Analytic Network Processes as a tool in the development of the Thematic Networks for Business Innovative Models in Agriculture

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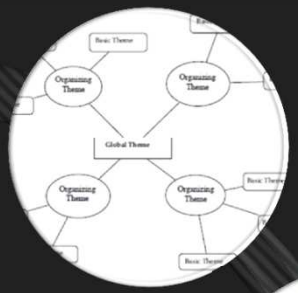
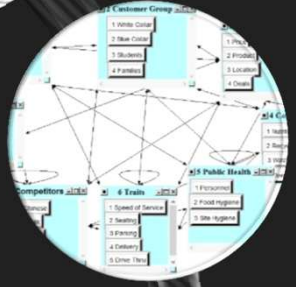
Bucharest University of Economic Studies

Institute of Economic Forecasting, Romanian Academy

STRUCTURING INFORMATION FOR AN OPTIMAL KNOWLEDGE TRANSFER



THEMATIC NETWORK (TN), AS A METHOD FOR STRUCTURING INFORMATION

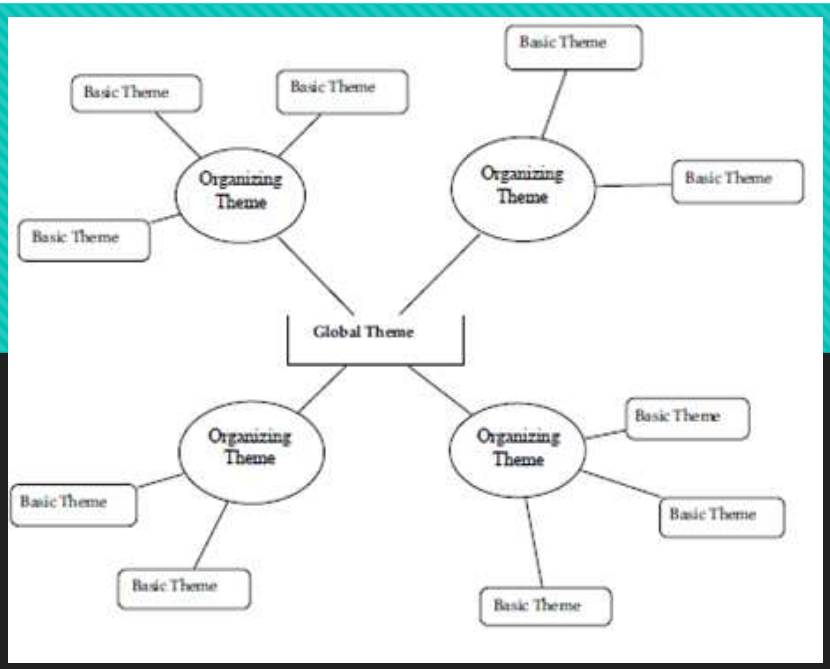


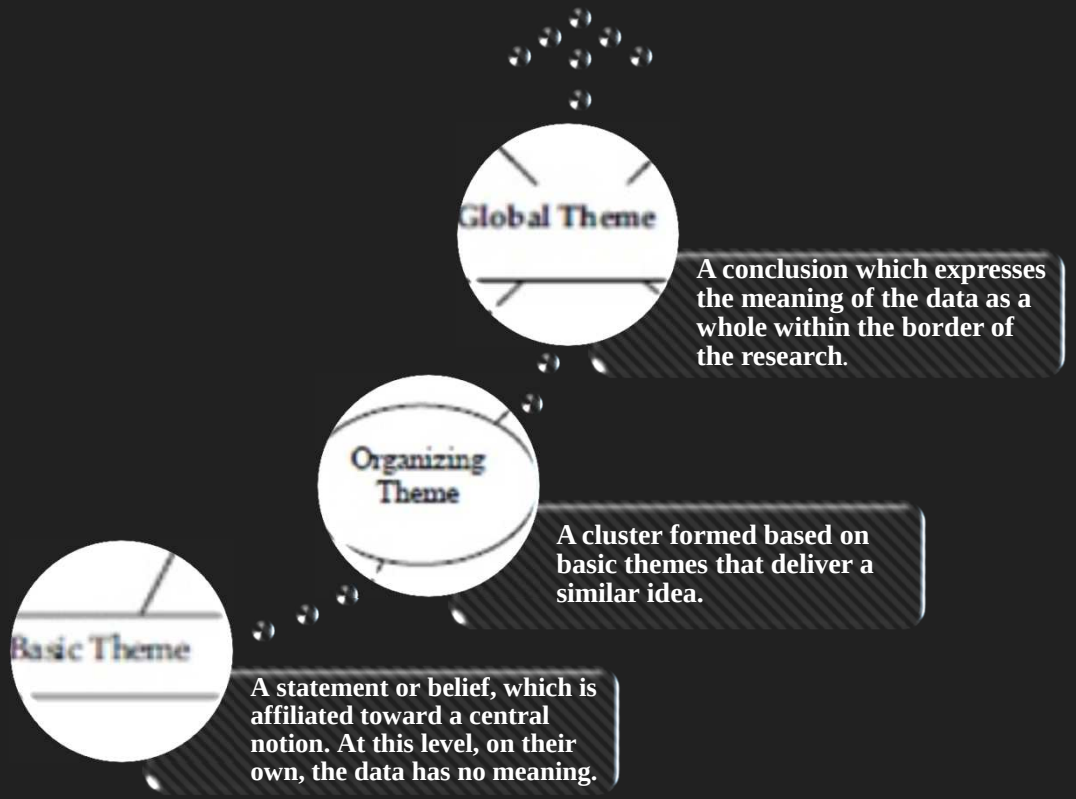
WEIGHTS OF IMPORTANCE FOR TN'S IN THE CONTEXT OF ANALYTIC NETWORK PROCESS (ANP) MODELLING

