Table S1–Table S2 document the full operational structure of the SYCACC indices, including item wording, original scales, harmonised 1–4 recoding, coding direction for Sensitivity (higher = more sensitivity) and Adaptive Capacity (higher = greater capacity), and notes for reverse-coded items.

Supplementary Table S1. Sensitivity operational table

Dimension	Subdimension	Code	Variable (EN)	Section	Question	Type/Scale	Direction for index	Recoding to 1–4	Notes
Sensitivity	Natural resource	S_NAT1	changes in coffee productive capacity	3.1	Have you noticed changes in the productive capacity of your coffee crops in the last 5 years?	Ord (4)	↑S (more decrease = more sensitivity)	No change=1; Slight decrease=2; Moderate decrease=3; Significant decrease=4	—
Sensitivity	Natural resource	S_NAT2	Soil quality	3.1	Soil quality: How would you rate the current characteristics of the soil on your farm?	Ord (4)	↑S (worse soil = more sensitivity)	Very good=1; Good=2; Fair=3; Poor=4	—
Sensitivity	Natural resource	S_NAT3	access to irrigation water	3.1	Do you have constant access to water for irrigation?	Ord (4)	↑S (less access = more sensitivity)	Always=1; Most of the time=2; Rarely=3; Never=4	—
Sensitivity	Natural resource	S_NAT4	frequency of extreme weather events	3.1	How often have you experienced extreme events (droughts, heavy rains, frosts)?	Ord (4)	↑S (more frequent = more sensitivity)	Never=1; Occasionally=2; Frequently=3; Constantly=4	—
Sensitivity	Natural resource	S_NAT5	increase in pests and diseases	3.1	Have you observed an increase in pests and diseases in the last 5 years?	Ord (4)	↑S (more increase = more sensitivity)	No increase=1; Slight increase=2; Moderate increase=3; Significant increase=4	—
Sensitivity	Human resource	S_HUM1	impact of climate on health	3.2	How have climatic conditions affected the health of your family or workers?	Ord (4)	↑S (more affectation = more sensitivity)	Not at all=1; Slightly=2; Moderately=3; Significantly=4	—
Sensitivity	Human resource	S_HUM2	household food security	3.2	Do you consider that your household has food security?	Ord (4)	↑S (less food security = more sensitivity)	Always=1; Most of the time=2; Rarely=3; Never=4	Invert logic so lower security ↑S
Sensitivity	Human resource	S_HUM3	training received on climate risks	3.2	Have you received training on how to manage climate risks?	Ord (4)	↑S (less training = more sensitivity)	Frequently=1; Sometimes=2; Once=3; Never=4	Invert logic so less training ↑S
Sensitivity	Physical resource	S_PHY1	accessibility and transport problems due to weather	3.3	Have you had problems with accessibility and transport due to weather conditions?	Ord (4)	↑S (more problems = more sensitivity)	Never=1; Occasionally=2; Frequently=3; Constantly=4	—
Sensitivity	Physical resource	S_PHY2	availability of coffee processing infrastructure	3.3	Do you have adequate infrastructure for coffee processing (e.g., wet mill, dryers)?	Ord (4)	↑S (less infrastructure = more sensitivity)	Fully=1; Partially=2; Plans only=3; No=4	Invert logic so less infra ↑S
Sensitivity	Financial resource	S_FIN1	income dependency on coffee	3.4	What percentage of your income depends on coffee?	Ord (4)	↑S (more dependence = more sensitivity)	<25%=1; 25–50%=2; 51–75%=3; >75%=4	—
Sensitivity	Financial resource	S_FIN2	access to credit or financing	3.4	Do you have access to credit or financing?	Ord (4)	↑S (less access = more sensitivity)	Always=1; Most of the time=2; Rarely=3; Never=4	Invert logic so less access ↑S
Sensitivity	Financial resource	S_FIN3	coffee income covers needs and investment	3.4	Do income from coffee allow you to cover basic needs and farm investment?	Ord (4)	↑S (less coverage = more sensitivity)	Fully=1; Partially=2; Minimally=3; Does not cover=4	—
Sensitivity	Financial resource	S_FIN4	economic diversification implemented	3.4	Have you implemented economic diversification strategies to reduce dependence on coffee?	Ord (4)	↑S (less diversification = more sensitivity)	Successful=1; With difficulties=2; Not yet, interested=3; Not interested=4	Invert logic so less diversification ↑S

