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Quick sustainability scan calculator for intensive and extensive broiler farms



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the European Union**

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EAAP
European Federation
of Animal Science



UNIVERSIDAD
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Main objectives



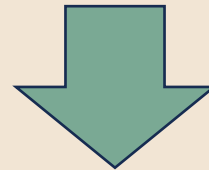
1. Develop techniques to assess broiler production sustainability.
2. Improve sustainability through best practices.
3. Evaluate environmental, social, and economic impacts of broiler production.





WPI - objectives

Improve the quality of broiler meat from conventional and organic farming systems by understanding how it is affected by extensive versus intensive production factors on-farm.

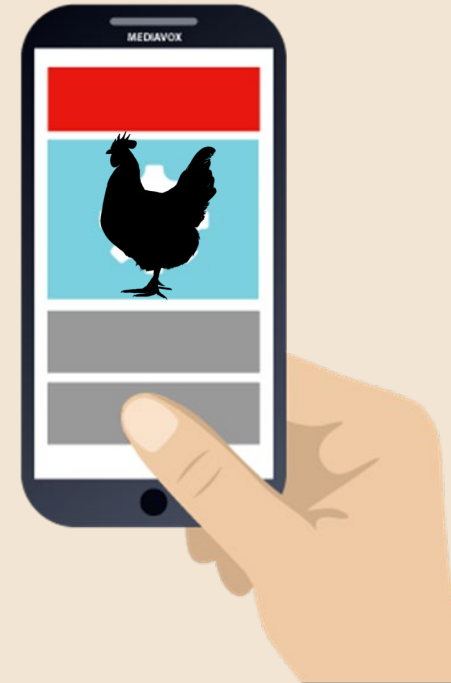


Development of quick sustainability scan calculators for intensive and extensive broiler farms.



Quick sustainability scan calculator

Propose an evaluation schemes, integrating the score assigned individually to a farm through the evaluation of different aspects related to livestock management



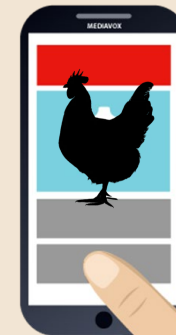
60 broiler farms from Poland and Germany



