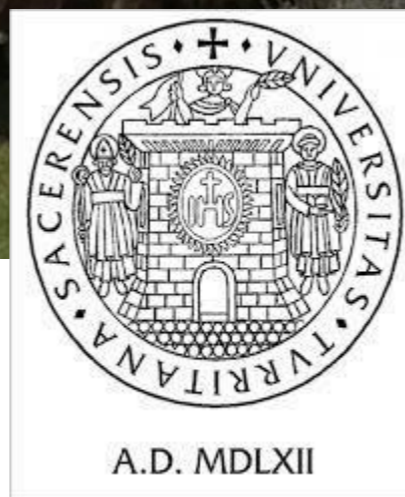




Upgrading RANGE SOFT for predicting grazing carrying capacity in Mediterranean agroforestry systems

Giuseppe Pulina, University of Sassari

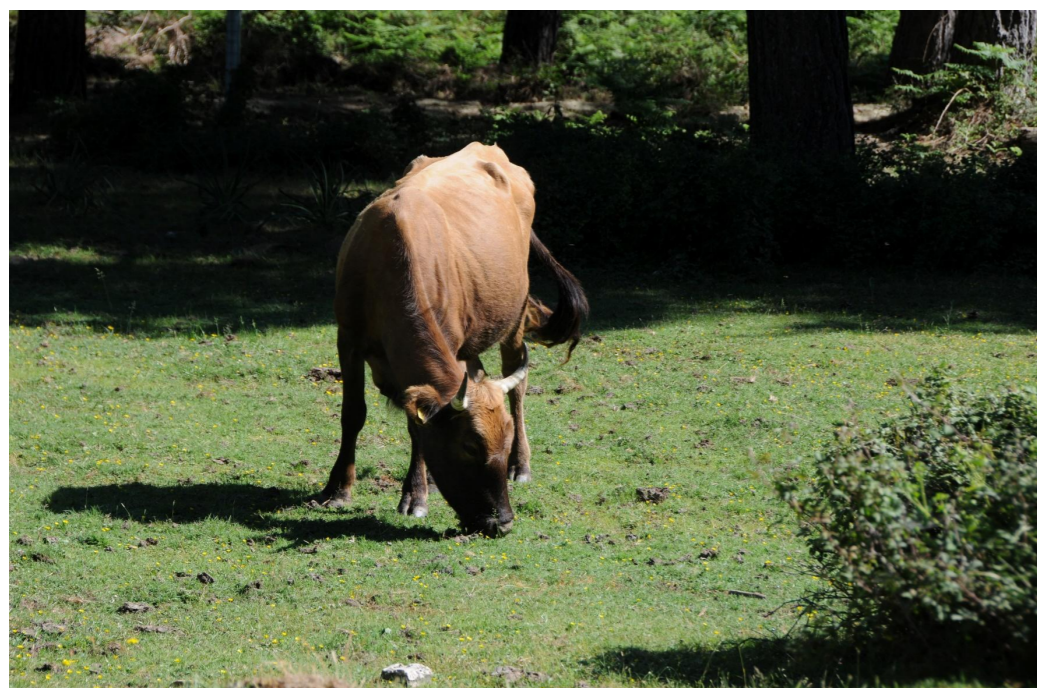




What is the purpose of the innovation?

To provide a handy tool for assessing the right stocking rate of livestock of sylvo-pastoral systems, to allow the rational use of grazing to increase the sustainability of agro-sylvo-pastoral systems and the profitability of farmers' investments.





Which problem can this innovation solve?

Pasture management is a problem that every farmer must face with a view to optimizing resources and sustainability. Agro-pastoral choices are often complex and it is very difficult for farmers to have access to decision support systems to help them make rational choices. The result is that grazing is often conducted in an empirical way with inadequate use of forage resources, leading to problems of either over- or under- grazing with damage to both soil and vegetation cover