THEMATIC NETWORKS IN THE CONTEXT OF EU FUNDED PROJECTS

THE ASSESSMENT OF THE BUSINESS INNOVATIVE MODELS IN AGRICULTURE USING ANP FOR TNs

THE STRUCTURE OF A THEMATIC NETWORK

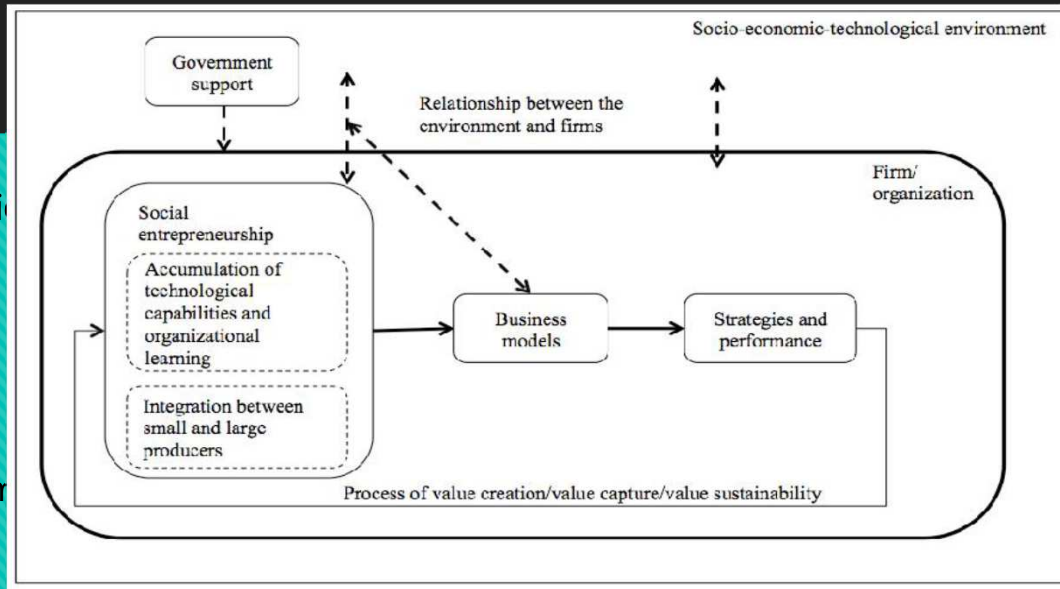




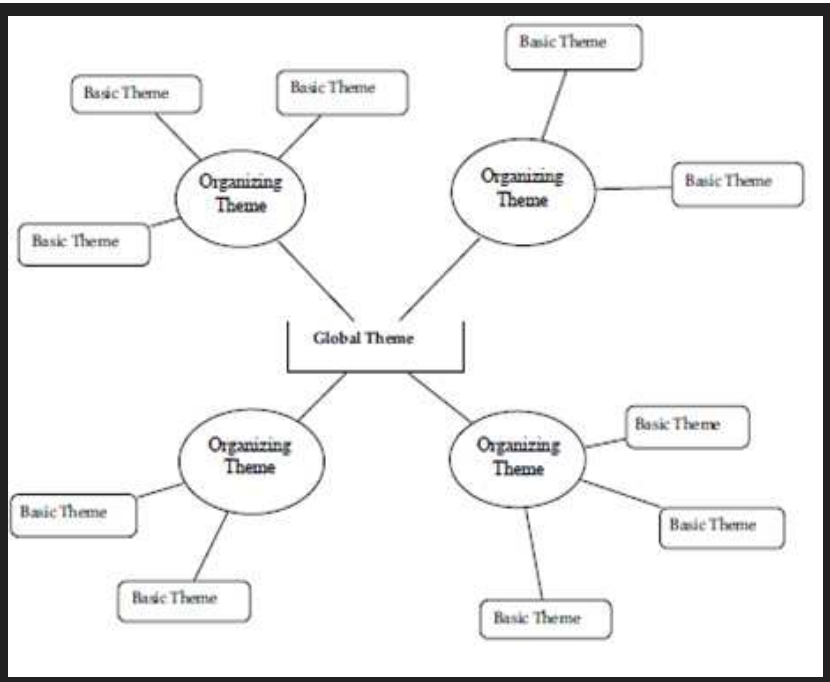
Global theme : the analysis of several BIM's in Agriculture

Organizing themes : Social entrepreneurship
Accumulation of technological capabiliti
and organizational learning
Integration between small and large producers
Government support
Socio-economic technological environm
Strategies and performances

