

## IMPLEMENTING SOCIALLY RESPONSIVE FORESTRY EXTENSION PROGRAMMES: TOWARDS A MODEL

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Following a literature review which pays particular attention to southern African references, a socially responsive forestry extension model is outlined. It is contended that the initial establishment of sustainable extension programmes rest upon the nature of the relations between the central-level office, the extensionist and the community. Whilst acting as central-level office representatives, extensionists also form the liaising link with the community. Their relations with the community form the essence of successfully implementing any community directed forestry policy. Circular processes of feedback evolving over time to more differentiated levels of understanding amongst all the role players are highlighted.

### INTRODUCTION

Ignorance, poverty and overpopulation have been described as some of the most important psychological, social and economic causes of environmental mismanagement. In searching for solutions it has been argued that education (formal or informal) is a key in developing optimal human-environment relations. Only through education is understanding broadened and the development of skills encouraged. Skills would serve as the basis for enhancing the quality of life in disadvantaged communities and for implementing sustainable environmental management programmes (Van Staden, 1992).

The urgency of skills training and education to prevent further land degradation is underlined by expectations that the South African population will double from almost 36 million in 1990 to 72 million by the year 2020 (Lombard, 1990). In 1994 it was estimated that approximately 17 million South Africans live below the poverty line and that 11 million live in underdeveloped rural areas (ANC, 1994). Most of these rural households still collect firewood daily. The backlog in electricity supply is likely to take at least another 20 years to overcome, but even so, the demand for wood and wood products is not likely to decrease significantly (*Farmer's Weekly*, 1994). Apart from placing a severe strain on the country's human resources, the collection of firewood also contributes to increased deforestation and desertification of the landscape. The depletion of forests is compounded by the clearing of land for agriculture and expanding settlements.

The increasing scarcity of arable land also causes subsistence farmers to utilise marginal land

unsuitable for agricultural purposes. When crops no longer grow, livestock tend to replace cultivation. In poor rural economies overgrazing has already caused the deterioration of 12 million hectares of semi-arid shrub land, and warnings are sounded that more than half of South Africa's total land surface is under threat of desertification (Council for Scientific and Industrial Research, 1992). Hanks (1982) argues that deforestation, overgrazing and soil erosion are important indicators of overloaded environmental resources which will inevitably lead to a reduced quality of life unless management programmes are instituted.

Consequently it can be argued that the first step in addressing the exploitation of natural resources and the destruction of ecosystems is to develop and implement education programmes which inform as well as afford economically viable skills in disadvantaged communities (Van Staden, 1992).

### ENVIRONMENTAL EDUCATION AND MANAGEMENT

Environmental education has been defined as the enhancement of people's awareness of environmental problems and of behavioural solutions that may address these problems. The guiding rationale behind environmental education programmes is that information will lead to greater environmental awareness, skills and motivation, causing changes in attitudes and ultimately in behaviour patterns resulting in the solution of environmental problems (Bell *et al.*, 1996; McAndrew, 1995; Tyson, 1994).

Various strategies and techniques are used to effect environmental education processes. In some cases it may be expedient to make use of mass media to

inform large groups of people, or formal courses may be offered in schools or universities. Environmental workshops, direct interpersonal communication strategies, displays on bulletin boards and eco-tourism are also employed to disseminate information (Bell *et al.*, 1996; Gifford, 1987; Tyson, 1994).

Whatever form the educational process may take, it generally has an applied focus (e.g. littering, nuclear waste or forest depletion) with the ultimate aim of enhancing the sustainability of ecosystems and consequently also the quality of human life. Along with an applied focus, education programmes tend to be aimed at well defined target populations in order to enhance their effectiveness. In this regard, a growing body of literature on the general characteristics of environmentally concerned/unconcerned citizens in South Africa tends to typify least concerned groups as having some of the following characteristics: being young, black, rural, people with low levels of education and income as well as people displaying an external locus of control (Corder, 1991; Grieve & Van Staden, 1985; Reynolds, 1992; Van Aswegen, 1992; Viljoen *et al.*, 1987; Willers, 1996).

While it appears that exposure to environmental education through the mass media increases public awareness and heighten concern (Holt-Biddle, 1992; MRA, 1991; Van Aswegen, 1992; Willers, 1996), it has also been fairly well established that education alone is not very successful in changing actual behaviour. Long term environmental management programmes that involve planned intervention strategies and programmes making use of reinforcement and active involvement of participants tend to yield more effective results. These programmes are however expensive, difficult to administer and time consuming and require sustained medium to long term input (Bell *et al.*, 1996; Holahan, 1982; McAndrew, 1995). In disadvantaged communities it is also likely that a narrow focus on environmental education *per se* will fail. Instead, a holistic approach where environmental education is incorporated in a more extended process of educational development will probably be of more lasting value, especially when perceived to be linked to a real prospect of an enhanced or at least sustained quality of life (Van Staden, 1992).

Given their cost, long term requirements and the complex combination of psychological, social, cultural and economic factors involved, it is

important that good care should be taken in the development and implementation of environmental management programmes. One context in which concerted efforts are made to develop sustainable community focussed environmental management programmes is the formal involvement of forestry extension officers with disadvantaged communities.