2 Quick sustainability scan calculator

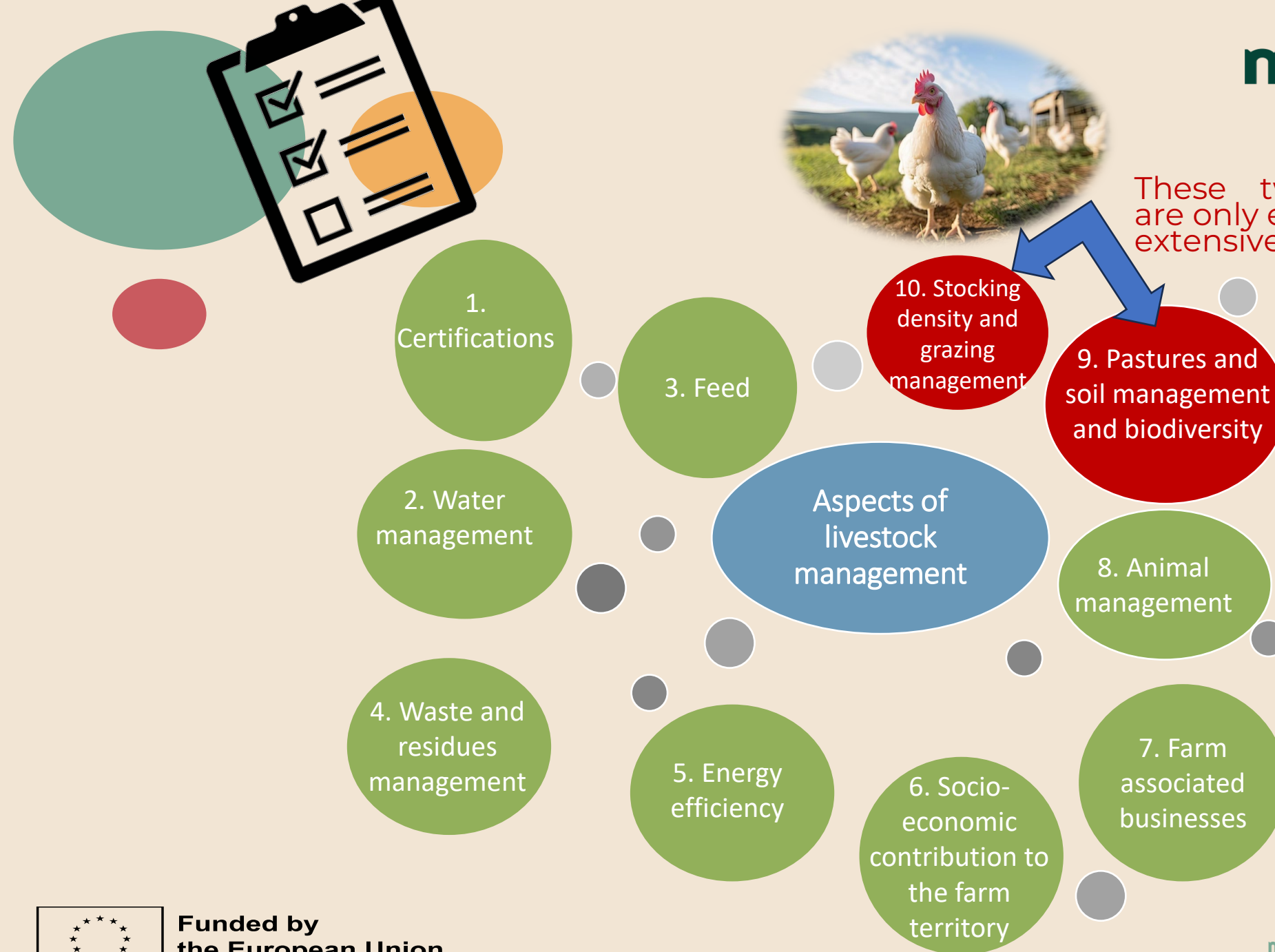
Extensive : 10 aspects with
a total of 61 questions

Intensive : 8 aspects with
a total of 52 questions





These two aspects
are only evaluated for
extensive farms



Metodology

Each of these aspects receives a score according to its importance and contributes in a different proportion to a final score, which is organized into 3 categories.

I. ENVIRONMENTAL IMPACT

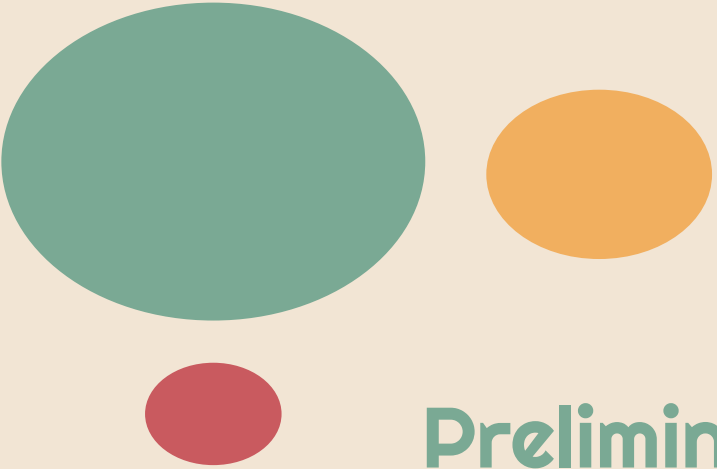
II. SOCIAL IMPACT

III. ECONOMIC IMPACT

Maximum achievable score in each category is **100 points**

Easy to fillout : yes/no





Preliminary Results



Germany = 30 farms → 20 extensive + 10 intensive



Poland = 30 farms → 10 extensive + 20 intensive

A. Intensive Farms (20PL + 10 GE)





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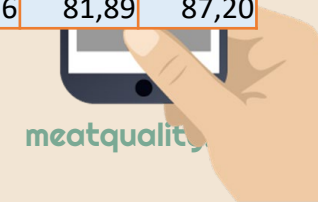