Sensitivity	Financial resource	S_FIN5	application of cost-management practices	3.4	Do you know and apply cost-management practices?	Ord (4)	↑S (fewer practices = more sensitivity)	Fully=1; Partially=2; Only information=3; No=4	Invert logic so fewer practices ↑S

↑ S indicates that higher values represent greater sensitivity; variables for which a decrease implies higher sensitivity were reverse-coded to ensure consistent directionality in the index.

Supplementary Table S2. Adaptative capacity operational table

Dimension	Subdimension	Code	Variable (EN)	Section	Question (English)	Type/Scale	Direction for index	Recoding to 1–4	Notes
Adaptive Capacity	Producer knowledge	S_NAT1	changes in coffee productive capacity	3.1	Have you noticed changes in the productive capacity of your coffee crops in the last 5 years?	Ord (4)	↑S (more decrease = more sensitivity)	No change=1; Slight decrease=2; Moderate decrease=3; Significant decrease=4	—
Adaptive Capacity	Producer knowledge	S_NAT2	Soil quality	3.1	Soil quality: How would you rate the current characteristics of the soil on your farm?	Ord (4)	↑S (worse soil = more sensitivity)	Very good=1; Good=2; Fair=3; Poor=4	—
Adaptive Capacity	Producer experience	S_NAT3	access to irrigation water	3.1	Do you have constant access to water for irrigation?	Ord (4)	↑S (less access = more sensitivity)	Always=1; Most of the time=2; Rarely=3; Never=4	—
Adaptive Capacity	Organizational governance	S_NAT4	frequency of extreme weather events	3.1	How often have you experienced extreme events (droughts, heavy rains, frosts)?	Ord (4)	↑S (more frequent = more sensitivity)	Never=1; Occasionally=2; Frequently=3; Constantly=4	—
Adaptive Capacity	Organizational governance	S_NAT5	increase in pests and diseases	3.1	Have you observed an increase in pests and diseases in the last 5 years?	Ord (4)	↑S (more increase = more sensitivity)	No increase=1; Slight increase=2; Moderate increase=3; Significant increase=4	—
Adaptive Capacity	Organizational services	S_HUM1	impact of climate on health	3.2	How have climatic conditions affected the health of your family or workers?	Ord (4)	↑S (more affectation = more sensitivity)	Not at all=1; Slightly=2; Moderately=3; Significantly=4	—
Adaptive Capacity	Organizational services	S_HUM2	household food security	3.2	Do you consider that your household has food security?	Ord (4)	↑S (less food security = more sensitivity)	Always=1; Most of the time=2; Rarely=3; Never=4	Invert logic so lower security ↑S
Adaptive Capacity	Social capital	S_HUM3	training received on climate risks	3.2	Have you received training on how to manage climate risks?	Ord (4)	↑S (less training = more sensitivity)	Frequently=1; Sometimes=2; Once=3; Never=4	Invert logic so less training ↑S
Adaptive Capacity	Social cohesion	S_PHY1	accessibility and transport problems due to weather	3.3	Have you had problems with accessibility and transport due to weather conditions?	Ord (4)	↑S (more problems = more sensitivity)	Never=1; Occasionally=2; Frequently=3; Constantly=4	—
Adaptive Capacity	Social cohesion	S_PHY2	availability of coffee processing infrastructure	3.3	Do you have adequate infrastructure for coffee processing (e.g., wet mill, dryers)?	Ord (4)	↑S (less infrastructure = more sensitivity)	Fully=1; Partially=2; Plans only=3; No=4	Invert logic so less infra ↑S
Adaptive Capacity	Socio-productive networks	S_FIN1	income dependency on coffee	3.4	What percentage of your income depends on coffee?	Ord (4)	↑S (more dependence = more sensitivity)	<25%=1; 25–50%=2; 51–75%=3; >75%=4	—
Adaptive Capacity	Socio-productive networks	S_FIN2	access to credit or financing	3.4	Do you have access to credit or financing?	Ord (4)	↑S (less access = more sensitivity)	Always=1; Most of the time=2; Rarely=3; Never=4	Invert logic so less access ↑S
Adaptive Capacity	Access to services	S_FIN3	coffee income covers needs and investment	3.4	Do income from coffee allow you to cover basic needs and farm investment?	Ord (4)	↑S (less coverage = more sensitivity)	Fully=1; Partially=2; Minimally=3; Does not cover=4	—

