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A note on the use of aerial photographs for land use planning on a settlement site in Ethiopia

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• Introduction

Two NGOs, Concern and BandAid have been assisting settlers at two resettlement sites in Western Ethiopia since 1985. Their assistance has been directed towards a better appreciation of environmental factors and greater participation by the settlers in planning the use of their land.

The two sites were photographed from the air at a scale of 1:20,000 and local consultants were employed to carry out a land capability study. Their report was submitted in June 1988. This report was in the usual form, of more or less use to professional land use planners but with minimal value as a communication tool for discussing land use with the settlers.

To overcome this the prints were enlarged to a scale of 1:5,000 and mosaics were made up at these scales for each of the village settlement areas.

A preliminary test run with a few farmers using one of these mosaics showed that:

- the settlers immediately recognised that this was a photograph of their land;
- they could without difficulty indicate the boundaries of their land on the mosaic (correcting in the process errors made by the consultants);
- they had no difficulty in recognising features such as ponds, swamps, woods, their own huts, thrashing floors, tracks, areas under crop etc;

- they could take one to any spot on their own land shown to them on the mosaic; and,
- they could identify on the mosaic their position at any point of a walk round the land.

Although none of them had seen an aerial photograph before, it was as if they had the stereoscopic vision facility acquired by experienced photo-interpreters in so far as they could show us on the mosaic steep and gentle slopes. This may be a question of transferring actual knowledge of the land onto the photograph rather than seeing slope on the print (as one can test by looking at a picture of an area intimately known to one). But I cannot be certain.

Subsequently a one-week workshop was organised by the NGOs at which representatives of all the villages concerned, including those of the indigenous population and of the Ministry of Agriculture, discussed land use planning with especial reference to the next cropping season. After one or two full sessions, each village took its photo-mosaic and, with its development agent and the local farmers, discussed and agreed on a pro-forma land use allocation. These allocations were then marked and labelled on transparent acetate sheets overlaid on the mosaic. Each village in turn presented their proposals to the full session using the mosaics and overlays.

- **Outcome**

Aerial photography helps technical staff who do not know an area well to identify its superficial characteristics and to visualise development options. It does not help a farmer who does know his land well, including details that cannot be shown on an aerial photograph, to make better plans for its use. It was, however, shown to be a valuable tool whereby farmers could illustrate their knowledge and ideas to others, i.e. developers, and enable developers to extract information of useful accuracy, for example this side or that of a path, without having to walk every part of the land. It provided a visual medium of mutual recognition, the farmers transferring their knowledge of the land onto a representation of it that they could recognise and explain to developers who could visualise what was being told to them through their greater or less ability to interpret photography.

A practical outcome of the workshop has been the start of a longer term programme of land use planning, already under way in which staff of the Land Use Planning Department of the Ministry of Agriculture are discussing land use plans in much more detail with settlers at each village site using the photo-mosaics.

The area in this case was specifically flown and the photo-prints were therefore up to date. A possible snag might be the use of the more commonly available prints which may be 10-20 years old. Especially in recently settled areas, or areas where there has been a dramatic change in the vegetation, for instance through expanded cropping, farmers might find it more difficult to recognise the photo imagery.

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