20 the value added to the industry. The disconnection between the forestry and wood-based sectors is  
21 further exacerbated by the distribution of timber from state forests and pressure from wood processors.  
22 The lack of human resources monitoring production in factories is also a challenge.

23 Implementing the EUTR will play a central role for the Directorate for Forests and the Customs  
24 Administration in Serbia. Existing legislation is likely to undergo changes to align with EU regulations.  
25 The need for new digital technologies and engagement of stakeholders, such as police, market  
26 inspectors, and public enterprises, is recognised. Implementing the EUTR should be comprehensive and  
27 efficient, especially for the wood industry sector, which is oriented towards the EU market. The  
28 increasing demand for wood in Balkan countries is expected to grow Serbian exports to the EU. Serbian  
29 products are of high quality, and companies with long-standing partnerships with EU customers will  
30 adapt to EU regulations to continue their operations smoothly.

## 31 **5.5 Slovenia**

32 Five out of six respondents did not consider illegal logging to be a significant issue in Slovenia. They  
33 believed the Forest Act incorporated robust rules to prevent illegal logging, and individual cases were

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<sup>3</sup> <https://dialogue-info.com/integrated-border-boundary-management/>



1 not seen as alarming. All respondents mentioned that state forests are certified, and there is also a PEFC  
2 certification group for private owners managed by the Chamber of Agriculture and Forestry. One  
3 respondent mentioned that group certification was affordable for private forest owners due to relatively  
4 low prices. Other respondents highlighted that Slovenski Gozdovi, a public enterprise, had implemented  
5 a due diligence system and internal codes of conduct to ensure the legality of timber from state forests.

6 However, one respondent had a different opinion, stating that there were cases of wood theft and illegal  
7 logging that were not officially addressed, indicating a certain level of corruption in the forestry sector.  
8 They also mentioned that most timber logged on farms for firewood is often not marked, making  
9 Slovenia potentially the country with the largest proportion of informal logging in the EU. The  
10 respondent criticised the lack of controls and oversight by the State Forest Service and the Ministry  
11 responsible for forestry.

12 All respondents agreed that awareness of the EUTR in the forest sector is high in Slovenia, as it had  
13 been implemented more than five years ago. Awareness-raising campaigns were conducted by the  
14 Directorate for Forests and the Slovenian State Forest Service. Private forest owners are considered to  
15 be quite aware of the documentation needed to prove timber legality. District foresters from the State  
16 Forest Service worked with private forest owners in the field and effectively introduced EUTR  
17 requirements.

18 The respondents mentioned limited capacities in terms of human resources, such as the number of  
19 district foresters, inspectors, and customs administration officials. They believed that with more  
20 employees, there could be a wider outreach in terms of awareness raising and monitoring. The  
21 affordability of certification for private forest owners was also mentioned as a challenge, leading to  
22 regional private forest certification under the PEFC scheme.

23 The major challenges faced by the respondents from the public administration were related to tropical  
24 timber from high-risk countries and the limited resources for field inspections. They mentioned well-  
25 established procedures for monitoring, combining targeted field checks with random sampling.  
26 However, they acknowledged that the system was not perfect.

27 Regarding future developments, the respondents did not expect major changes in policy, legal  
28 framework, or the structure of the forest sector. They mentioned that the forthcoming EUDR might  
29 impose new requirements, but they felt prepared based on their experience with EUTR. One respondent  
30 suggested improving the forest management system and reorganising the State Forest Service to  
31 enhance private forests and the forest sector as a whole. One respondent, though had critical viewpoints  
32 on the future EUDR implementation regarding efficiency and desired outcomes.

## 33 **6. Discussion**

1 In this section, results are discussed by comparing institutional and actor-oriented factors across five  
2 selected case studies and then by presenting possible implications of institutional and actor-oriented  
3 factors on the future transposition of EUDR requirements in the analysed countries.

#### 4 **6.1. Comparison of institutional and actor-oriented factors across five selected case studies**

5 Looking at all the analysed countries and applying the ACI framework, we were able to derive  
6 institutional (6.1.1) and actor-oriented (6.1.2) factors of timber legality in each country and to notice  
7 both similarities and differences between countries (Table 3).