Basic themes :BIM 1, BIM 2……



The structure of an AHP model


Basic Theme
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Global Theme
Organizing Theme
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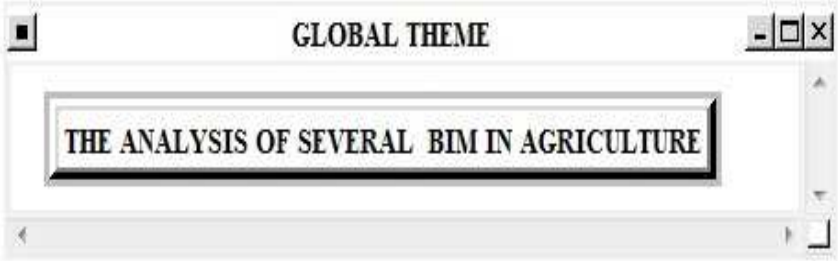
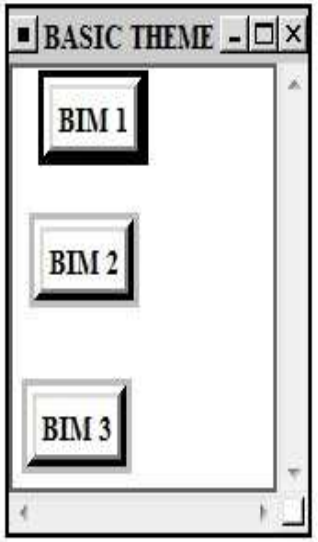
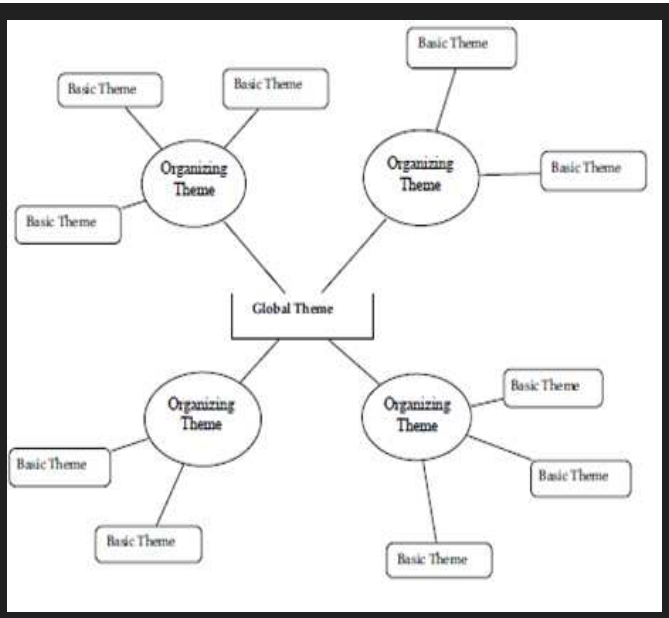
Basic Theme


GLOBAL THEME
THE ANALYSIS OF SEVERAL BIM IN AGRICULTURE

ORGANIZING THEME
Government support
Integration between small and large producers
Social entrepreneurship
Socio-economic technological environment
Strategies and performnces
Technological capabilities and organizational learning


BASIC THEME
BIM 1
BIM 2
BIM 3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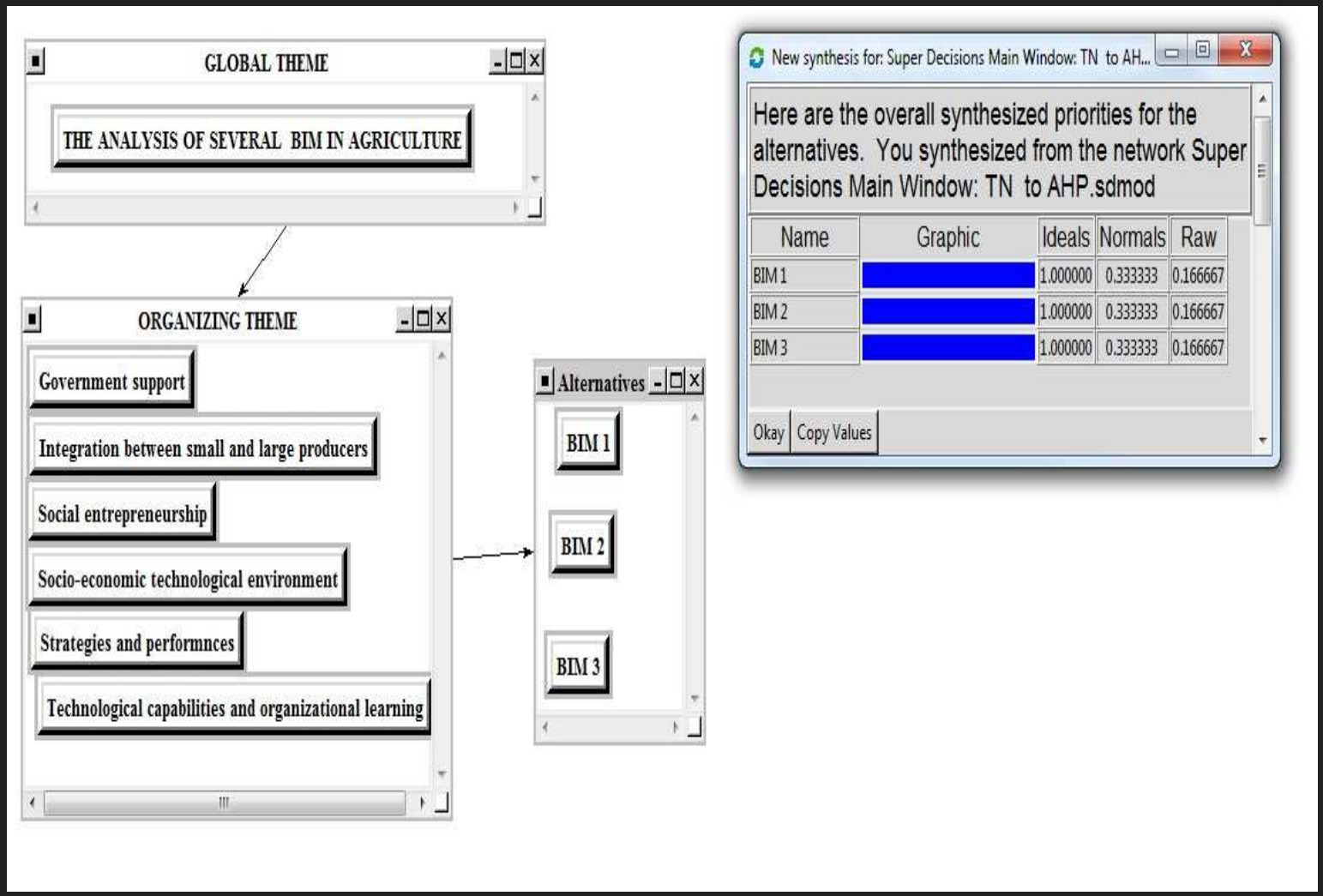
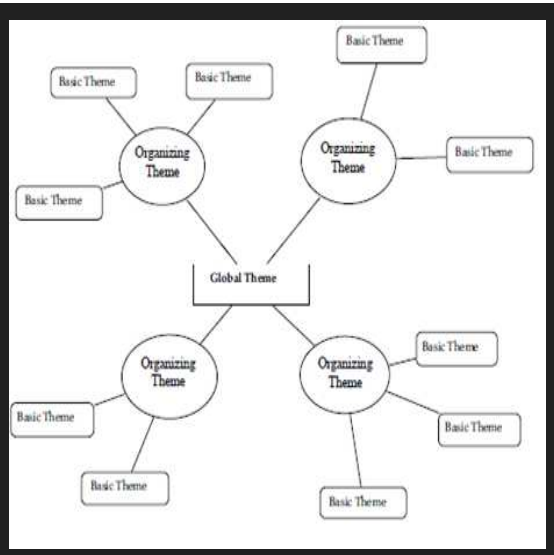