Adaptive Capacity	Financial resource	S_FIN4	economic diversification implemented	3.4	Have you implemented economic diversification strategies to reduce dependence on coffee?	Ord (4)	↑S (less diversification = more sensitivity)	Successful=1; With difficulties=2; Not yet, interested=3; Not interested=4	Invert logic so less diversification ↑S
Adaptive Capacity	Financial resource	S_FIN5	application of cost-management practices	3.4	Do you know and apply cost-management practices?	Ord (4)	↑S (fewer practices = more sensitivity)	Fully=1; Partially=2; Only information=3; No=4	Invert logic so fewer practices ↑S

↑ S indicates that higher values represent greater sensitivity; variables for which a decrease implies higher sensitivity were reverse-coded to ensure consistent directionality in the index.

Supplementary Table S3. Standardised effect sizes (η^2) for group comparisons of Sensitivity and Adaptive Capacity indices

index	group	eta2	F
Natural resources	Gender	0.006	1.749
Natural resources	experience	0.072	11.402
Natural resources	Age	0.008	1.118
Natural resources	Provinces	0.035	3.491
Natural resources	Organisations	0.002	0.537
Human Resources	Gender	0.003	0.894
Human Resources	experience	0.027	4.095
Human Resources	Age	0.001	0.111
Human Resources	Provinces	0.072	7.518
Human Resources	Organisations	0.066	20.702
Physical Resources	Gender	0.000	0.078
Physical Resources	experience	0.010	1.450
Physical Resources	Age	0.007	0.981
Physical Resources	Provinces	0.060	6.209
Physical Resources	Organisations	0.009	2.596
Financial Resources	Gender	0.002	0.617
Financial Resources	experience	0.005	0.783
Financial Resources	Age	0.009	1.400
Financial Resources	Provinces	0.021	2.063
Financial Resources	Organisations	0.000	0.002
Sensitivity Index	Gender	0.003	0.946
Sensitivity Index	experience	0.005	0.759
Sensitivity Index	Age	0.004	0.621
Sensitivity Index	Provinces	0.075	7.816
Sensitivity Index	Organisations	0.050	15.566
Adaptive Capacity - producers	Gender	0.001	0.415
Adaptive Capacity - producers	experience	0.009	1.332
Adaptive Capacity - producers	Age	0.010	1.450
Adaptive Capacity - producers	Provinces	0.025	2.519
Adaptive Capacity - producers	Organisations	0.002	0.505
Adaptive Capacity - organisation	Gender	0.002	0.503
Adaptive Capacity - organisation	experience	0.012	1.748
Adaptive Capacity - organisation	Age	0.007	0.985
Adaptive Capacity - organisation	Provinces	0.140	15.713
Adaptive Capacity - organisation	Organisations	0.003	0.875
Adaptive Capacity - Socio-productive Networks	Gender	0.000	0.058
Adaptive Capacity - Socio-productive Networks	experience	0.001	0.180
Adaptive Capacity - Socio-productive Networks	Age	0.002	0.240
Adaptive Capacity - Socio-productive Networks	Provinces	0.091	9.694
Adaptive Capacity - Socio-productive Networks	Organisations	0.013	3.874
Adaptive Capacity Index	Gender	0.000	0.021
Adaptive Capacity Index	experience	0.005	0.686
Adaptive Capacity Index	Age	0.002	0.323
Adaptive Capacity Index	Provinces	0.099	10.624
Adaptive Capacity Index	Organisations	0.011	3.399