##### 8 **6.1.1. Institutional factors**

9 Formal institutions, such as policies and laws, shape the approaches and prescribe measures to address  
10 illegal timber activities (Cashore, 2012; Henn, 2021). In each analysed country, legislation and policy  
11 frameworks significantly influence the approach to mitigate illicit practices within the forestry sector.  
12 Most notably, the integration of EUTR requirements into regulatory texts is driven by international  
13 governance regimes (Sotirov et al, 2020), which, in our case, corresponds to the EU status of analysed  
14 countries. For EU member states, this is done through the Forest Act in Slovenia and additional Law on  
15 EUTR in Croatia. As for the three Western Balkan countries in accession to EU (i.e., Serbia,  
16 Montenegro, and Republic of Srpska (BiH)), national forest laws were largely aligned with the EUTR  
17 requirements, although not fully aligned yet.

18 Upon examining institutional factors, it is evident that all countries exhibit robust formal institutions,  
19 with the exception of Montenegro, which is undergoing sector restructuring. These institutions are  
20 characterised by top-down policies and stringent legislation pertaining to timber legality, particularly  
21 forest acts and rulebooks (Bjegović et al, 2021; Radosavljevic et al., 2021 and 2023). Although rules  
22 and procedures are formally defined in all analysed countries, compliance with timber legality  
23 regulations is contingent upon the efficiency of monitoring and enforcement mechanisms (Bosh, 2021).  
24 Slovenia and Croatia have a paucity of inspectors and relatively low fines for violations, and the  
25 situation seems even heightened in non-EU countries, where additional difficulties originate from poor  
26 coordination of multiple enforcement agencies (Serbia), limited knowledge and training (Montenegro),  
27 as well a lack of adequate information technology and field equipment (Republic of Srpska). In all  
28 countries, national forestry information systems are centralised, incomplete and under the jurisdiction  
29 of forestry and financial public administration (UNEP-WCMC, 2020). Several analysed countries  
30 struggle with limited transparency and information accessibility (Croatia and Slovenia), low  
31 transparency and quality of data (Serbia and Republic of Srpska), as well as non-existence of the data  
32 (Montenegro). This confirms that the lack of consolidated data and data systems makes monitoring of  
33 specific instances, such as illegal forest activities, difficult, finally indicating a lack of robust law  
34 enforcement (Bjegovic et al., 2021). Thus, to ensure the integrity of timber legality, measures such as  
35 data collection and sharing, monitoring, and law enforcement should be improved in all countries.

1 Informal institutional factors, such as organisational culture, seem to considerably influence the  
2 enforcement of timber legality measures in each analysed country. As noted by our respondents and  
3 confirmed by previous studies (FEA, 2020; Bjegović et al., 2021) in many of the targeted countries,  
4 inter-sectoral, multi-actor cooperation is weak, and the trust among actors is low; moreover, in all  
5 targeted countries corruption plays a role in illicit activities to a certain extent. Although the perceived  
6 level of illegal activities varies from low in the EU-member Western Balkan countries, to medium (in  
7 Serbia and BiH) and high (Montenegro) (FEA 2020), in any case, it undermines the effectiveness of  
8 timber legality measures by allowing illegal logging and trade. While Slovenia and Croatia demonstrate  
9 a dedication to adherence and compliance with overall EU goals, as a consequence of their EU  
10 members' condition, the political priority of illegal logging is relatively low, as illegal activities are not  
11 perceived as worrying activities due to a perceived small-scale, and subsistence nature of illegal  
12 logging. Additionally, those countries do not have common action plans or guidelines for combating  
13 illegal logging and local organisations rely on inter-organizational protocols, codes or rule books. In  
14 contrast, Montenegro and the Republic of Srpska have action plans to counter illicit activities. Still,  
15 none of the countries have complete forest information systems, and all face challenges related to  
16 evidence of property rights and land use changes (Dobšinská et al., 2011 and 2020; Živojinović et al.  
17 2015; Weiss et al., 2019). This creates unfavourable institutional conditions for free flow and access to  
18 information (Baycheva-Merger et al., 2018).