A. Intensive Farms (20PL + 10 GE)

		Certifications	Water management	Feed	Energy efficiency	Socio-economic contribution to the territory	Farm associated business	Animal management	Waste and residues management	Total score	Environmental impact	Social impact	Economic impact
N		30	30	30	30	30	30	30	30	30	30	30	30
Mean		1,40	9,61	6,70	7,88	8,39	7,47	9,69	8,98	79,52	68,04	78,58	82,85
Desviación estándar		2,02	0,56	0,84	0,69	1,32	3,06	0,54	1,43	5,00	5,38	3,85	5,06
Min		0,00	8,82	3,23	6,50	5,45	0,00	8,33	6,47	69,09	56,28	71,02	72,40
Max		4,21	10,00	8,03	9,38	10,00	10,00	10,00	10,00	86,18	74,12	83,47	88,10
Percentils	25	0,00	8,82	6,77	7,50	7,95	4,00	8,89	7,06	76,13	65,06	75,96	79,88
	50	0,00	10,00	6,77	8,13	9,09	8,00	10,00	10,00	80,04	69,41	79,99	84,55
	75	4,21	10,00	6,97	8,38	9,09	10,00	10,00	10,00	84,04	71,76	81,89	87,20



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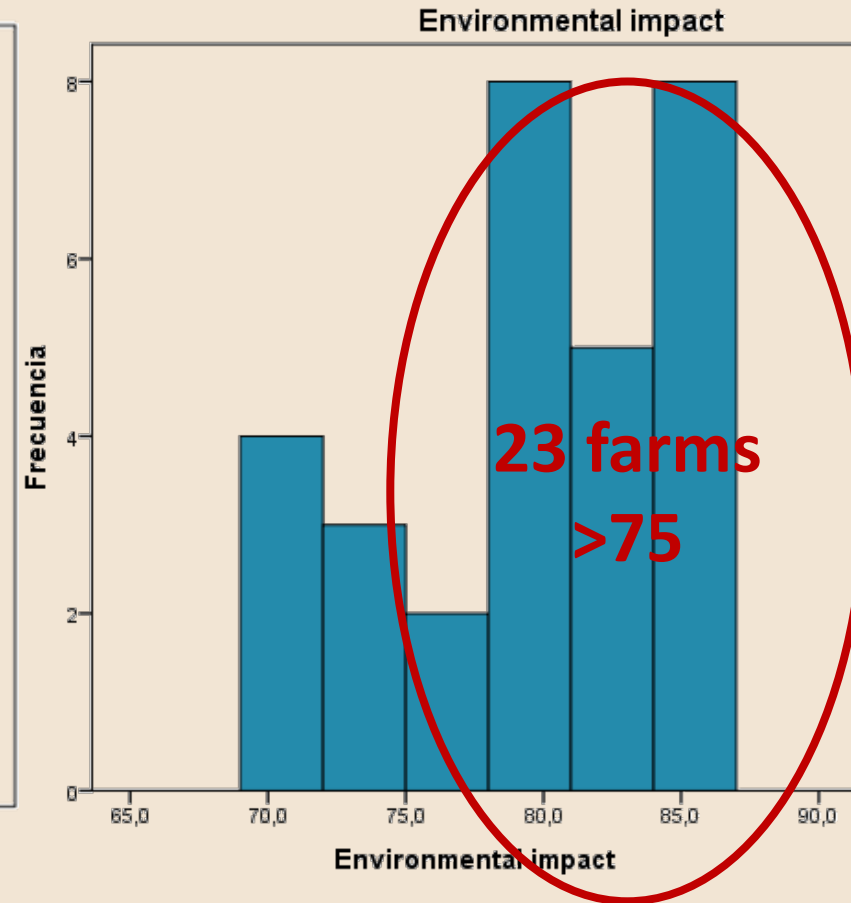
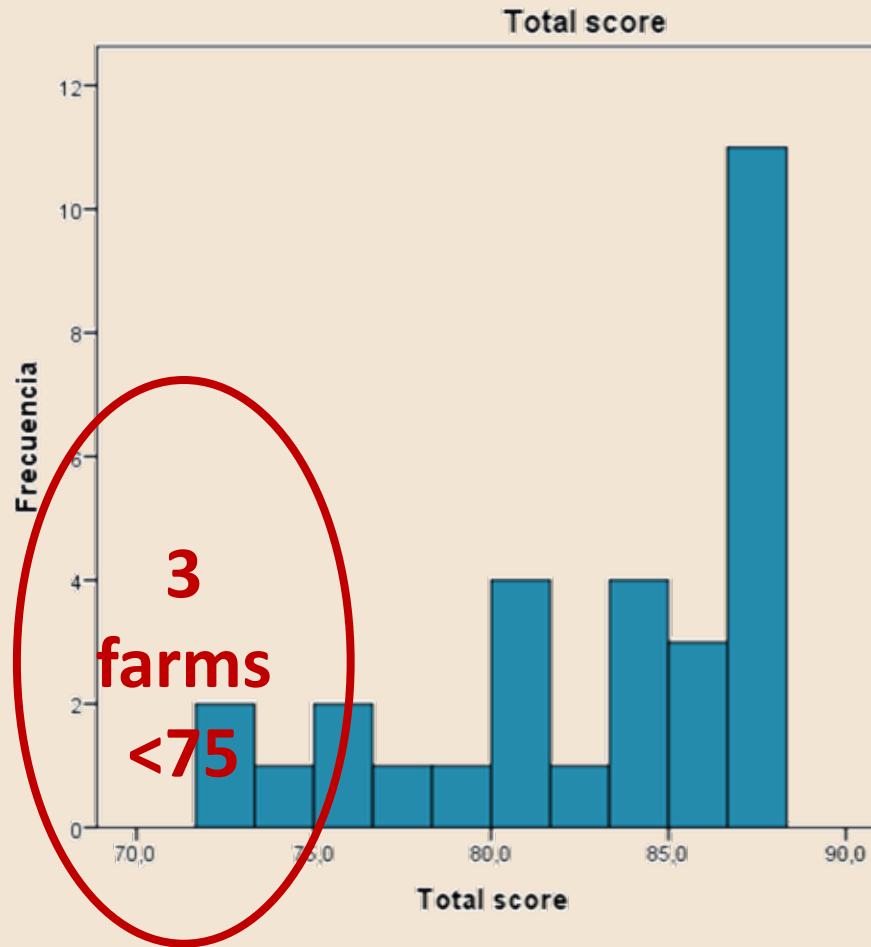