GLOBAL THEME
THE ANALYSIS OF SEVERAL BIM IN AGRICULTURE
ORGANIZING THEME
Government support
Integration between small and large producers
Social entrepreneurship
Socio-economic technological environment
Strategies and performnces
Technological capabilities and organizational learning
Alternatives
BIM 1
BIM 2
BIM 3
New synthesis for: Super Decisions Main Window: TN to AH...
Here are the overall synthesized priorities for the alternatives. You synthesized from the network Super Decisions Main Window: TN to AHP.sdmod
Name
Graphic
Ideals
Normals
Raw
BIM 1
1.000000
0.333333
0.166667
BIM 2
1.000000
0.333333
0.166667
BIM 3
1.000000
0.333333
0.166667
Okay
Copy Values


Basic Theme
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Organizing Theme
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Global Theme
Organizing Theme
Organizing Theme
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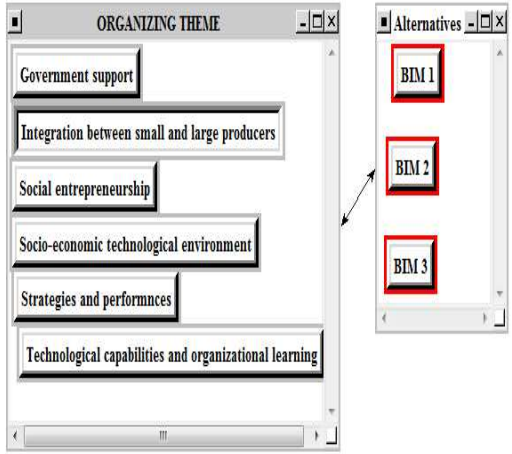
Basic Theme


ORGANIZING THEME
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Integration between small and large producers
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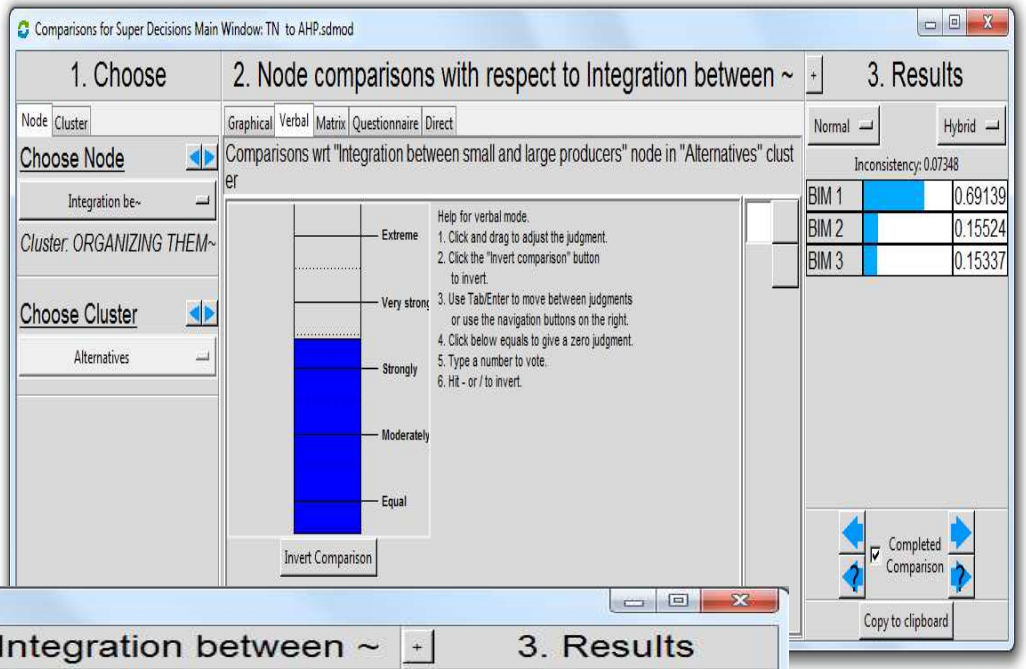
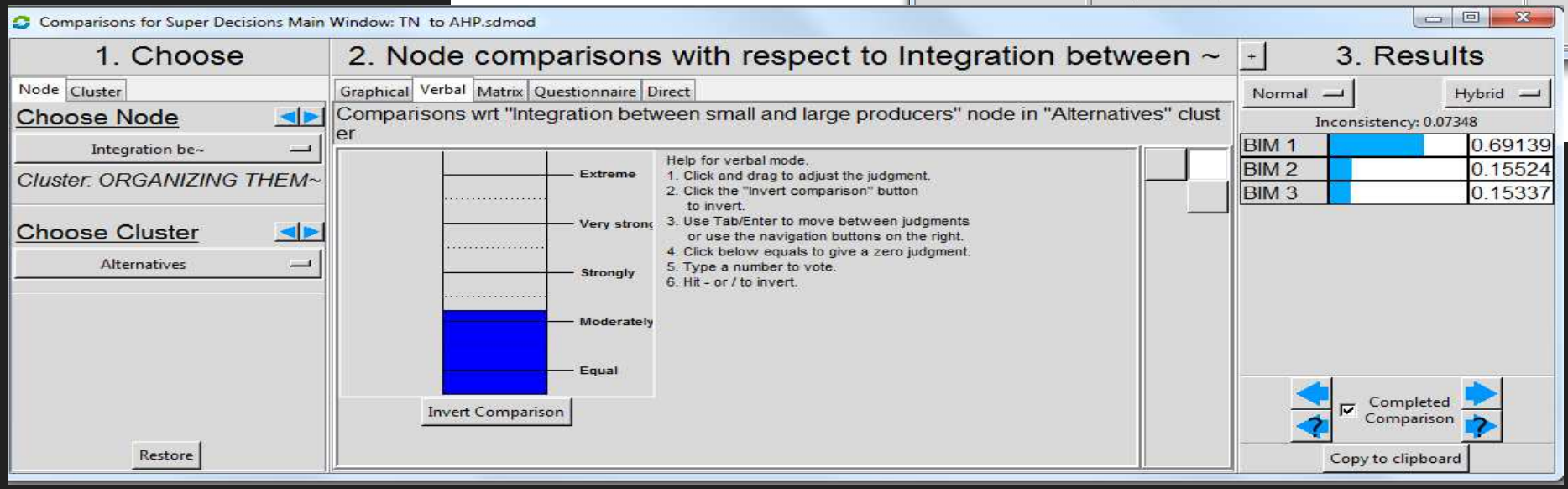