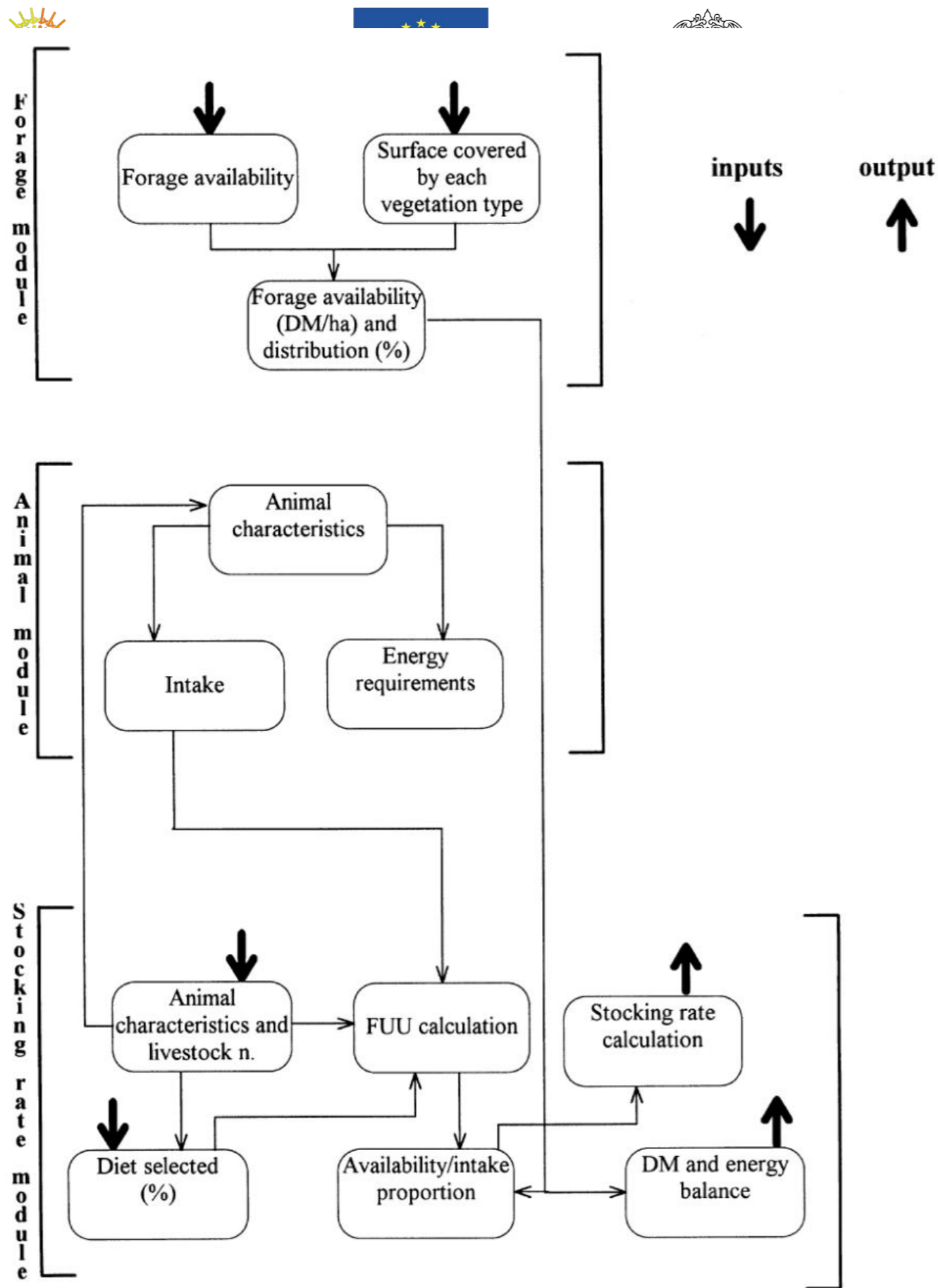


Fig. 1. Flow chart of the model using three modules.

Second B2B event in Jordan on Grazed Woodlands Amman - March 15th, 2023



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A spreadsheet model for the assessment of sustainable stocking rate in semi-arid and sub-humid regions of Southern Africa

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**zione del carico sostenibile di cavalli ed altre
specie in un'area pascoliva molisana**

