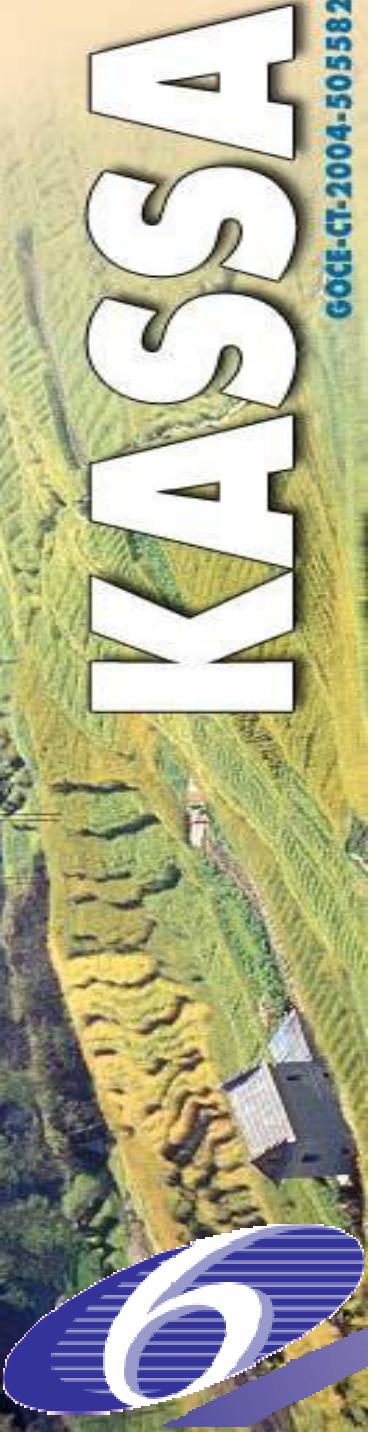

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CMU-SC Joint Meeting - Brussels, 9-10 January 2006,

Workpackage 3

Validation of the

SYNTHESIS REPORT OF KASSA FINDINGS

Session V

CONCLUSION - RECOMMENDATIONS

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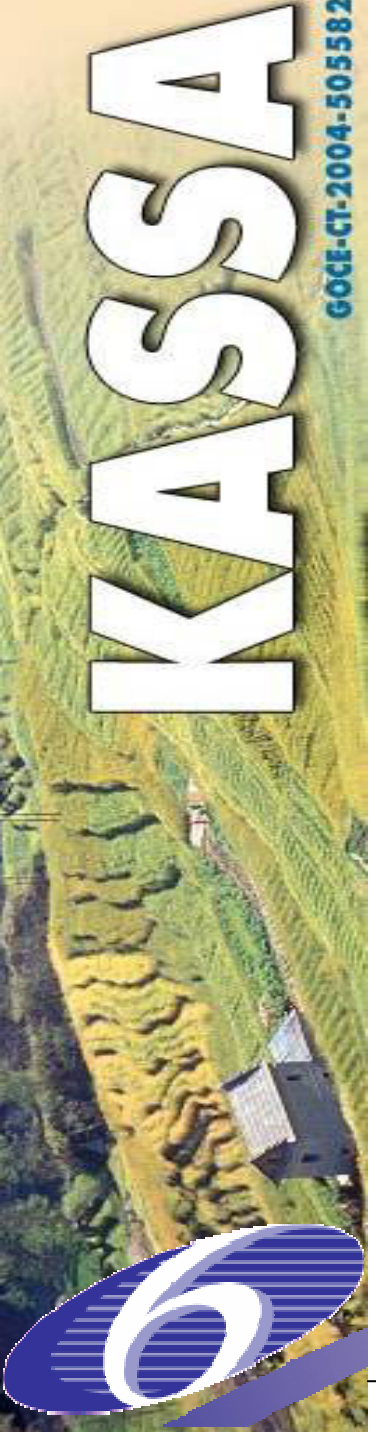
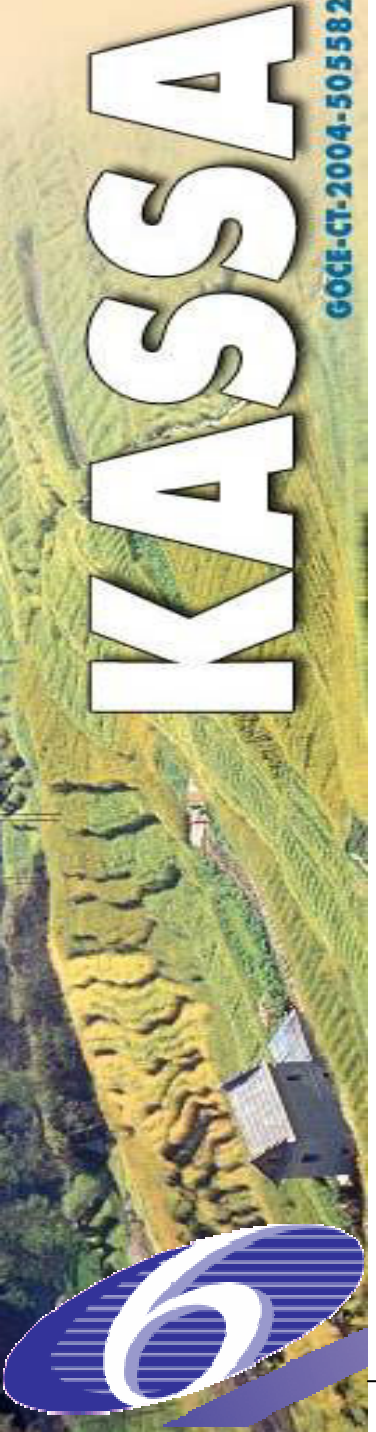
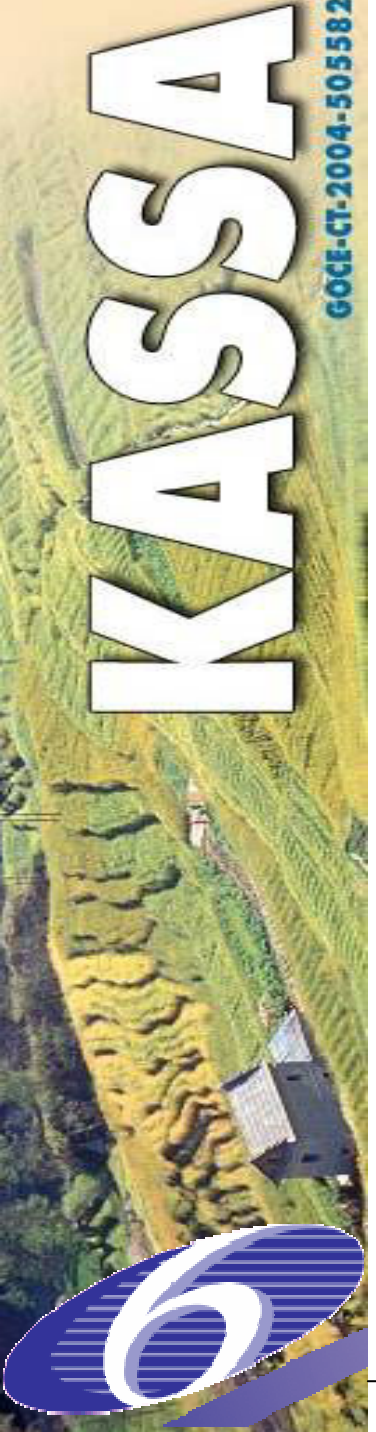
CIRAD, Avenue Agropolis, 34398 Montpellier Cedex 5, France



