the conservation intervention (*In Situ* rainwater-harvesting structure) had followed a community participatory approach. Nevertheless, results of the study clearly disclose that the involvement of the community in both areas was limited to 'community consultation[7]', where they were rather convinced to implement the rainwater-harvesting technology. Schwartz *et al* (1996:5) says that '*community consultation is a process through which a donor or government agency communicates with and informs communities of its goals and actions'.* According to the respondents' who were the community participants in the project in both Uvati and Kawala sub-locations, they were rather persuaded by an external agent (implementing agency- from ADCL) who influenced them to implement the new rainwater-harvesting technology on their farms. This finding also indicated that the inappropriateness of the intervention strategy by the project implementers affected the perception of the community participants of the project, thus affecting their adoption rate towards the technology. In this case, the absence of genuine participation of community participants in important activities such as involvement in what sort of rainwater harvesting systems they would have preferred and during the planning and implementation process of the project, has therefore lacked the necessary basis and direction to achieving sustainable results.

The selection of primary beneficiaries (local population in the study area) by involving the community was not taken into account as major targeting strategy for the community based project. According to the results in Uvati area, the participants were chosen based on groups that existed before and was already established, this meant leaving out the rest of the community members who felt like participating in the project. According to Pretty and Shah (1997) and Kessler (2006) it is pointed out that involvement of local farmers is a necessary precondition for an effective execution and sustainable utilization of soil and water conservation technologies (Bewket, 2007:414). As for the sustainability objective of the project it is not quite clear if it will be achieved once the project implementers stop offering direct assistance in the areas. Same applies for its adoption and its replication capacity of the technology by the community members.

The major factors that discourages or slows down the adoption process by both the participants of the project and the rest of the community was that the rainwater harvesting technology was not tailored to meet the community's requirements or needs in the area. The

[7] ADB (2001:2) highlighted that participation can take different forms, depending on the breath of stakeholders involved and the depth of their participation. In this case consultation constitutes, information-sharing, listening and learning and joint assessment, and they might be considered as prerequisites for participation.

## 5.3 Recommendations

For successful implementation of community-based projects, especially when it comes to new innovations and better adoption rate by the community benefiting from it, the following recommendations are suggested:

- Importance of project initiators to include in the beginning people's priorities and needs, and also listen to their different views in relations to development issues. Including also land tenure, gender relations, power and income inequalities in and between households;
- The benefits or potential of the new agricultural innovation systems (soil and water conservation technology) should be made clear to the community from the start. As such new technologies often require demonstration to the community in order for them to understand and envisage its effectiveness;
- Proper communication and support systems from the project initiators should be offered to community participants;
- Design intervention and approaches should be handled differently based on the areas needs or requirements;
- Technical know-how should be done through extensive training being offered to both the community members and the agricultural officers in the area;
- Promotion of awareness and motivation among the community members with regard to the new innovation project (rainwater-harvesting project) and how to achieve them should be crucial.