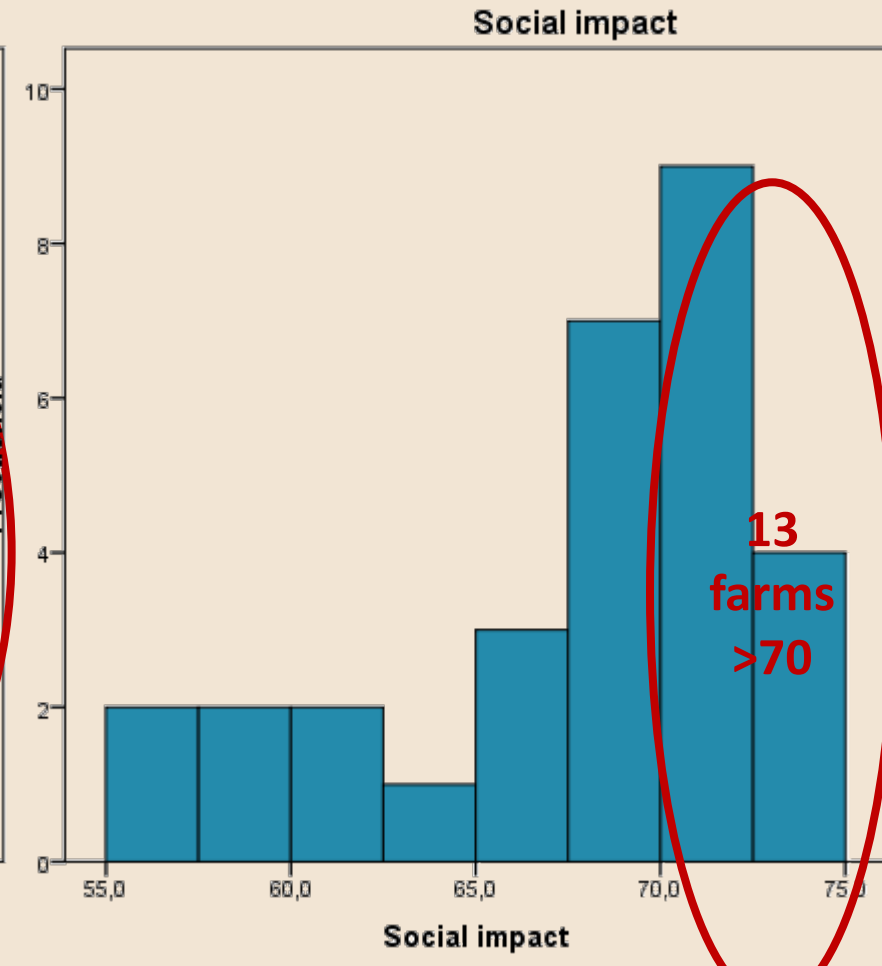
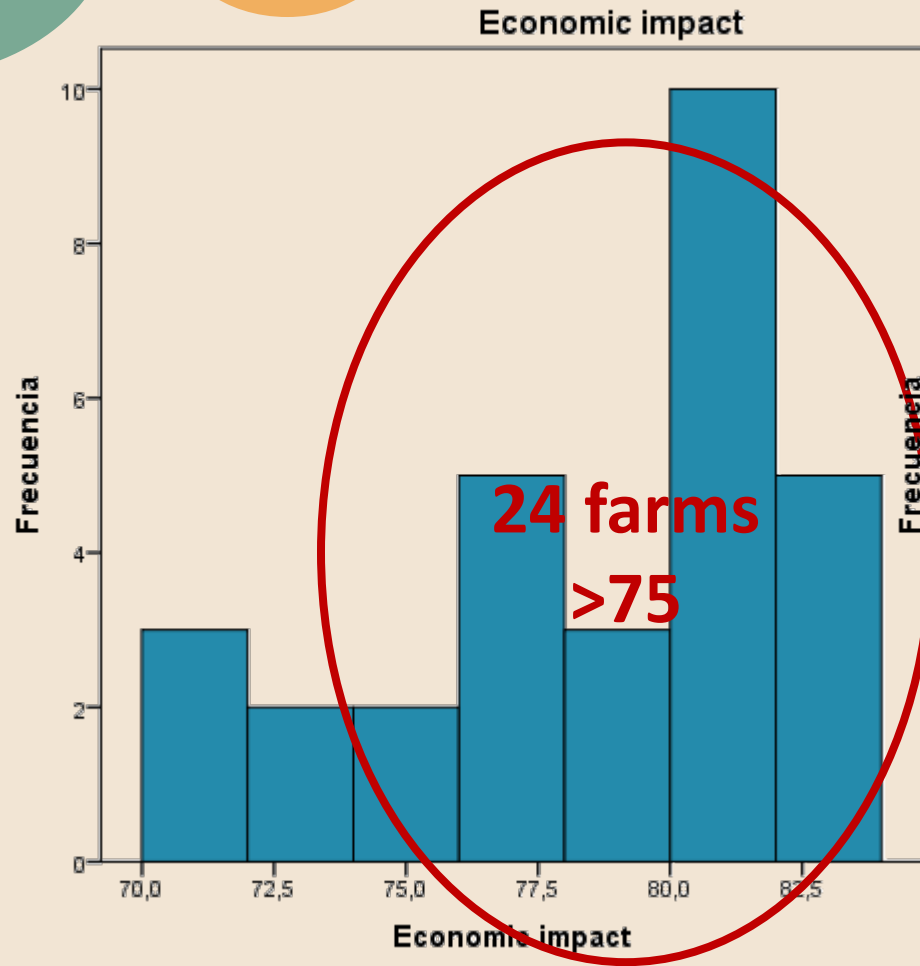
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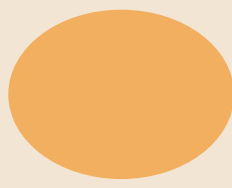
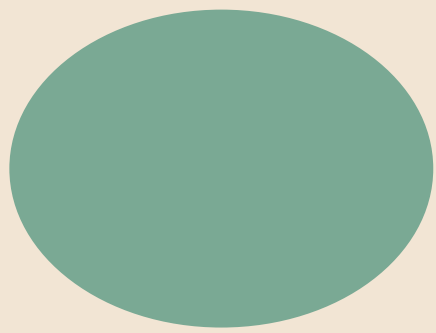