KASSA PROJECT intended to capitalise the results from the past research on sustainable agriculture and to draw new perspectives for future research actions.



Sustainable agriculture is seen as "agriculture able to ensure social and economic viability, food security and safety while conserving and even improving local and global basic resources and the environment."

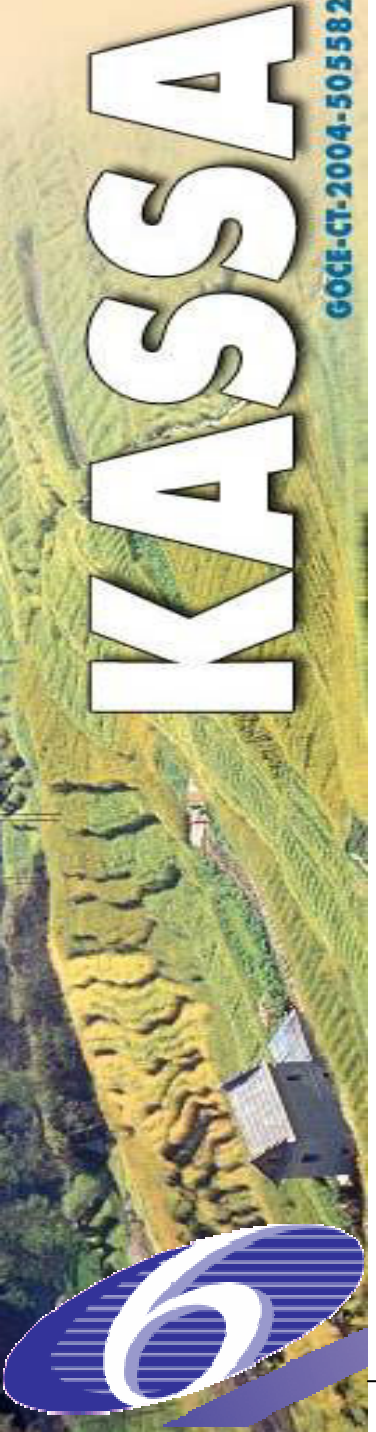


KASSA focussed on conservation agriculture which is perceived as a technology fulfilling these needs.

KASSA

GOCE-CT-2004-505582

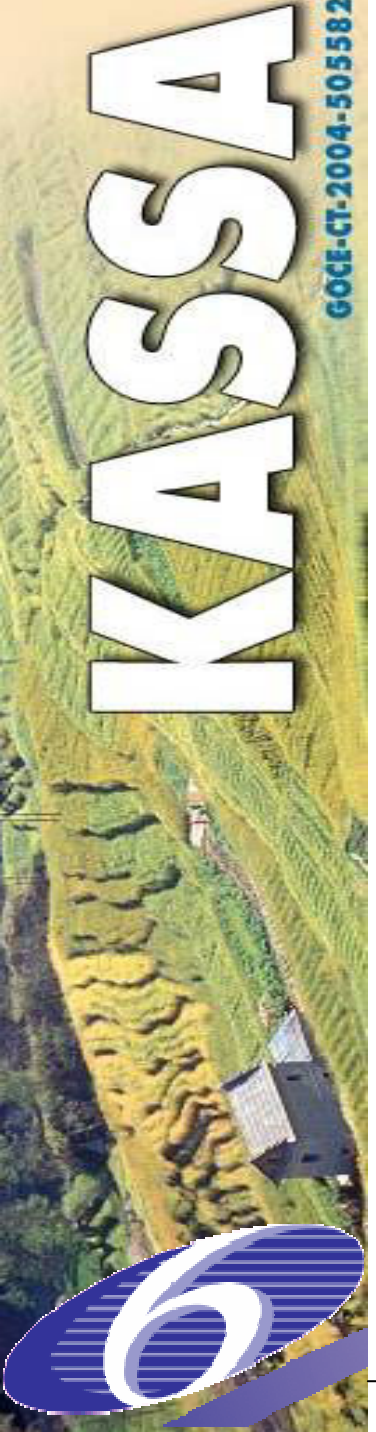
The work has been done in 4 regions of the world having different experiences in CA.