### 19 **6.1.2. Actor-oriented factors**

20 The allocation of responsibilities among various stakeholders within the forestry sector is crucial for  
21 coordinating among actors and efficiently enforcing timber legislation and adequate forest governance  
22 (Cashore and Stone, 2012; Aggestam and Pülzl, 2018; Dobšinská et al., 2020). In every country, the  
23 most significant entities are those that possess legally acknowledged rights and resources (Winkel and  
24 Sotirov, 2016). On the one hand, the aforementioned entities are present in all countries as public  
25 entities, particularly within ministries that oversee forestry, financial inspectorates, customs offices, and  
26 traffic police departments. In addition to these entities, state enterprises or extension services, such as  
27 the Slovenian Forest Service, play significant roles, particularly at the ground level. This indicates that  
28 public actors are connected with strong and formal ties across different sectors at the national level,  
29 while in practice, they stay poorly connected to private forest owners, forest industry or civil society.  
30 Such dominance and power of state actors in ensuring timber legality indicate a siloed approach and  
31 “policy elites” (Rogelja and Shannon, 2018), thus being aligned with the findings of previous broader  
32 studies on traditional modes of governance (Behagel, 2018), polycentric forest governance (Lazdinis,  
33 Angelstam, and Pülzl, 2019) or policy integration (Sotirov and Memmler, 2012). For example, the  
34 current actors' arrangements in Serbia resemble that found in Rogelja and Shannon (2017) with regard  
35 to the incorporation of anti-corruption measures in forestry, being in line with the findings of Sotirov  
36 and Memmer (2012) on enduring policies due to unchanging actors' constellations.

1 Successfully implementing timber legality measures depends on the actors' resources and capacities  
2 (Scharpf, 1997). Slovenia places significant emphasis on delineating and assigning roles and  
3 responsibilities, while the intricate circumstances in Croatia give rise to apprehensions regarding the  
4 concurrent involvement of a state forest enterprise in various roles of timber utilisation, monitoring and  
5 trade, which may give rise to conflicts of interest (Turner, 2021). Despite the commitment demonstrated  
6 by Slovenia and Croatia, there is a notable lack of resource allocation for the implementation of the  
7 EUTR, as none of the analysed countries has a separate budget. Non-EU countries (Serbia, Republic of  
8 Srpska and Montenegro) also encounter difficulties due to a limited number of forest inspectors and  
9 resource limitations, mirroring comparable concerns observed in Croatia and Slovenia. In Serbia, there  
10 is no clearly defined procedure or authority in cases where a wood processing company seeks  
11 documentation issuance as defined by the EUTR, which EU buyers require.

12 Thus, all countries share the challenge of managing a shared responsibility landscape, which is in non-  
13 EU countries even further complicated by ongoing reforms and limitations in know-how and technical  
14 capacity (FEA, 2020). However, sufficient financial and adequately trained human resources are  
15 essential to effectively address and mitigate illegal timber activities, thereby ensuring significant  
16 positive outcomes (Sotirov et al., 2020). Adequate funding, labour force and technical expertise are  
17 essential to establish distinct responsibilities and efficient collaboration. Additionally, investing in the  
18 necessary resources will enable these entities to overcome limitations in their capacity and successfully  
19 implement ongoing reforms. Without the necessary resources, achieving comprehensive timber legality  
20 outcomes will be difficult, if not impossible. Therefore, it is crucial for all countries to prioritise resource  
21 allocation to address the challenges they face in managing their shared responsibility landscape.

22 The importance of awareness of timber legality and European requirements, as well as transparent,  
23 accessible and reliable information, are crucial for the successful execution of policies and the  
24 engagement of stakeholders, policymakers, and the wider public (Cashore and Stone, 2012; Sotirov et  
25 al., 2020). Awareness raising and training are crucial in cultivating a shared comprehension regarding  
26 the significance of timber legality measures and EU timber legality requirements (European  
27 Commission, 2020; EC, 2021). In this regard, Slovenia and Croatia exhibit a notable level of awareness  
28 among policymakers, which has the potential to facilitate the implementation of regulations. In contrast,  
29 Serbia shows a moderate awareness level that is gradually growing, primarily influenced by civil society  
30 engagement and protests. Both Montenegro and the Republic of Srpska place significant importance on  
31 the necessity of awareness-raising among diverse stakeholders, primarily the forest industry and private  
32 forest owners.

