

**Appendix 5.** Network analysis metrics used to identify structurally important factors in the Russian FSC standard development process. Bold indicates key factors, based on these metrics.

Factor	Degree	Betweennesscentrality	Eigencentality	Loop Count
Adequacy of national legislation to protect biodiversity	5	10,083333	0,004015	0
<b>Adequacy, availability and accessibility of relevant scientific data, methodologies and knowledge</b>	11	476,233333	0,695968	867
Capability of participants to negotiate/ moderate negotiations	1	0	0	0
<b>Clear, unambiguous terminology/ descriptions regarding IGLs and newly-introduced concepts</b>	7	202,666667	0,202729	427
<b>Clearly formulated biodiversity indicators</b>	5	140,475	0,338051	397
Development of process-focused indicators, rather than outcome-focused	1	0	0	0
<b>Difficulty in reaching consensus among chambers</b>	12	376,583333	0,759392	660
Ease of implementation & auditability of new indicators	6	116,016667	0,151772	306
Efficiency/ efficacy of negotiation process	4	34	0,3148	117
<b>Efforts by environmental chamber to clarify new terms and relate them to legislation</b>	2	180,666667	0,306771	425
<b>Efforts to improve transparency, efficiency, and accountability of the FSC-certification process</b>	4	203,033333	0,809728	758
<b>Engagement of environmental NGOs in standards negotiations</b>	6	493,358333	0,51169	689
Environmentally responsible forestry	3	133,816667	0,275669	581
Experts contribute to standards development on voluntary basis	2	0	0	0
Field-testing of biodiversity indicators	3	24,025	0,087776	118
FSC certification provides access to markets for certified timber	2	0	0,004015	0
<b>FSC efforts to protect and maintain biodiversity (incl. IFLs &amp; key biotopes)</b>	4	203,616667	0,224662	587
<b>FSC-certified companies</b>	5	279,083333	0,518102	631
FSC-certified companies exposure to criticism by NGOs	4	13,583333	0,509839	147
Greenpeace Russia shape public opinion against current forest management	5	34	0,004015	0
<b>Impact of forestry on IFLs, key biotopes &amp; species</b>	7	160,483333	0,262312	735
Inadequate knowledge of general public about forests and forestry	1	0	0	0
<b>Institutional instability (incl. Government forest regulations)</b>	4	0	0	0
Integration of comments from stakeholders into new standard	1	0	0	0
Interactions between FSC-International and FSC-Russia	2	0	0,087776	1
Introduction of new, Russian national certification system	3	7,75	0,307749	122

Investment made by large stakeholders represented by economic chamber for FSC-certification	2	0	0	0
Lack of specialists that had capacity and knowledge to fulfill/check requirements of certain biodiversity indicators	1	0	0	0
Leasing rights to log in intact forests	7	131,166667	0,215634	565
Lobbying by large stakeholders represented by economic chamber	1	0	0	0
<b>Long-running debate/conflict between forestry industry and environmental NGOs</b>	5	153,25	0,231339	508
Multiple stakeholder consultations on draft standard	1	0	0	0
Negative media image of FSC	5	24	0,510562	26
New FSC Russia indicators on IFLs	3	26,166667	0,389452	217
New standard considered even more complicated and difficult to implement/ audit than previous standard	2	3,333333	0,03441	72
Number of requirements on biodiversity in new standard compared with old standard	5	135,033333	0,082681	317
Overlap/ synergy between FSC standard and national legislation (e.g. Concerning biodiversity protection)	5	144,733333	0,103858	375
Participation of chambers at domestic and international meetings outside of negotiation process	3	151,15	0,250275	376
<b>Perceived adequacy &amp; legitimacy of proposed biodiversity indicators</b>	11	500,816667	0,901024	790
Perceived desire of FSC-International to expand area under certification	1	0	0	0
Perceived difficulties of developing FSC in Russia	4	39,75	0,012044	0
Perceived flexibility of forest management	5	40,666667	0,287727	263
<b>Perceived legitimacy of FSC-certification</b>	14	572,283333	0,741941	663
Perception by environmental NGOs that certification is given too easily, with many certified companies NOT living up to requirements	3	56,908333	0,114142	186
Perception by forest companies that FSC certification will protect them from environmental criticism	2	6,75	0,303734	122
<b>Perception by govt officials that FSC-certification is a "foreign" phenomenon, meddling in national concerns</b>	4	0	0	0
<b>Pressure on environmental chamber to ensure conservation of biodiversity (incl. IFLs)</b>	6	706,233333	0,593862	857
Proximity of forest areas to less environmentally-sensitive markets	2	0	0	0
<b>Relative attractiveness of FSC-certification for economic stakeholders compared to non-certification or alternative certification schemes</b>	10	231,45	0,501584	509
<b>Satisfaction of chambers with negotiation process/ outcomes</b>	8	234,083333	1	388

Share of forest lease potentially identifiable as intact forest tract	1	0	0	0
Stakeholders represented by economic chamber fears of losing profitability	4	34	0,004015	0
Stakeholders represented by economic chamber forced to harvest all AAC	4	4,583333	0,004015	0
State ownership of forests	1	0	0	0
Stringency of biodiversity prescriptions in alternative certification schemes	1	0	0	0
<b>Unwillingness of stakeholders represented by economic chamber to identify intact forest tracts in their leased areas or consider these during logging operations</b>	<b>5</b>	<b>115,166667</b>	<b>0,481614</b>	<b>565</b>

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