B. Extensive Farms (20 GE + 10 PL)

Mean grazing area:
Germany = 5,32
ha
Poland = 3,8 ha





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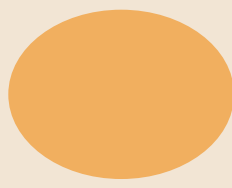
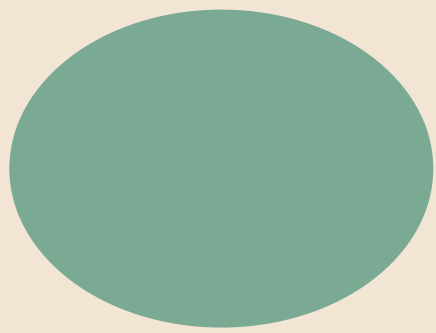


B. Extensive Farms (20 GE + 10 PL)

		Certifications	Water management	Feed	Stocking density and grazing management	Energy efficiency	Socio-economic contribution to the territory	Farm associated businesses	Animal management	Pasture and soil management and biodiversity	Waste and residues management	total score	Environmental impact	Social impact	Economic impact
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	Mean	8,18	8,94	3,91	8,60	7,88	7,00	5,93	9,02	8,59	5,63	77,64	75,47	77,02	78,41
	SD	0,47	0,71	0,66	1,30	1,32	1,71	3,91	0,66	1,43	3,30	5,09	6,88	4,21	4,93
	Min	7,89	6,47	2,32	4,00	5,63	2,73	0,00	7,22	5,56	0,00	63,65	60,47	64,93	65,27
	Max	8,95	10,00	5,16	10,00	10,00	9,09	12,00	10,00	10,00	10,00	85,02	88,24	82,35	86,11
Percentils	25	7,89	8,82	3,14	8,00	7,13	5,45	3,50	8,75	7,78	4,00	74,32	71,47	74,58	76,24
	50	7,89	8,82	4,19	8,00	8,05	7,27	4,00	8,89	8,89	4,00	78,89	75,29	78,12	78,13
	75	8,95	8,82	4,25	10,00	8,81	8,41	10,00	9,44	10,00	10,00	81,45	81,18	79,85	82,42



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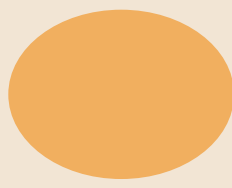
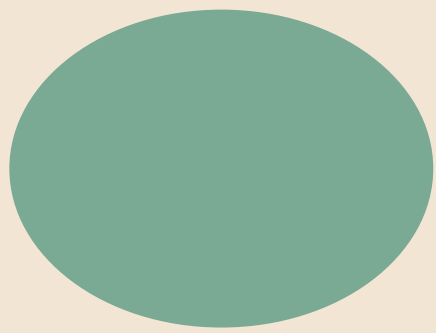