With emphasis on

Ecosystem/society/policy conditions of the development and adoption of the technologies within the platforms

On their social/economic and environmental impacts



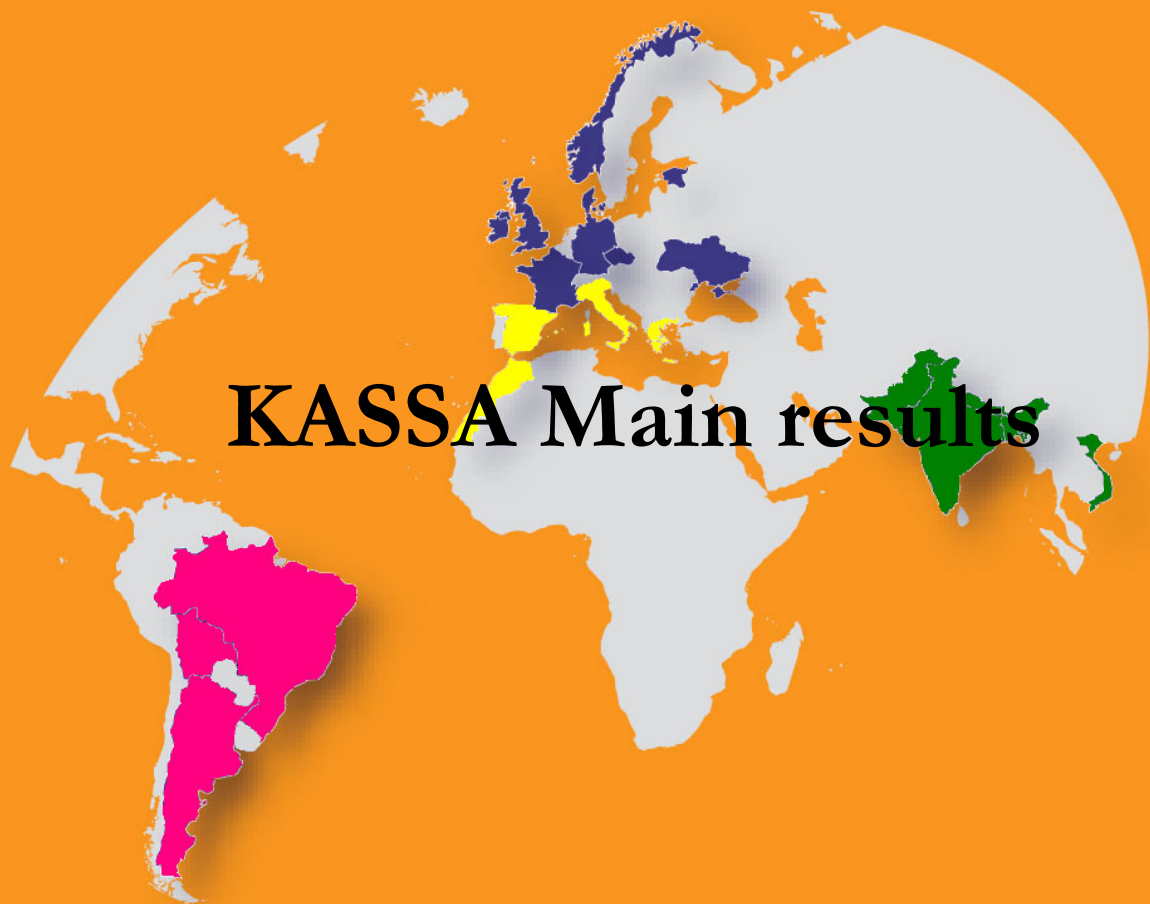
The work followed 3 successive steps in generating knowledge

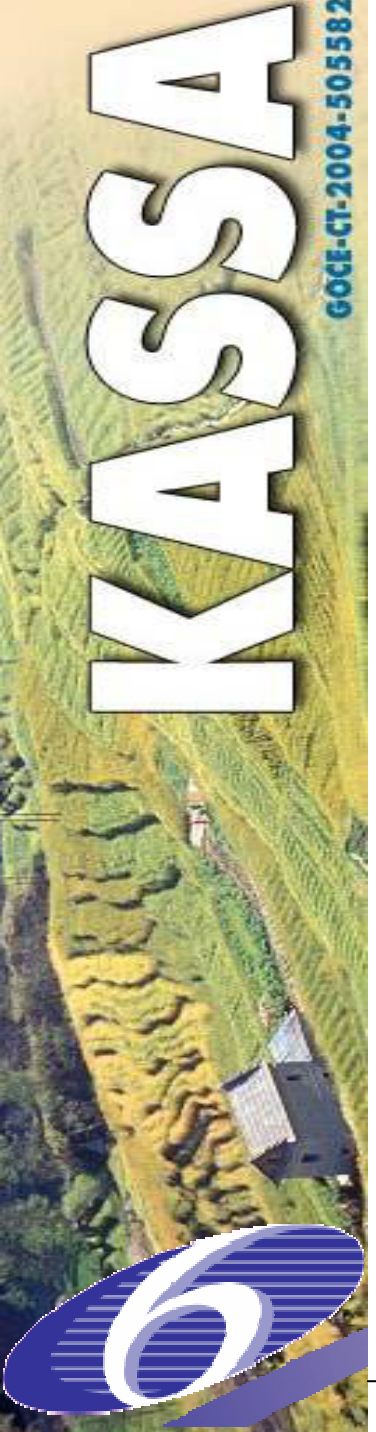
Comprehensive inventory and assessment of existing knowledge on sustainable agriculture
Cross-checking of the results
Refinement of the findings