Comparisons for Super Decisions Main Window: TN to AHP.sdmod
1. Choose
2. Node comparisons with respect to Integration between ~
3. Results
Node
Cluster
Choose Node
Integration be~
Cluster: ORGANIZING THEM~
Choose Cluster
Alternatives
Graphical
Verbal
Matrix
Questionnaire
Direct
Comparisons wrt "Integration between small and large producers" node in "Alternatives" clust er
Extreme
Very strong
Strongly
Moderately
Equal
Help for verbal mode.
1. Click and drag to adjust the judgment.
2. Click the "Invert comparison" button to invert.
3. Use Tab/Enter to move between judgments or use the navigation buttons on the right.
4. Click below equals to give a zero judgment.
5. Type a number to vote.
6. Hit - or / to invert.
Invert Comparison
Normal
Hybrid
Inconsistency: 0.07348
BIM 1 0.69139
BIM 2 0.15524
BIM 3 0.15337
Completed Comparison
Copy to clipboard


Comparisons for Super Decisions Main Window: TN to AHP.sdmod
1. Choose
2. Node comparisons with respect to Integration between ~
3. Results
Node
Cluster
Choose Node
Integration be~
Cluster: ORGANIZING THEM~
Choose Cluster
Alternatives
Restore
Graphical
Verbal
Matrix
Questionnaire
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Comparisons wrt "Integration between small and large producers" node in "Alternatives" clust er
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Very strong
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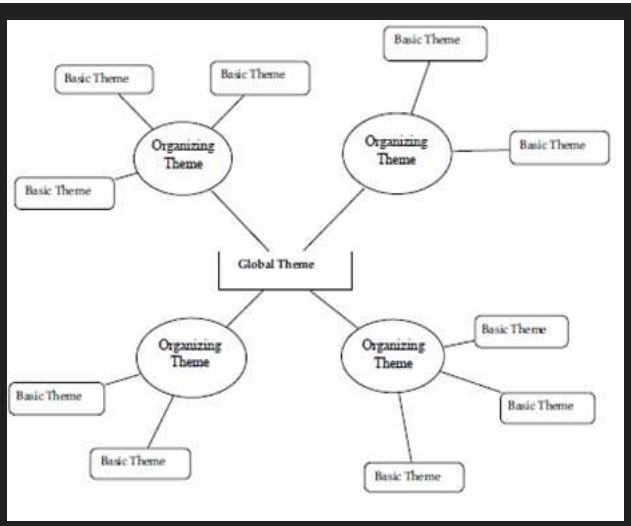
Basic Theme
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Organizing Theme
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Global Theme
Organizing Theme
Organizing Theme
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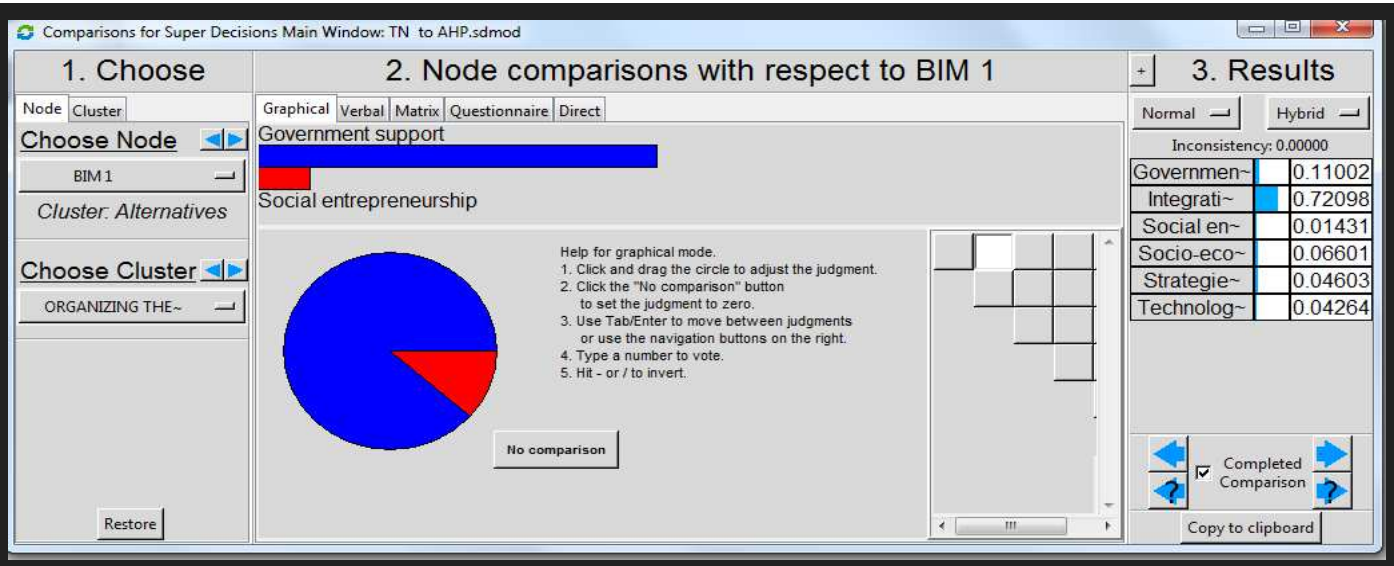
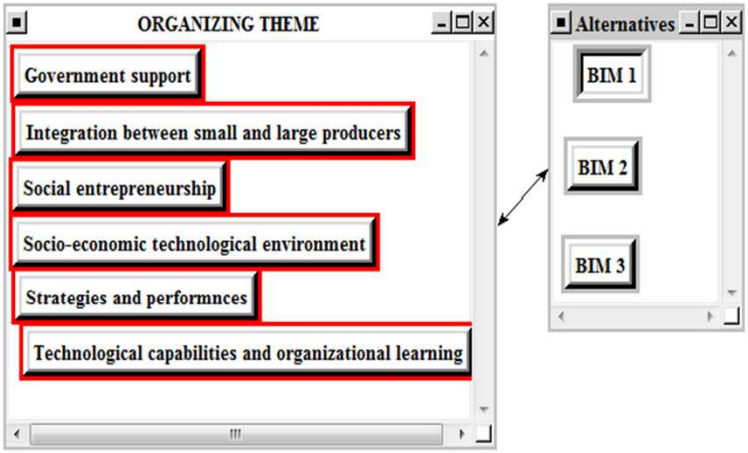
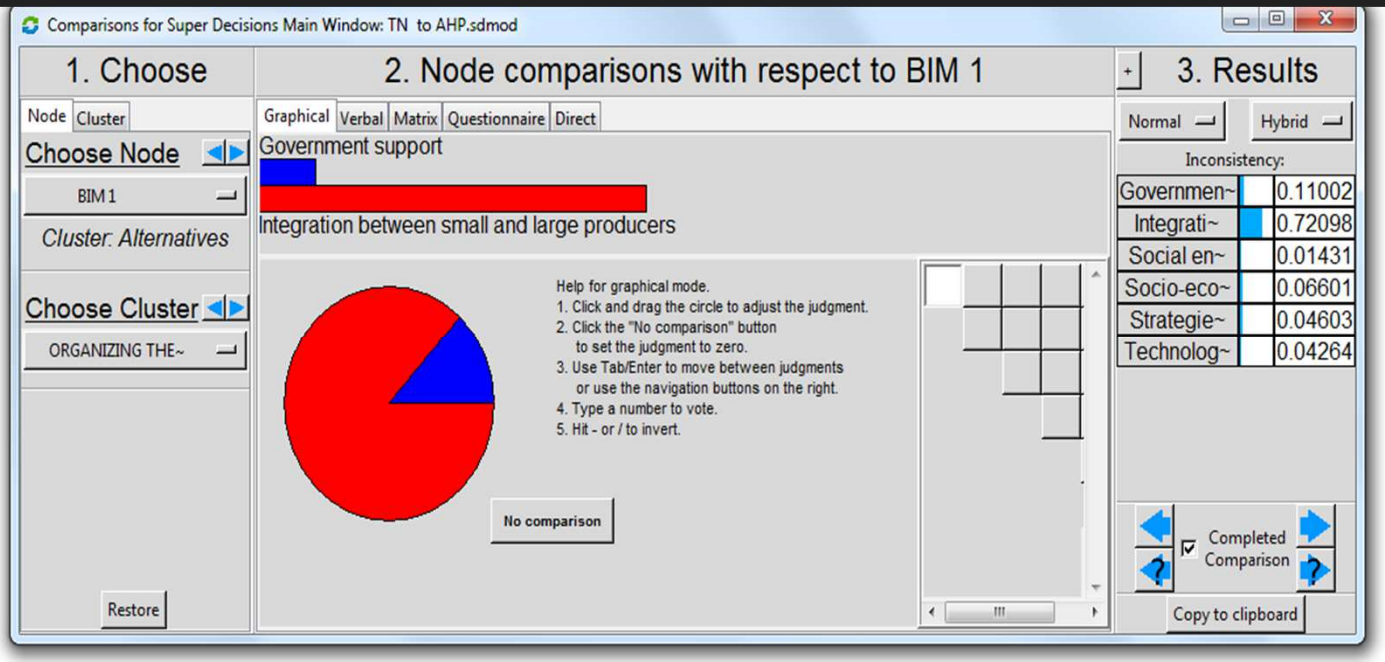