**ible stocking rate evaluation in a Molise area
grazed by horses and other species**

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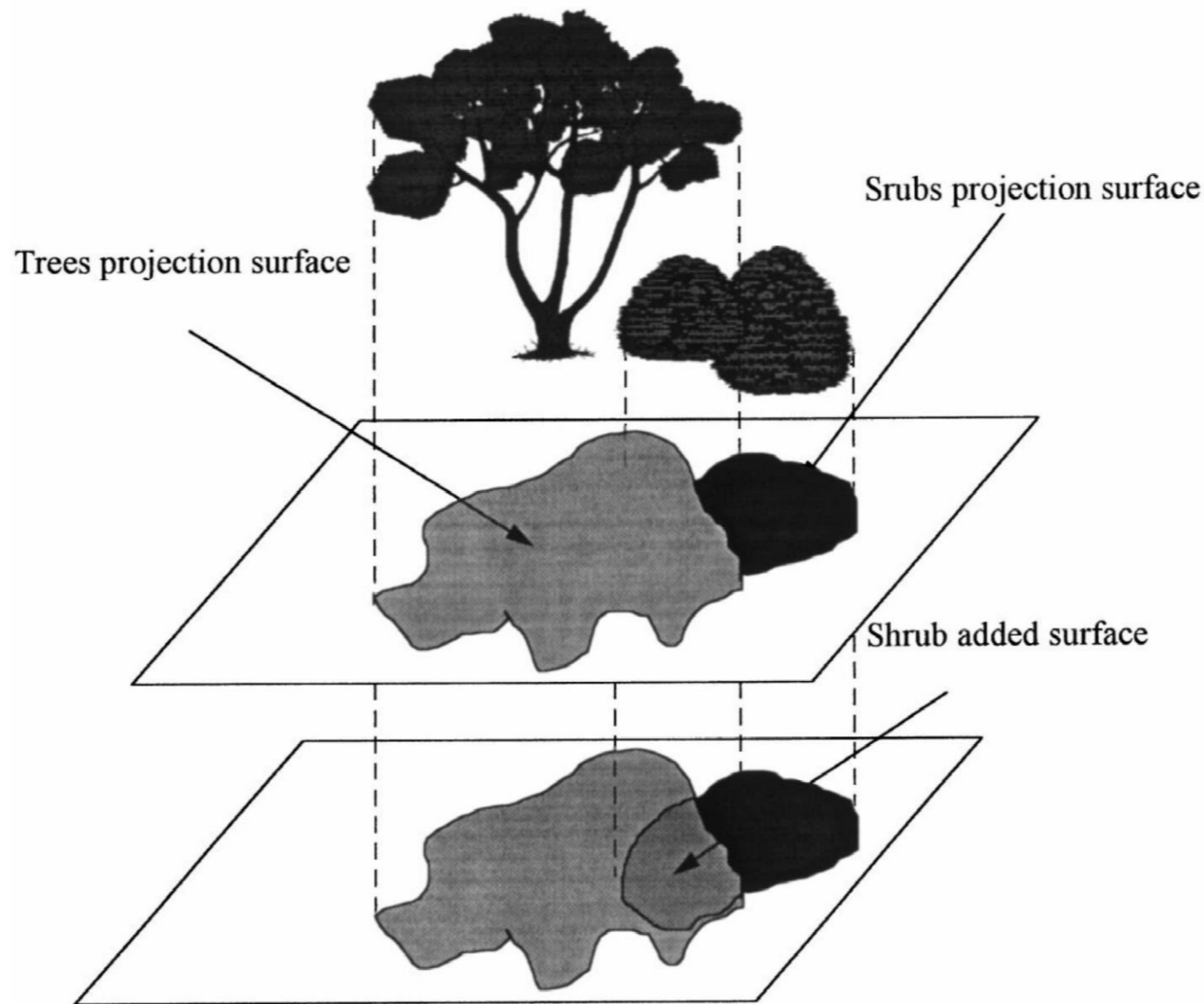


Fig. 2. Conversion of the volume of forage distribution in area covered by crowns of trees and shrubs.



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Table 8

Stocking rate, forage intake and DM balances for the GUA at Matopos Research Station farm, Zimbabwe

		Maximum	Intermediate	Minimum
Stocking rates (<i>n</i>)	FUU ha ⁻¹	0.030	0.029	0.027
	BCU ha ⁻¹	0.152	0.145	0.137
	GCU ha ⁻¹	0.303	0.291	0.275
	OCU ha ⁻¹	0.076	0.073	0.069
	LU	0.209	0.201	0.190
Intake (kg of DM/ha)	Trees	154.4	148.0	139.9
	Shrubs	206.4	197.9	187.1
	Grass	728.8	698.7	660.6
	Total	1089.6	1044.6	987.6
DM balance (kg)	Trees	-14.4	-8.1	0.0
	Shrubs	0.0	8.5	19.3
	Grass	-30.1	0.0	38.1
	Total	-44.5	0.4	57.4

GUA=Grazing Unit Area; FUU=Forage Utilised Unit; BCU=Bovine Consumption Unit; GCU=Goats Consumption Unit; OCU=Ovine Consumption Unit; LU=Livestock Unit (500 kg of liveweight).