KASSA

GOCE-CT-2004-505582

KASSA Main results

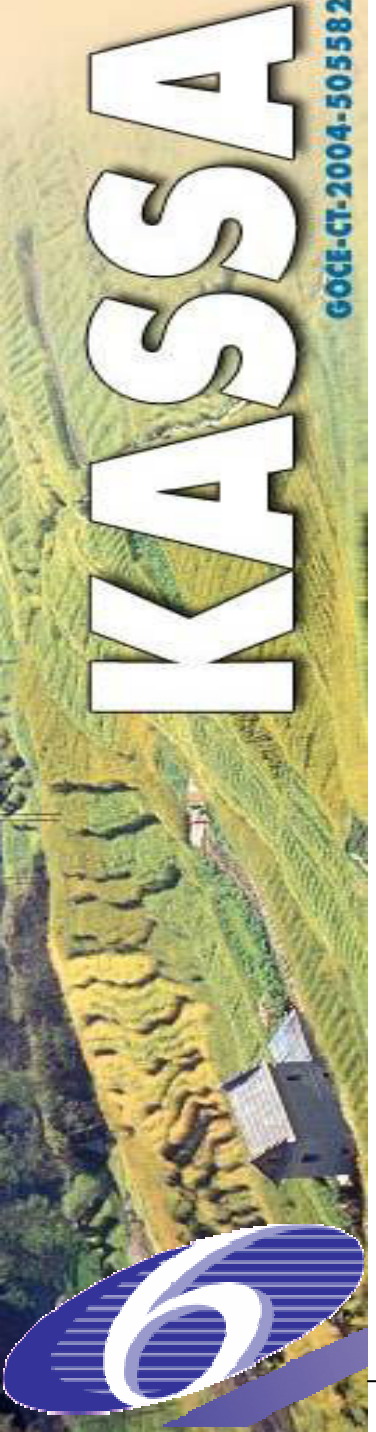




KASSA FINDINGS

I.

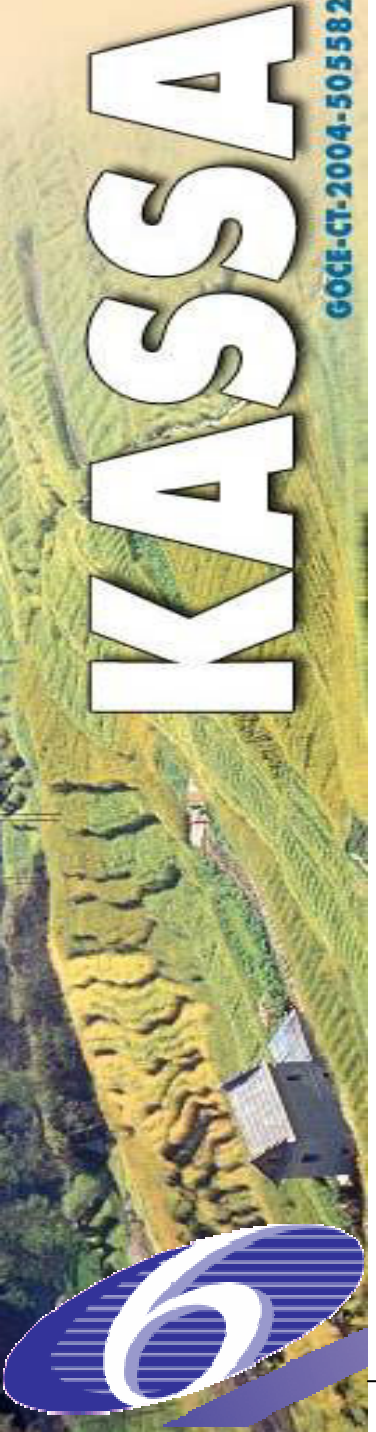
Conservation agriculture is not equally appropriate for all agroecosystems.



Limitations for CA development & adoption

Soil cover and no-till result in cooler soil temperatures, delayed sowing, and depressed yields.

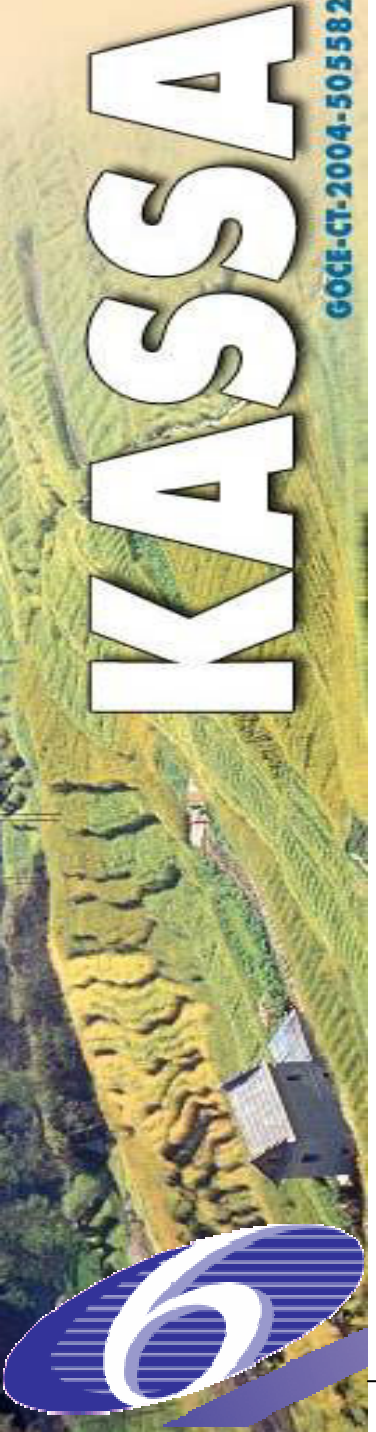
Soils are susceptible to compaction.



Limitations for CA development & adoption

Soil cover from crop residues is either inadequate (dry lands) or excessive.