B. Extensive Farms (20 GE + 10 PL)

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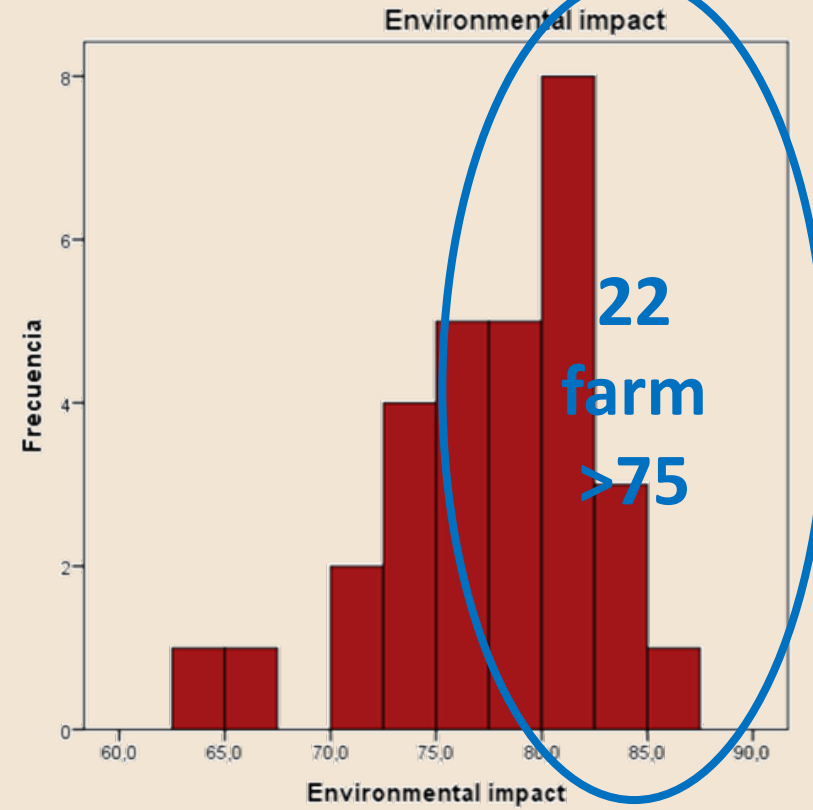
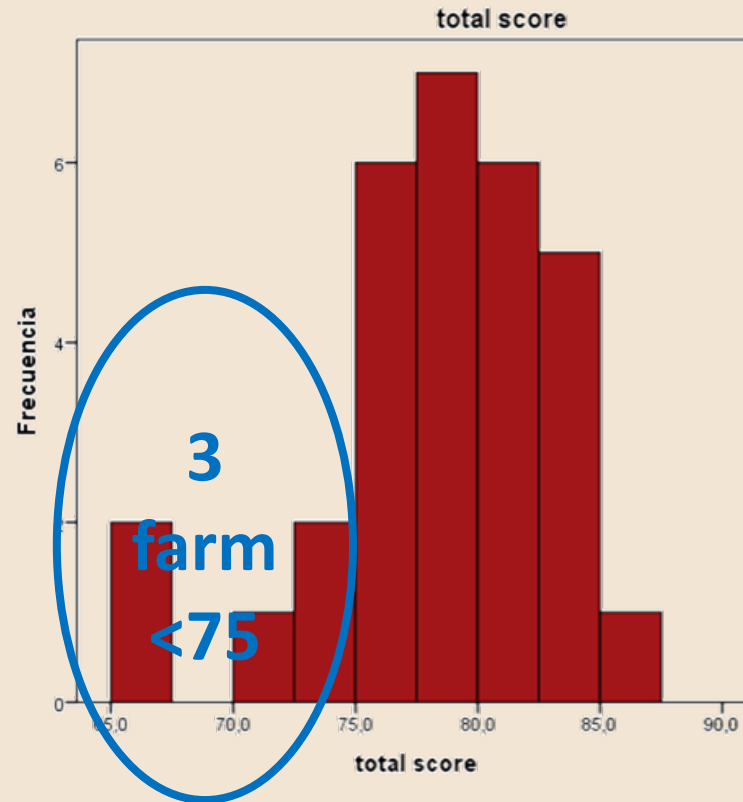