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TABLE 3 Institutional and actor-oriented factors influencing timber legality in selected countries

	Sub-category	Croatia		Montenegro		Serbia		Republic of Srpska		Slovenia	
		Specification	Description	Specification	Description	Specification	Description	Specification	Description	Specification	Description
Institutional Factors	<b>Legislation and policy</b>	On the force, rigid	Forest Act, Law on EUTR, rulebooks	Not fully applied No forest certification	Action plan for preventing illegal activities Forest Act, rulebooks	On the force, rigid Forest certification	Forest Act, rulebooks	On the force, rigid Forest certification	Action plan for preventing illegal activities Forest Act, rulebooks	On the force, rigid Forest certification	Forest Act, rulebooks
	<b>Monitoring and fines</b>	Defined financial fines	Relatively low fines	Defined financial fines	Inefficient procedures Relatively low fines	Defined financial fines	Relatively low fines	Defined financial fines	Inefficient procedures Relatively low fines	Defined financial fines	Relatively low fines
	<b>Organisational culture</b>	Centralised approach	Top-down dominance of the state Relatively low political priority Export mostly within the EU	Sectoral reorganisation	Relatively high political priority Low exports to less demanding markets High corruption	Centralised approach	Top-down dominance of the state Relatively low political priority	Centralised, dependent on broader political BH developments	Relatively high political priority High corruption	Centralised approach	Top-down dominance of the state Relatively low political priority
		Exchange of information	Formal, centralised systems and registers. low transparency of information, low collaboration	Exchange of information	Formal, low transparency of information, low collaboration	Formal exchange of information	Formal, centralised systems and registers	Exchange of information	Formal, low transparency of information, low collaboration	Formal exchange of information	Formal, centralised systems and registers
Actor-oriented Factors	<b>Responsibilities</b>	Divided, unclear	Shared responsibilities between ministries and inspectorates	Divided, unclear	Overlapping responsibilities between ministries and inspectorates	Divided, unclear	Shared responsibilities between ministries and inspectorates	Divided, unclear	Overlapping responsibilities between ministries and inspectorates	Divided, clear	Shared responsibilities between ministries and inspectorates
	<b>Resources</b>	Limited capacities	Lack of data, lack of inspectors, lack of knowledge	Limited capacities, knowledge and resources	Lack of data, lack of inspectors, lack of knowledge, low salaries	Limited human capacities	Lack of inspectors, lack of equipment, inadequate knowledge	Limited capacities, knowledge and resources	Lack of data, lack of inspectors, lack of knowledge, low salaries	Limited human capacities	Lack of inspectors

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	<b>Awareness</b>	Familiarity with EUTR	Relatively low in Private Forest Owners, and the wood industry	Low familiarity with EUTR	Low export to the EU; No interest in implementing the EUTR	High familiarity with EUTR	Relatively low in PFOs, and the wood industry	High familiarity with EUTR	PFOs familiarised through the laws; Industry familiarised due to export orientation	Small scale, substantial illegal logging High familiarity with EUTR	Word of mouth for familiarising PFOs
	<b>Perceptions</b>	cross-sectoral, multi-actor cooperation, market volatility	Poor information sharing and networking	Poor cross-sectoral cooperation	Lack of certification, Low interest; Corruption	Poor cross-sectoral, multi-actor cooperation, market volatility, inactive PFOs	Poor information sharing and networking; Nepotism	Poor cross-sectoral, multi-actor cooperation,	FSC & PEFC as confirmation of legality	Poor cross-sectoral, multi-actor cooperation, market volatility, inactive PFOs	Difference between de jure and de facto procedures

Source: Own elaboration upon Radosavljevic et al. (2021 and 2023)

## 6.2. Implications of institutional and actor-oriented factors on the future transposition of EUDR requirements in the analysed countries

Implementing the EUTR and EUDR in the region requires a combination of institutional capacity, collaboration, and enhanced monitoring and enforcement procedures. Slovenia's commitment to forest certification and legality verification aligns with EU standards, while Croatia's experience with EUTR and existing legal frameworks may serve as a basis for transitioning to EUDR. However, the expanded due diligence standards and risk assessment procedure will probably impose significant administrative obligations on forest management and monitoring agencies (Ross and Johnston, 2023; Köthke, Lippe, and Elsasser, 2023).