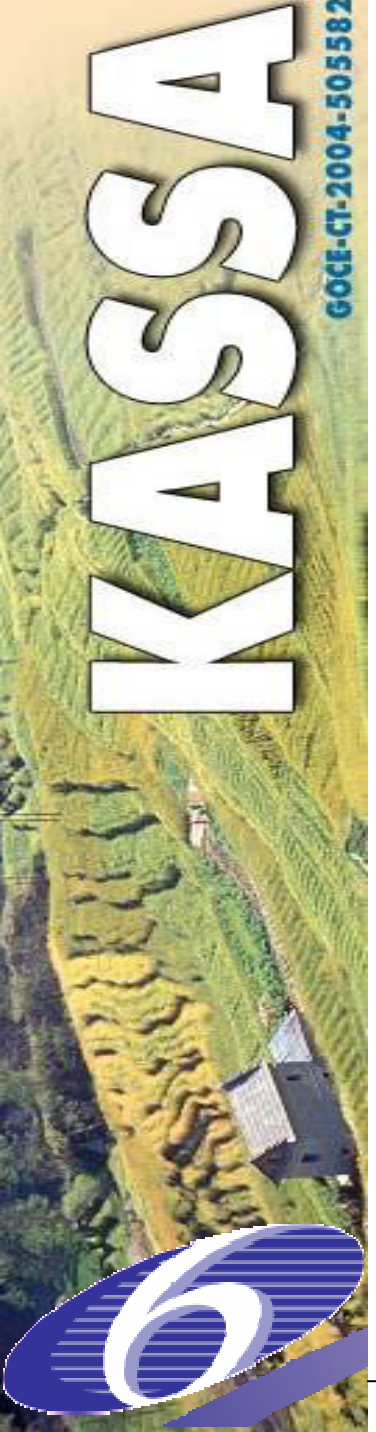
Cover crops increase costs but produce few benefits.



Limitations for CA development & adoption

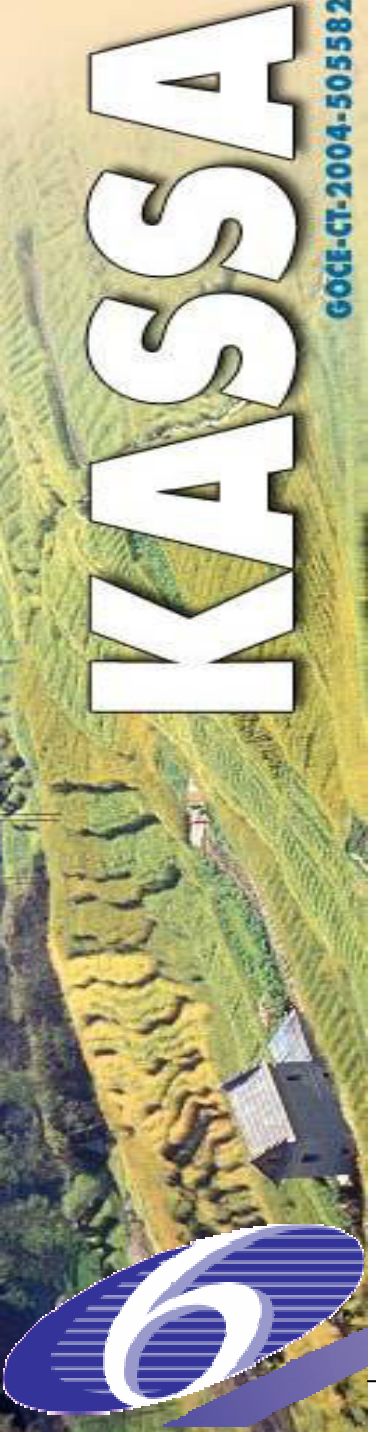
The use of agronomically sound rotations is ruled out by farm-level economics.

Pest, disease or weed problems are increased.



Limitations for CA development & adoption

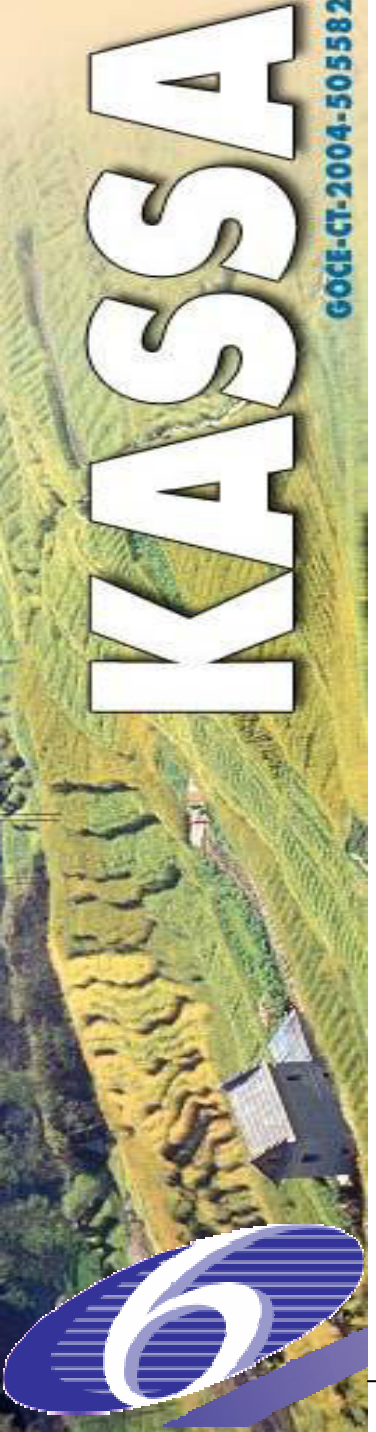
Suitable conservation agriculture implements are not available.



Limitations for CA development & adoption

Unit production costs are increased, taking account of all changes in cost categories.