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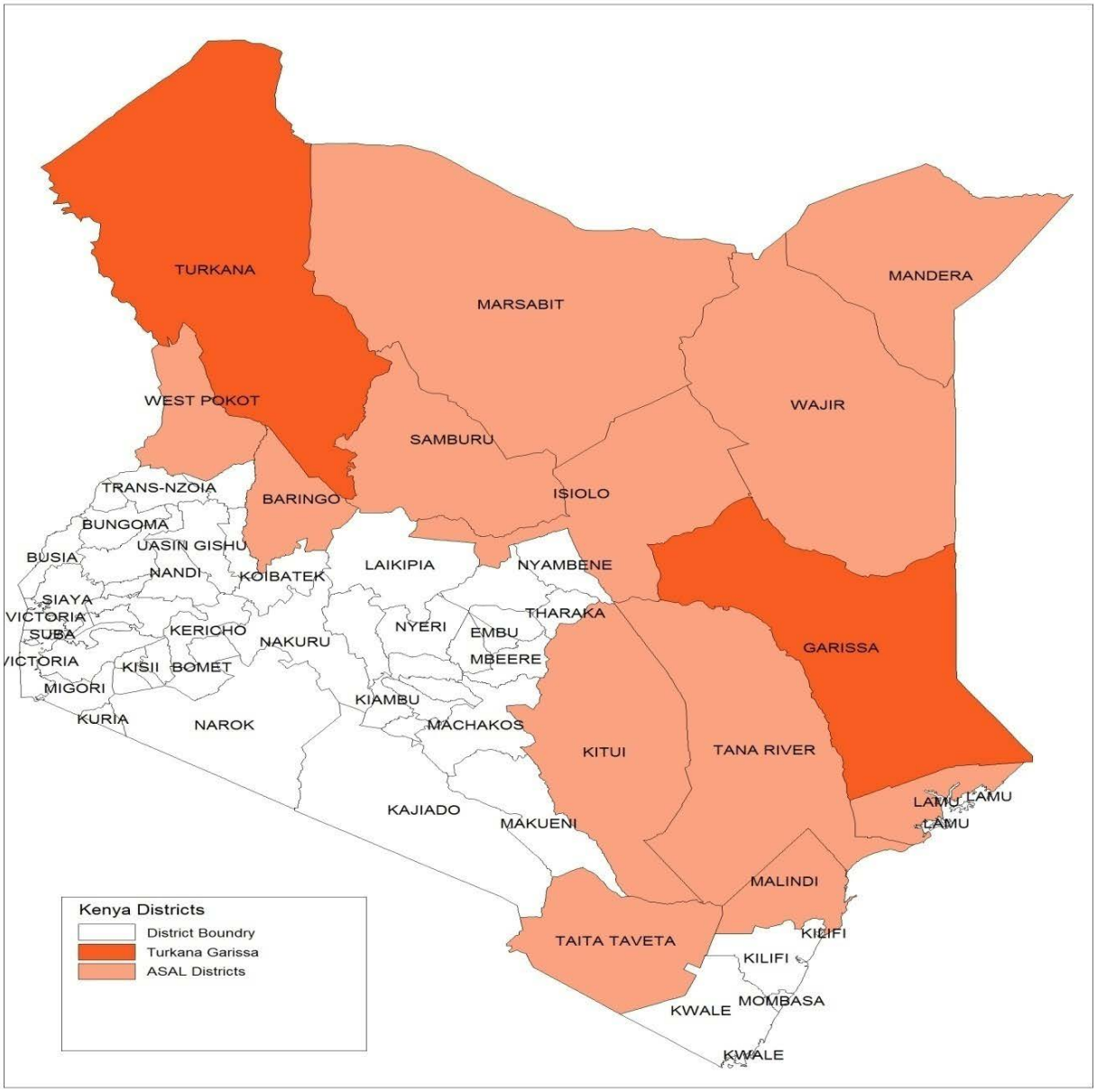
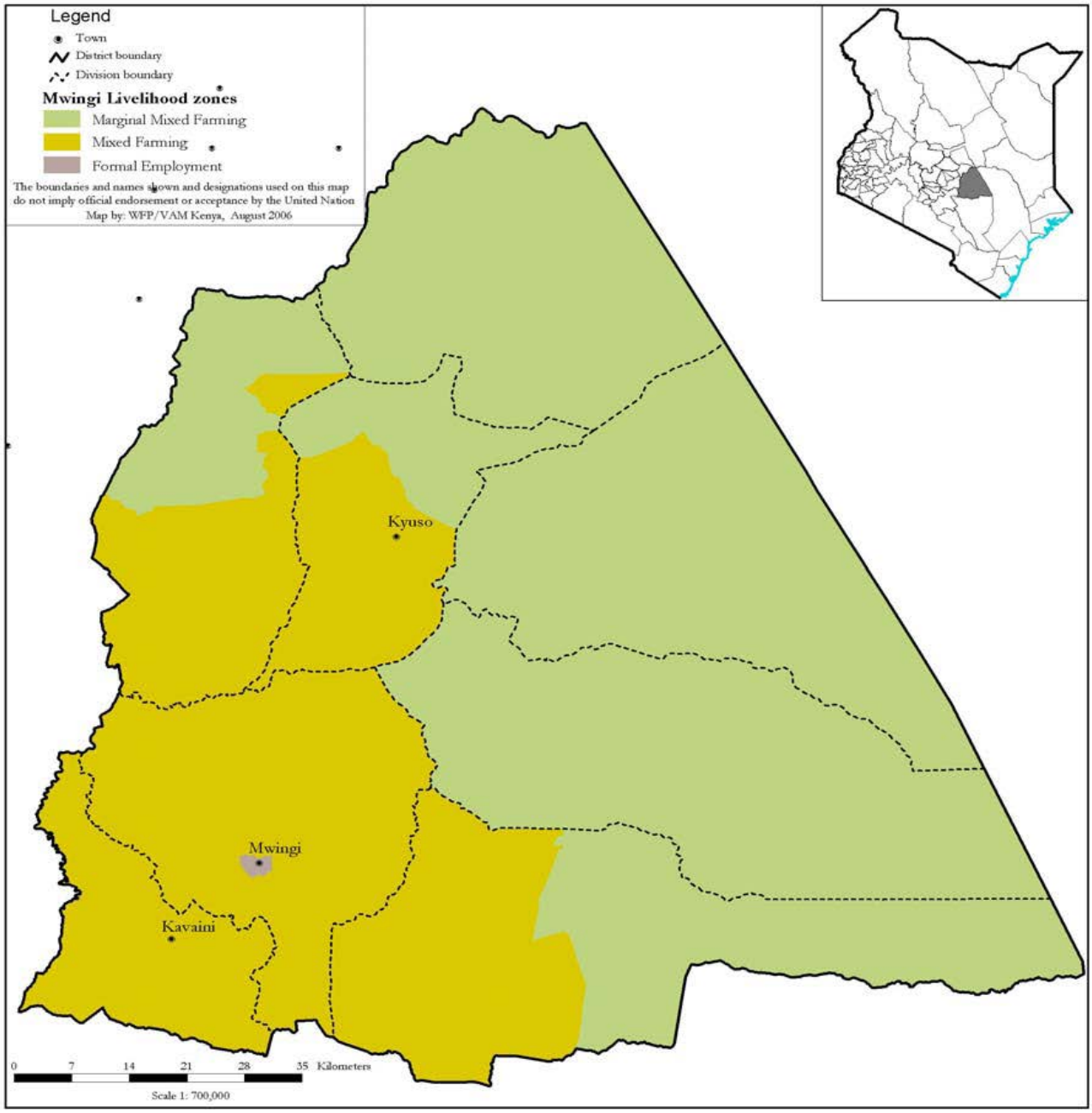
# APPENDIX