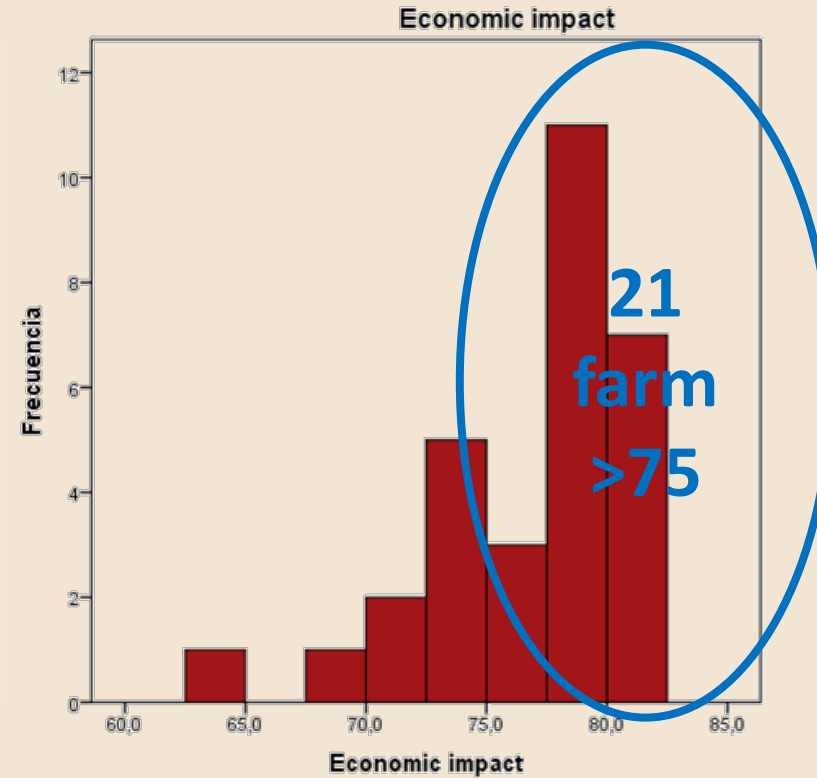
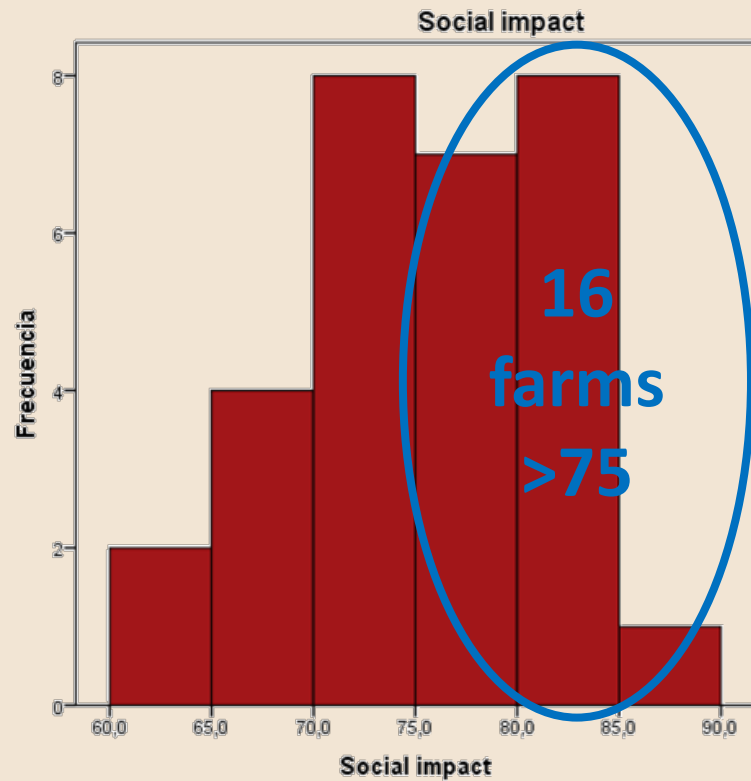
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Conclusions

1. These calculators are tools for self-monitoring and evaluation in extensive and intensive broiler farms.
2. Allows comparison (benchmarking) and identification of the weak points of broiler farms
3. Facilitates the evaluation and certification



Conclusions

4. Great potential for differentiation of sustainable products
5. Enables participatory certification and helps gain consumer confidence.
6. With the results from the remaining countries, we expect to correlate the scores obtained in the 'Quick Sustainability Scan Calculator' with information on productive data, economic aspects, and the meat quality.





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