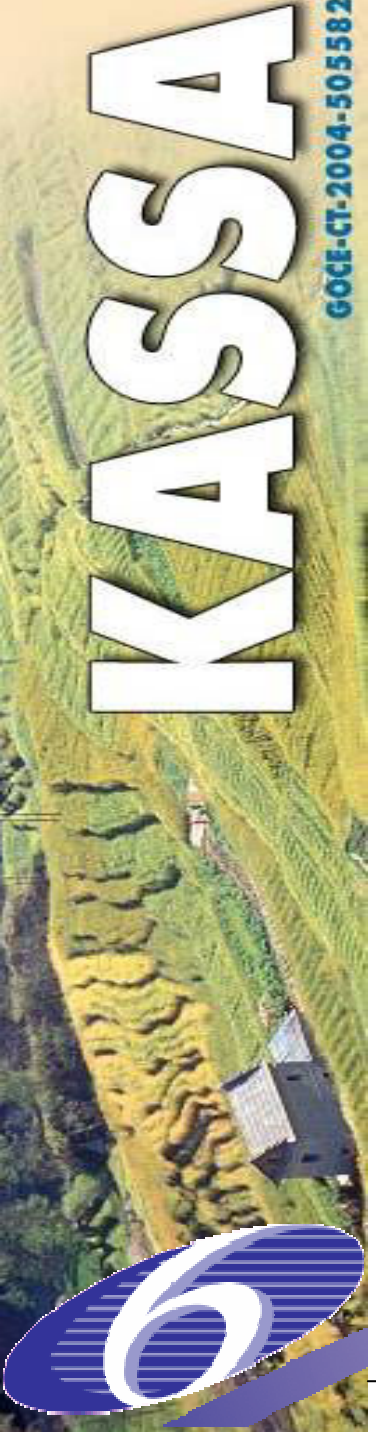
Farmers are not compensated for the social benefits they produce when using conservation agriculture (e.g., land and water conservation).



Limitations for CA development & adoption

Farmers and technicians have no access to knowledge or have socio-cultural barriers

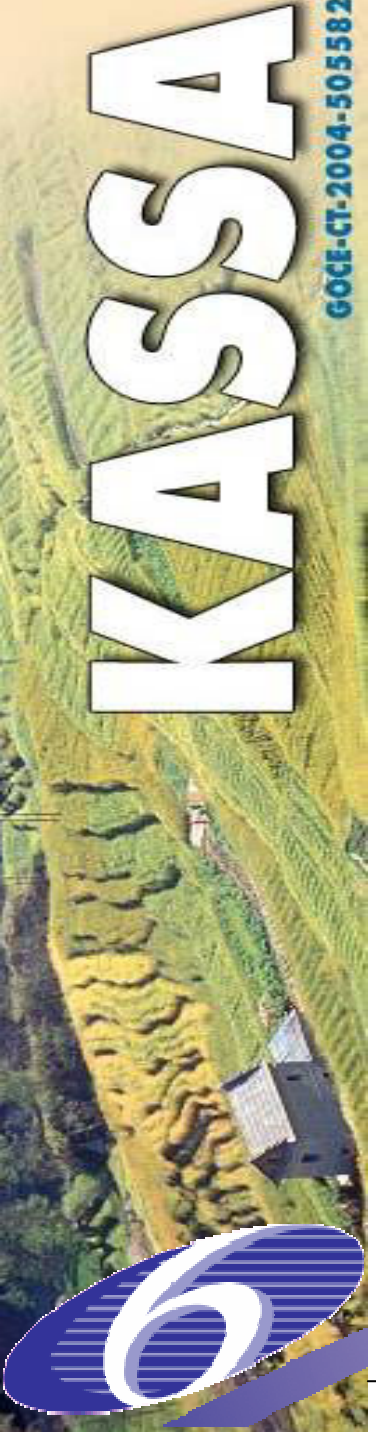
Agricultural research and other policies do not encourage the emergence of dynamic innovation systems for knowledge generation.



KASSA FINDINGS

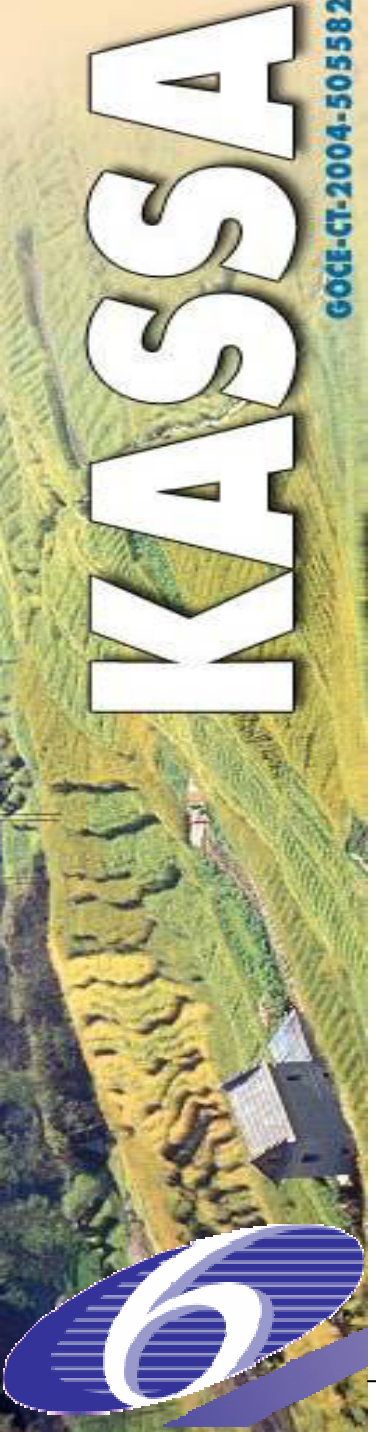
II.