Comparisons for Super Decisions Main Window: TN to AHP.sdmod
1. Choose
2. Node comparisons with respect to BIM 1
3. Results
Node
Cluster
Choose Node
BIM 1
Cluster: Alternatives
Choose Cluster
ORGANIZING THE~
Restore
Graphical
Verbal
Matrix
Questionnaire
Direct
Government support
Social entrepreneurship
Help for graphical mode.
1. Click and drag the circle to adjust the judgment.
2. Click the "No comparison" button
to set the judgment to zero.
3. Use Tab/Enter to move between judgments
or use the navigation buttons on the right.
4. Type a number to vote.
5. Hit - or / to invert.
No comparison
Normal
Hybrid
Inconsistency: 0.00000
Governmen~ 0.11002
Integrati~ 0.72098
Social en~ 0.01431
Socio-eco~ 0.06601
Strategie~ 0.04603
Technolog~ 0.04264
Completed Comparison
Copy to clipboard


ORGANIZING THEME
Government support
Integration between small and large producers
Social entrepreneurship
Socio-economic technological environment
Strategies and performnces
Technological capabilities and organizational learning
Alternatives
BIM 1
BIM 2
BIM 3


Comparisons for Super Decisions Main Window: TN to AHP.sdmod
1. Choose
2. Node comparisons with respect to BIM 1
3. Results
Node
Cluster
Choose Node
BIM 1
Cluster: Alternatives
Choose Cluster
ORGANIZING THE~
Restore
Graphical
Verbal
Matrix
Questionnaire
Direct
Government support
Integration between small and large producers
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4. Type a number to vote.
5. Hit - or / to invert.
No comparison
Normal
Hybrid
Inconsistency:
Governmen~ 0.11002
Integrati~ 0.72098
Social en~ 0.01431
Socio-eco~ 0.06601
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Completed Comparison
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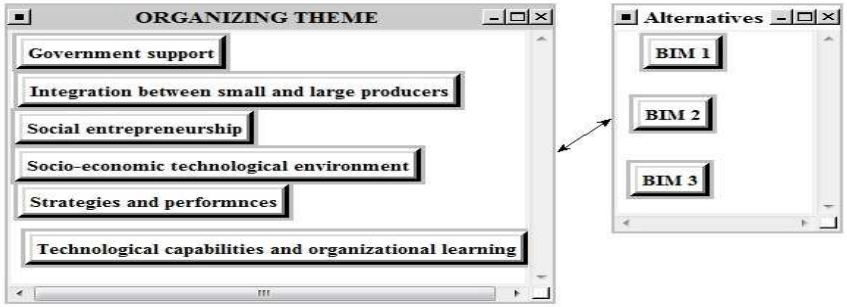
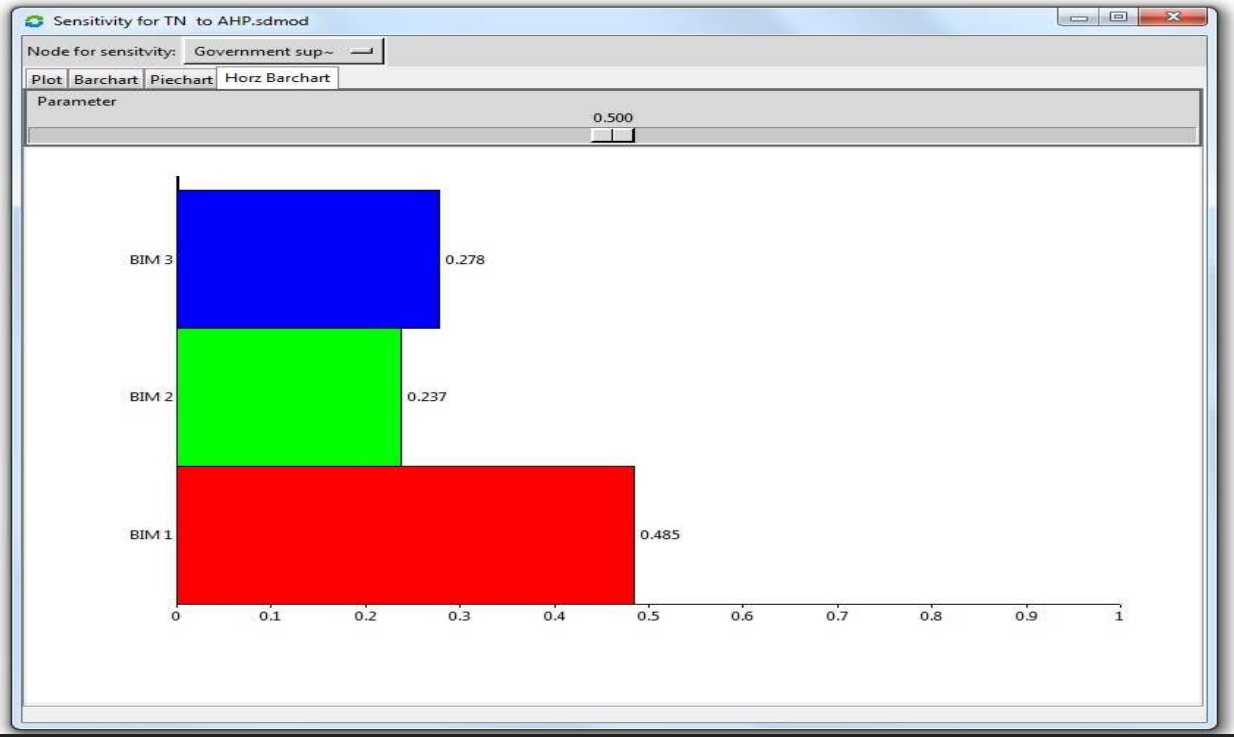
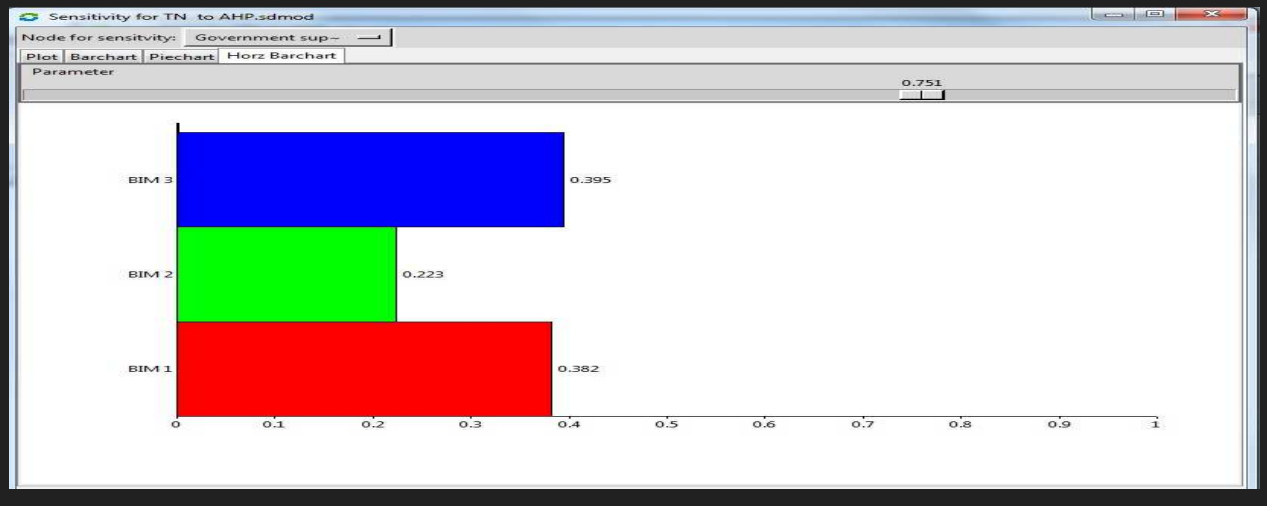