Serbia's institutional framework for wood legality and sustainable forest management has been strengthened, but ongoing obstacles include developing inter-institutional coordination and enhancing monitoring and enforcement capacity. There is a lack of coordination between the forestry sector and the wood industry, which needs to be improved for better outcomes. Serbia's current attempts to build a new information system for forestry and undertake a new national forest inventory aligned with EUDR data needs are essential for compliance. Further developments in terms of integration with various forestry reporting systems (e.g., FAOSTAT, EEA, EUFIS, EUFORGEN, to mention a few) could be worth investigating in more depth, as synergies would open access to additional resources and capacity building.

Establishing a Competent Authority and improving coordination among public entities will be essential to achieving the enforcement requirements of the law. Awareness and comprehension of EUDR among Serbia forest owners, operators, and traders is crucial for compliance. The prospective inclusion of Serbia within the EUDR list of countries with a higher deforestation and forest degradation risk might entail further measures to assure the legality of exports to the EU market. Strengthening the skills of accountable actors and developing cooperation with other EU member states can facilitate the implementation of the EUDR.

Montenegro's focus on preventing unlawful activities and establishing a state forest management organisation could help meet EUDR requirements. However, due to the lack of certified forest areas – that might help comply with EUTR and EUDR requirements – and limited information accessibility, due diligence is still a challenge. To ensure compliance, Montenegro's forest industry stakeholders must work closely together through awareness campaigns and capacity-building programs. Besides that, forest certification could be perceived as a possible green lane – or at least a huge support - for legality (Dieguez and Sotirov, 2021) and introducing it would be a logical step after finalising the current sectoral reforms.

Bosnia and Herzegovina, with their fragmented government systems, face challenges in uniform application and enforcement of EUTR rules. The Republic of Srpska needs to align its legislative

1 structure with EU criteria and establish an organisational culture to enhance human resources for  
2 monitoring purposes. The emphasis on forest certification, as seen in the certification of all state forests  
3 according to FSC standards, could make it easier to meet EUDR's legality criteria (Avdibegović et al,  
4 2021).

5 To combat illegal logging in the Western Balkans, country-specific strategies are required. National  
6 legal frameworks for forest management are largely in place, but implementation and enforcement are  
7 falling behind due to inadequate resources. Monitoring, inspection, and enforcement through the  
8 criminal justice system remain one of the most problematic aspects due to highly formal, long official  
9 procedures and inefficient corrective measures. To adapt to the EDUR (as well as the requirements of  
10 other European Green Deal policies), all analysed countries will need to amend existing laws and  
11 policies or adopt new ones to integrate European timber legality and multiple other requirements. While  
12 this might pose a challenge in terms of policy integration and coordination, it will likely create the  
13 momentum for timber legality to gain importance on policy agendas and attract necessary resources for  
14 policy alignment and implementation. In light of such circumstances, increased regional cooperation,  
15 capacity building and training, as well as increasing information exchange and forest certification, seem  
16 to be the first necessary steps towards improving timber legality in the Western Balkan region.

17 In our study, ACI proved a useful approach to ensuring the analysis of actors and institutional factors  
18 that influence policy transposition. It pointed out that timber legality is shaped by a dynamic interaction  
19 between formal regulations, cultural norms, institutional responsibilities, available resources, and levels  
20 of awareness, which collectively affect the effectiveness of public actors in preventing illicit logging  
21 and the wood trade. Although the ACI framework was useful for the aims of our study, such messages  
22 should always be considered with respect to the given context. In that sense, our study also encompasses  
23 certain limitations due, for example, to a relatively small and homogeneous sample (all respondents  
24 occupied key positions within the national forestry sectors at the time of the research) or national-level  
25 research. While future studies should strive to overcome those shortcomings (i.e. extending the sample  
26 to other stakeholder groups, such as PFOs and industries), they should also benefit from multiple case  
27 study methods).