There have been little scientific accumulation on the CA systems and their Consequences. The gap in knowledge is large.



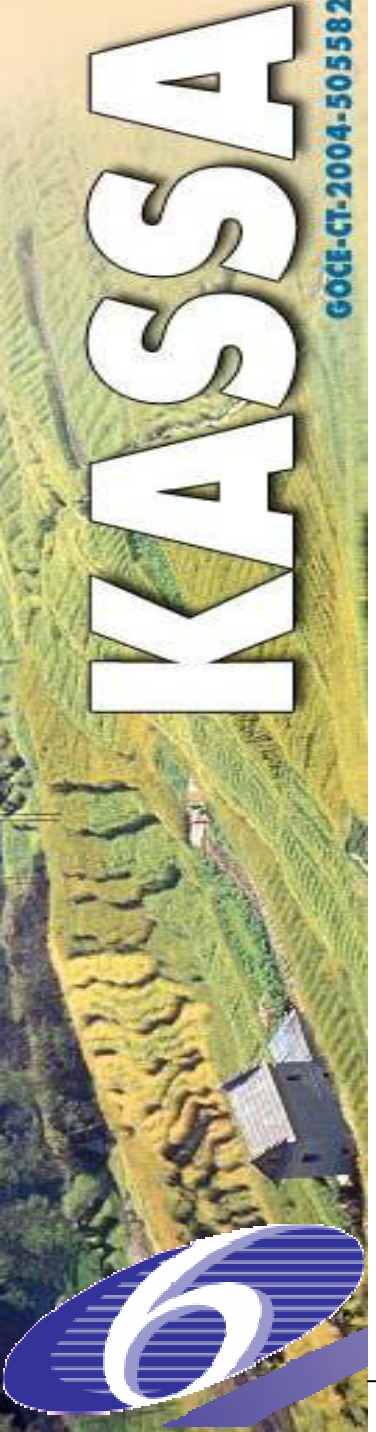
Understanding the functioning of the CA agroecosystems

What are the natural processes in play?



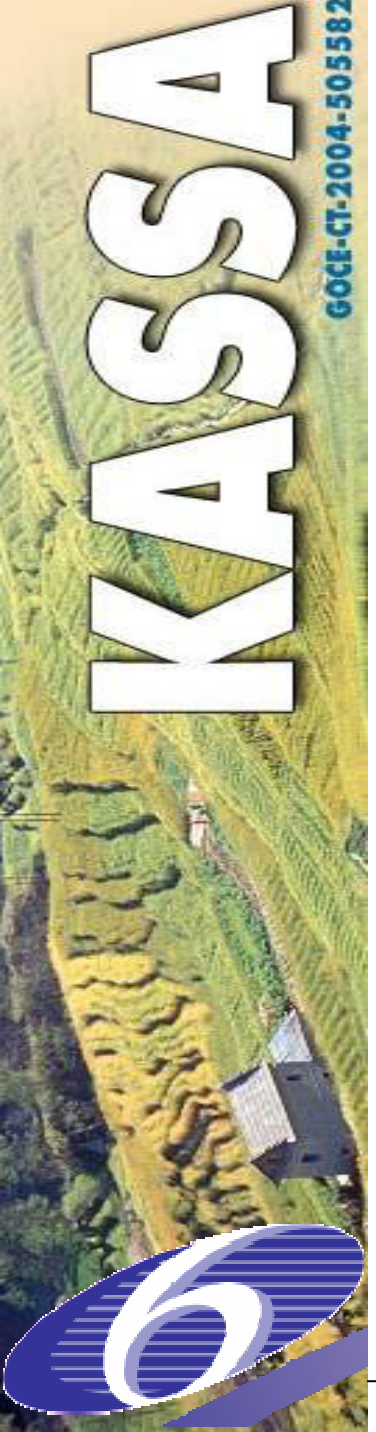
Consequences of CA adoption for

Costs, income and employment ?



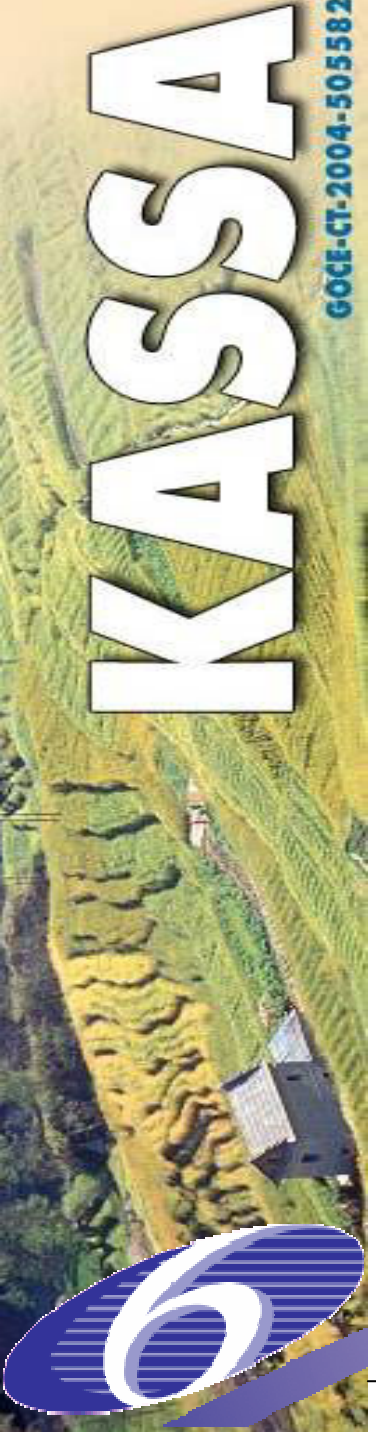
Consequences of CA adoption for

Soil, water and biodiversity resources ?



