INTRODUCTION
The South African constitution affects every citizen's access to basic services and accordingly it has become a legal requirement for local authorities to prepare integrated development plans (IDPs), develop performance management systems and promote development that is the prerequisite of basic services is the provision of social facilities, e.g. primary health care, parks, sports fields and community halls. These facilities must be sufficient and equitably available to the public.

DEFINING EQUITABLE PROVISION OF SOCIAL FACILITIES
Achieving equity is possible only if the areas that are under or over-provided are identified and corrective action is applied through appropriate planning and implementation. Determining the spatial mismatch between supply and demand is established by:

- Deciding on suitable standards pertinent to a specific facility, which will be related to:
  1. the demand (the population who will use the facility)
  2. acceptable travel costs (time and distance) to the facility and
  3. the capacity of existing facilities (based on size and functionality).

Based on this, it boils down to what the maximum distance is that people are willing to travel to a facility, and whether that facility will have enough capacity to accommodate them once they get there. If these criteria are met, the provision of the facility by a local authority can be deemed equitable.

ANALYSING EQUITABILITY
The standards to which a facility must adhere are of cardinal importance in order to provide an equitable service. Everybody must have access to the same type and quality of facility within a reasonable distance from where they live. Quality of the facility refers to the variety of functions available at the facility – for instance a kitchen and toilet facilities at a community hall – and the fact that the facility has enough capacity to accommodate the potential population it can serve. It must be noted, especially from a South African perspective, that acceptable travel distances will differ, based on the socio-economic status of communities. Socio-economic status has an influence on the kind of transport people traverse across space. The advantage of using a road network is that it takes into consideration the topography of the area in question, i.e. it doesn’t go through buildings, it can't cross cliffs or other impassable spaces. Different types of roads also have different speeds/substrates which affect the travel distance, for example a buffer zone around an area, to determine the amount of people within a given distance from a facility.

- Facility standards – determining the facility, indicating precisely where it is located using its geographical coordinates. Attached to the facility must be attribute data indicating its capacity and any other relevant information that has an impact on its usability.

Figure 1: Input datasets (layers) needed for the analysis

Analysis procedures
The first step is to establish the status quo within the region, i.e. how equitable are the current services being provided. Figure 2 shows the results from this analysis.

- Re-adjusting current standards, especially the acceptable travel time
- It may be that a majority of the facilities have spare capacity and practical knowledge tells one that this is not true due to actual usage of facilities. This is then a clear example that travel time allowed to get to facility is too little
- Considering certain facilities for upgrading/expansion
- It is possible if the analysis shows that there are people within the acceptable travel distance from the facility, but due to capacity constraints the people can not be accommodated (see Figure 2)
- Establish optimal locations for new facilities
- If a majority of the facilities are utilised to capacity and the expansion of current facilities is not an option.

SYNTHESIS

By having good standards and the necessary data it is possible to do a fairly good analysis of the equitable distribution of facilities. One can determine whether backlogs are, determine spatial mismatch between supply and demand as well as determine the optimal location for new facilities.

This analysis does not, however, take the needs of the community into consideration. We rather propose a process by which the power of accessibility analysis in GIS is coupled with a community consultative process to ensure better decision making by local authorities and thus the development of better policies. This will again lead to better and more sustainable development.

Analysis

The provision of social facilities, e.g. primary health care, sports fields and community halls, is a prerequisite of basic services. CSIR research investigates the sufficient and equitable availability of such services to the public.

REFERENCES

Figure 2: Population not being served by the facilities based on the status quo

Figure 3: Recommended upgrades for primary health facilities to address backlogs