Rate of Change with respect to an increase of the Government Support (GS)

	GS as in present	GS up with 50 %	Rate of change	
BIM 3	0.278	0.395	$\frac{0.395 - 0.278}{0.278}$	42 %
BIM 2	0.237	0.223	$\frac{0.223 - 0.237}{0.237}$	- 6 %
BIM 1	0.485	0.382	$\frac{0.382 - 0.485}{0.485}$	-21 %



Analytic Network Processes as a tool in the development of the Thematic Networks for Business Innovative Models in Agriculture: several reasons for an integrated approach

The extended sense associated with the sintagm : 'Thematic Network '

EU-Cordis :

- since 2002-until 2014 there were 6222 EU financed projects for developing Thematic Networks (TN) in different fields
- 628 EU financed projects -TN for business innovative models
- 879 EU financed projects- TN in agriculture

RECENT TRENDS: for TN for business models in agriculture - 190 projects –in between 2014-2016

Enhancing the human and social capital

Thematic networks
Horizontal

AGRI-SPIN - Space for Agricultural Innovation: website - CORDIS (2014)

HNV-link - High Nature Value Farming: Learning, Innovation and Knowledge: CORDIS (2015)

SMART-AKIS - European Agricultural Knowledge and Innovation Systems (AKIS) towards innovation-driven research in Smart Farming Technology: CORDIS (2015)

AGRIFORVALOR - Bringing added value to agriculture and forest sectors by closing the research and innovation divide: website - CORDIS (2015)

Crops
OK-Net-Arable - Organic Knowledge Network Arable: website - CORDIS (2014)

FERTINNOWA - Transfer of INNOvative techniques for sustainable WAter use in FERtigated crops: CORDIS (2015)

WINETWORK - Network for the exchange and transfer of innovative knowledge between European wine-growing regions to increase the productivity and sustainability of the sector: website - CORDIS (2014)

EUFRUIT - EU Fruit Network: CORDIS (2015)

Livestock
HENNOVATION - Practice-led innovation supported by science and market-driven actors in the laying hen and other livestock sectors: website - CORDIS (2014)

EuroDairy - A Europe-wide thematic network supporting a sustainable future for EU dairy farmers: website - CORDIS (2015)
4D4F - Data Driven Dairy Decisions 4 Farmers - CORDIS (2015)

EIP-AGRI , Multi –Actor Approach, Territorial CAP assessment

TOPIC : Thematic Networks compiling knowledge ready for practice
Topic identifier: RUR-10-2016-2017
Publication date: 14 October 2015

Types of action: CSA Coordination and support action
DeadlineModel:
Opening date: single-stage
04 October 2016 Deadline: 14 February 2017 17:00:00

Types of action: CSA Coordination and support action
DeadlineModel:
Opening date: single-stage
27 October 2015 Deadline: 17 February 2016 17:00:00

Time Zone : (Brussels time)
Horizon 2020H2020 website
Pillar: Societal Challenges
Work Programme Year: H2020-2016-2017
Work Programme Part: Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy
Call : H2020-RUR-2016-2017

Topic Description

Specific Challenge:
Despite the continued generation of knowledge through scientific projects,

research results are often insufficiently exploited and taken up in agricultural practice, and innovative ideas and methods from practice are not captured and spread.

National and sectoral agricultural knowledge and innovation systems (AKISs) are insufficiently connected to fully meet this challenge.

In view of fostering economically viable and sustainable agriculture and forestry, it is essential to close the research and innovation divide and to act at EU level.

More cooperation is needed between researchers, advisors, farmers/foresters and other actors in the supply chain to stimulate knowledge exchange so as to optimise resource use and smooth the transition to a knowledge-driven agriculture.

Thematic networks are a key element in the implementation of the EIP Agricultural Productivity and Sustainability (EIP-AGRI)
with a view to fostering cross-border knowledge exchange and they may enable links being established with and between the EIP-AGRI Operational Groups supported under rural development programmes.