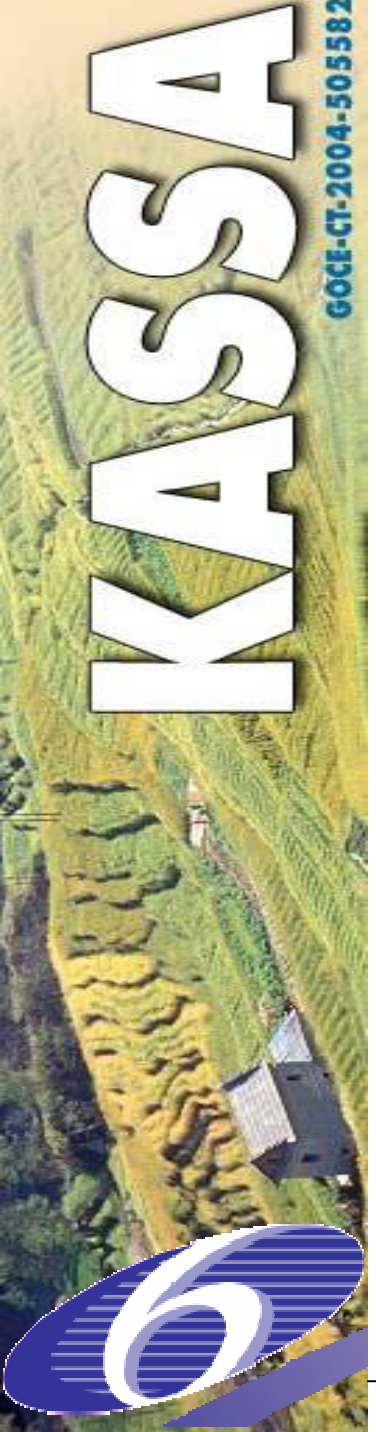
Consequences of CA adoption for

The environment ?



KASSA FINDINGS

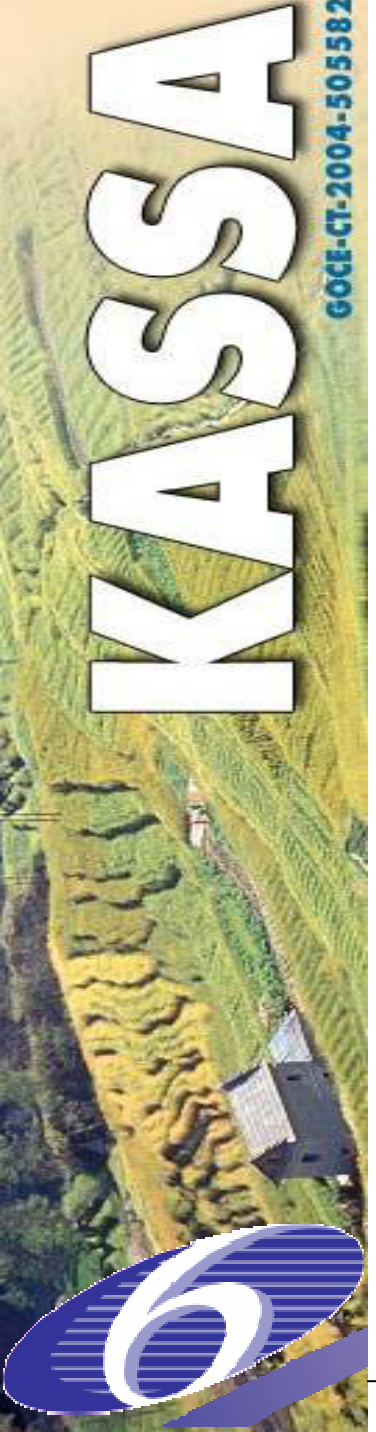
III.
Need for generating and sharing knowledge



Fill in gaps

Need for more research efforts

- Which research?
- Which approach?



Fill in gaps

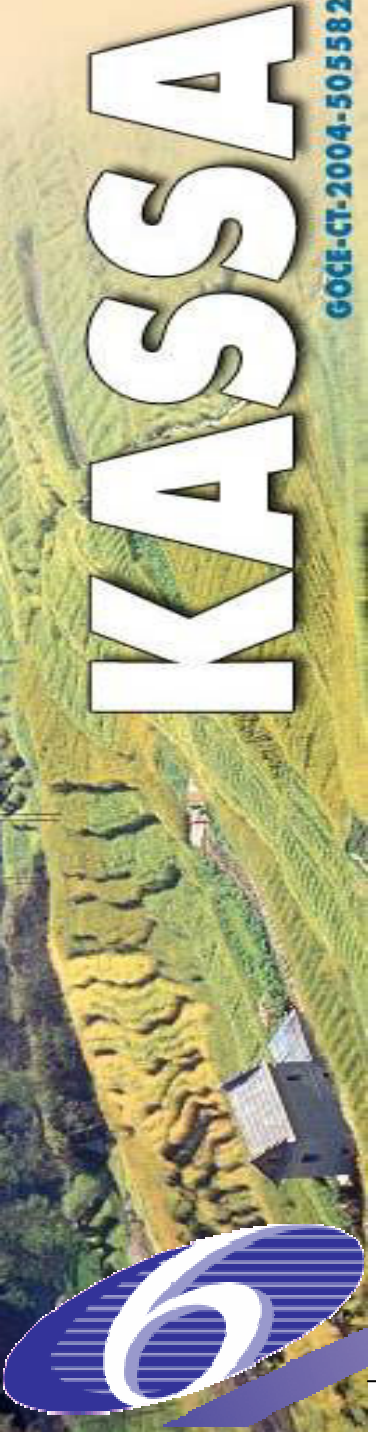
Need for more research efforts

- Which research?
- Which approach?

SOIL,

IWPM

Producers behaviour & policy



Fill in gaps

Need for sharing knowledge

- dissemination
- education, training

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