## 28 **7. Conclusions**

29 This research has taken initial steps in understanding stakeholder perceptions regarding the potential  
30 implementation of the EUTR and EUDR in the targeted Western Balkan countries. Acknowledging the  
31 heterogeneity of stakeholders and their varying perspectives on the EUTR has been a crucial aspect of  
32 this research. It is evident that non-EU-analysed countries will face the need for clarification and  
33 specific interpretation of EU requirements related to timber trade in the future.

34 The structured interviews conducted with stakeholders have enriched the analysis, providing a deeper  
35 understanding of the underlying reasons behind different stakeholder perspectives. In particular,



1 conducting in-depth interviews was highly valuable in Slovenia and Croatia, where the EUTR has  
2 already been fully implemented, and stakeholders have a clearer understanding of how the regulation  
3 affects their interests. For EU candidate countries, it remains important to continue enhancing  
4 understanding of stakeholder awareness and exploring effective strategies for implementing EU  
5 requirements related to timber trade. By understanding stakeholder perspectives and experiences,  
6 policymakers and relevant stakeholders can work towards a more successful implementation of the  
7 EUTR and EUDR.

8 In summary, key factors for the successful implementation of EU timber legality requirements include  
9 legislation and implementation, forest governance, enforcement mechanisms, stakeholder engagement,  
10 and capacity building. These factors must be addressed and improved upon to ensure the effective  
11 implementation of European and national legislation and combat illegal logging in the Western Balkan  
12 countries. Additionally, collaboration among the Western Balkan countries themselves is crucial to  
13 address the issue collectively and in a harmonised, consistent manner and share best practices.  
14 Strengthening cooperation and information exchange between governments, law enforcement agencies,  
15 and relevant stakeholders will enhance the effectiveness of timber legality requirements. Moreover,  
16 investments in technology and surveillance systems can aid in monitoring and detecting illegal logging  
17 activities, enabling timely intervention and enforcement measures. Ultimately, by addressing these key  
18 factors and implementing comprehensive strategies, the Western Balkan countries can promote  
19 sustainable timber trade and protect their valuable forest resources.

20 Therefore, addressing corruption is crucial for ensuring the successful implementation of timber legality  
21 measures and promoting sustainable forestry practices globally. This requires not only strengthening  
22 legal frameworks and accountability mechanisms but also fostering a culture of integrity and  
23 transparency within the industry.

24 In synthesising these elements within the ACI framework, it becomes evident that each country's  
25 approach to ensuring timber legality is shaped by a dynamic interplay of formal regulations, cultural  
26 norms, institutional responsibilities, available resources, and levels of awareness. These components  
27 collectively influence the effectiveness of their efforts to combat illegal logging and the timber trade,  
28 highlighting the need for comprehensive and coordinated strategies to address this multifaceted  
29 challenge.

### 30 **Declaration of generative AI and AI-assisted technologies in the writing process**

31 During the preparation of this work the author(s) used Bing Chat+, Bard, Chat GPT3.5,  
32 Grammarly in order to improving the language clarity, conciseness and grammar. After using  
33 this tool/service, the author(s) reviewed and edited the content as needed and take(s) full  
34 responsibility for the content of the publication.

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**Declaration of interests**

The authors declare that they have no know competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The authors declare the following financial interests/ personal relationships, which may be considered as potential competing interests:

**CRedit authorship contribution statement**

M.R Conceptualization, Methodology, Data collection; Investigation; Formal analysis; Writing – original draft

T.R: Methodology, Conceptualization, Formal analysis; Supervision, Writing - review & editing.

M.M.: Conceptualization, Writing – review & editing, Resources; Supervision.

B.G: Data collection; Investigation; Writing – review & editing,

D.Č.: Data collection; Investigation; Writing – review & editing

D.P.: Writing – review & editing, Resources; Supervision.



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