## Appendix 1: Map showing the ASALs Districts in Kenya



## Appendix 2: Map showing Mwingi District and their livelihood zones




Source: Mwingi district- (short rains and food security report, 2012)

## Appendix 3: Semi-Structured questions (Interview guide used in both Interviews and Focus Group Discussions for both participants and non-participants of the project)

1. How did the community deal with droughts in the past?
2. In the local area, how was the water situation before the rainwater-harvesting project was implemented?
3. Did you know anything about the rainwater harvesting before it was implemented in the area?
4. How did the water harvesting idea arise in the community? And how was it done?
5. Who decided it was a good idea to try the new technology? And who decided how it will be implemented?
6. What role did you play in the implementation process?
7. How is the rainwater-harvesting system perceived?
8. Do you participant in the rainwater-harvesting project?
9. What was the motivation to participate in the project?
10. Did the community decide the location for the trapezoidal bunds? And what criteria were used in locating the bunds in various farms?
11. How is the land tenure system? And does it affect with the community-based project when it comes to control and ownership?
12. How did the community/ participants organize themselves? And how was the group formation done?
13. In what way is the division of task done or shared between the participants of the project?
14. Are there people who dropped out from the project? And why did they drop out of it?
15. What are your views based on the work input in the structures?
16. Has the projects outputs pay off? And in which situations does it pay off?
17. What are the expectations of the rainwater-harvesting project?
18. What challenges were faced during the implementation of the project to now?
19. How were some of the challenges encountered solved or think should be solved?
20. Who supplies and distributes the seeds to be planted inside the bunds?
21. How are the crops harvested from the bunds used amongst the participants?
22. How differently would they have approached the issue of rainwater-harvesting?
23. How will the projected be managed once the project comes to an end (external inputs? Are there changes that will be made on the rainwater harvesting systems?
24. What are your thoughts on the crops planted inside the bunds? Were there any preferential crops rather than the one planted in the bunds?
25. Are there plans on building or replicating similar structures in the farm?
26. Are there plans or intentions to maintain the structures after the project is finished?
27. How can the project be made sustainable in the future?
28. How is the future of the bunds seen? (Each family has a bund? Landscape?

## Appendix 4: Interview guide with the Agricultural extension officers

1. What duties do you carry out in the area? And for how long have you worked in the area?
2. In the local area, how was the water situation before the rainwater-harvesting project was implemented?
3. Did you know anything about the rainwater-harvesting before it was implemented in the area?
4. How did the project implementers come in contract with the you?
5. How did the water harvesting idea arise in the community? And how was it done?
6. Who decided it was a good idea to try the new technology? And who decided how it will be implemented?
7. What role did the community have in the implementation process?
8. What are your general thoughts on the rainwater-harvesting project? Are there strengths or drawbacks of the implemented methods?
9. Do you perceive the implemented system in the areas (Uvati and Kawala) as sustainable or reliable in times of seasonal discrepancies?
10. What have you learned about the rainwater-harvesting structures introduced in the areas?