*Which is the geographical
scale of application?*

The application can also be used on a farm scale, but is more useful if applied on a territorial scale (common lands, aggregated farms)



Who will benefit from this advancement?

Directly the farmers, who will be able to better measure the carrying capacity of their silvopastoral systems, and indirectly the citizens because natural capital and soil will be safeguarded

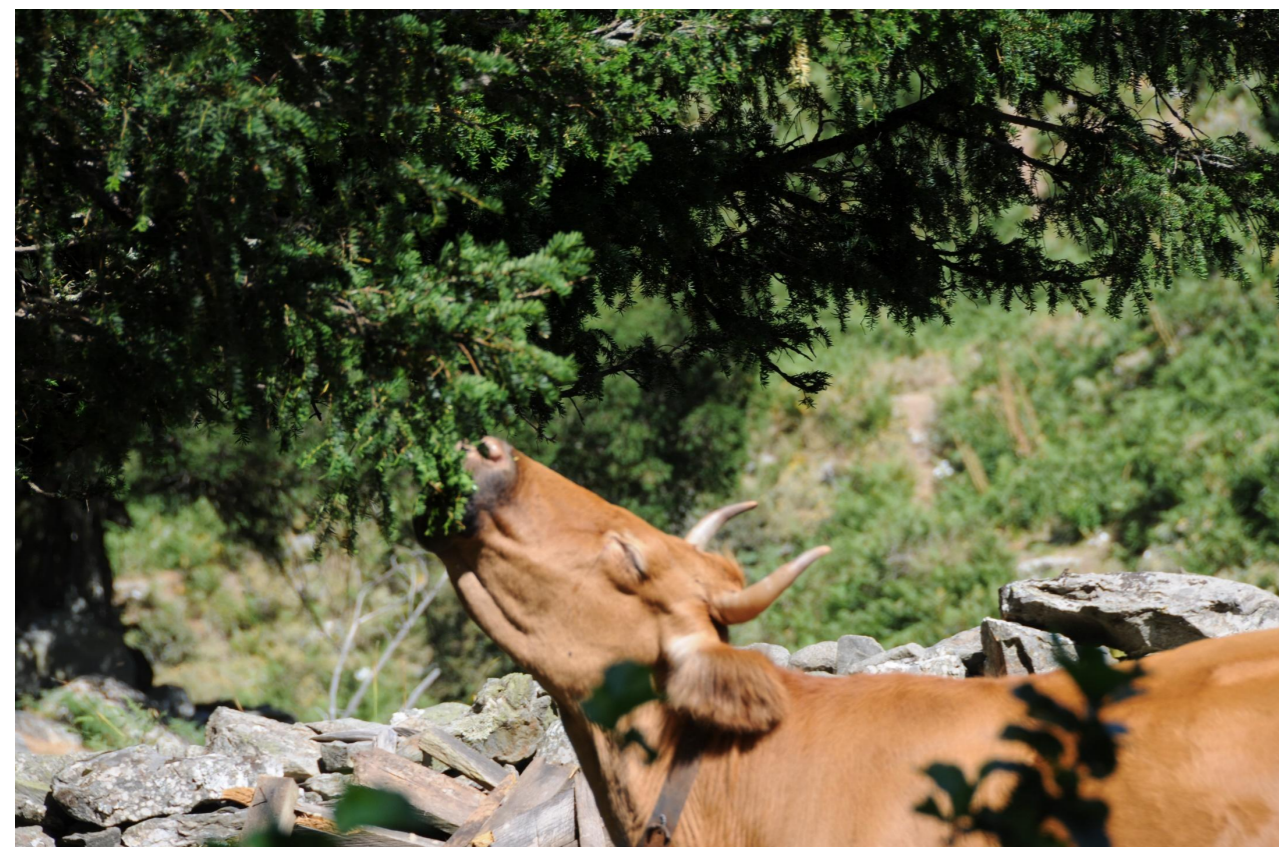


*How much does the
innovation cost for being
adopted?*

Requires the acquisition of information on the areas concerned, type of vegetation, animals and their productivity and a smartphone with an internet connection

*What are the potential revenues
and/or the potential savings
from this innovation?*

The software makes it possible
to optimise the use of grazing
resources while safeguarding
the pastoral value of sites
without compromising animal
performance



What are the potential social and environmental benefits of this innovation?

Optimal use of agroforestry resources is the key to sustainable agriculture and forestry. Correct stocking of grazing livestock generates an accurate use of resources and positive economic and social impacts



Thank you for your attention

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