#### FORESTRY EXTENSION AND COMMUNITY DEVELOPMENT

Whereas deforestation and desertification continue unabated in South Africa, the country's forestry industry has been described as one which is still in its infancy with enormous economic potential (De Villiers, 1994). While approximately 1,38 million hectares of the country are presently under controlled forest plantations, it is estimated that a further one million hectares are still suitable for the establishment of commercial forests. The expansion of commercial forests would provide more job opportunities and foreign valuta. But along with this vision of economic development the South African forestry industry also has an educational responsibility to fulfill.

This responsibility is primarily addressed by establishing social- and agroforestry projects in traditionally disadvantaged communities. Though these two forms of forestry extension practice are often used as synonyms, the general trend has been to progress from social forestry to agroforestry activities (*Parks & Grounds*, 1994). Social forestry focuses on eliciting the socio-organisational mechanisms needed to enable a community to grow trees for multiple desired uses. As the implementation of forestry programmes progresses, increased attention is likely to be paid to agroforestry goals. These involve the forging of optimal relations between farming systems and forest plantations (Bandhu & Garg, 1986; Hall & Green, 1989; Poffenberger, 1990).

Social scientific literature on extensionist programmes are limited. Authors tend to focus on the commercial aspects of energy use rather than on extensionist-community relations (Agarwal, 1986; Leach & Mearns, 1988; Munslow *et al.*, 1988). Nevertheless, extension goals can only be reached through the development and maintenance of amenable extensionist-community relations. Extension workers usually initiate contact with the community, establish a working relationship with community leaders and groups. Together they determine which community needs and problems can

be solved through forestry-related programmes given the characteristics of the community such as available skills, and physical and financial resources. At present, forestry extensionists tend to favour participatory approaches to facilitate the process of need identification and problem solving (Agarwal, 1986; Bandu & Garg, 1986; Leach & Mearns, 1988; Munslow *et al.*, 1988; Van Staden, 1996).

The educating programmes which extensionists undertake tend to lead people through a series of stages in changing their ideas and practices. According to Ffolliott *et al.* (1995) the process of adopting and integrating new practices within the community moves from a level of initial awareness, to interest, to understanding, to a trial period of trying out the proposed change, before the threshold of acceptance is crossed and the new practice is implemented. Education methods most often employed include information campaigns and tours, field demonstrations and using volunteer trainees.

The infrastructure required to organise forestry extension services depends firstly on a central-level policy-formulating and coordinating office. Responsibilities include the provision of ideological leadership, distributing financial resources, providing legal assistance and the selection, training and placement of field workers. Secondly, according to Ffolliott *et al.* (1995), extension workers are responsible for creating a field-level organisation which would include:

- \* Gathering and collating data about land use patterns and problems.
- \* Preparing and implementing strategies for improving land and resource use patterns.
- \* Ensuring that financial allocations are effectively utilised.
- \* Involving local leaders, farmers and land managers in improved forestry practices.
- \* Establishing local nurseries.
- \* Providing assistance in the marketing of forest-based products.

The execution of these goals are demanding and require sophisticated vocational and technical skills. Nevertheless, many countries do not have formal training programmes in forestry extension. Furthermore, because of financial limitations extensionists are usually involved in extension programmes as well as a range of other forestry duties (Blair & Olpadwala, 1988).

The South African government's *White Paper on Reconstruction and Development* (1994) called for the establishment of a socially responsive society which participates effectively on all levels of decision-making processes, a society which is also environmentally aware and responsible. In contributing to the translation of this vision into reality the South African Chief Directorate of Forestry gave its extension officers a simple and straightforward brief, namely to establish sustainable community forestry programmes. Within this fairly open ended directive, extension officers had to initiate and establish socially responsive forestry programmes in which the tree/wood related needs of disadvantaged communities are being addressed. In 1996, the views and opinions of state department forestry extensionists on the effectiveness of their community programmes were gauged (Van Staden, 1996). It was concluded that, taking into account variations in demographic compositions, different approaches are needed when dealing with disadvantaged urban versus rural communities, and that a holistic perspective on community environmental management is slowly unfolding. This perspective was reported to have primarily resulted from the extensionists' trial and error experiences, which increasingly lead to the adoption of extension programmes that require interactive strategies in determining and implementing demarcational-, organisational-, relational- and educational goals.

#### TOWARDS A SOCIALLY RESPONSIVE FORESTRY EXTENSION MODEL

Resulting from the literature review and paying specific attention to southern African experiences, a fairly coherent socially responsive forestry extension model is emerging. It depicts the dynamics of establishing extension programmes which consist of circular processes evolving over time to higher levels of understanding and cooperation amongst all the role players involved. The value of integrating and maintaining so-called 'feedback loops' when implementing extension programmes is emphasised by Blair & Olpadwala (1988) who ascribe part of the success of social forestry programmes founded in Gujarat, India to the willingness of foresters to learn from their failures, thereby continuously redesigning and refocussing their strategies until their programmes become highly successful.

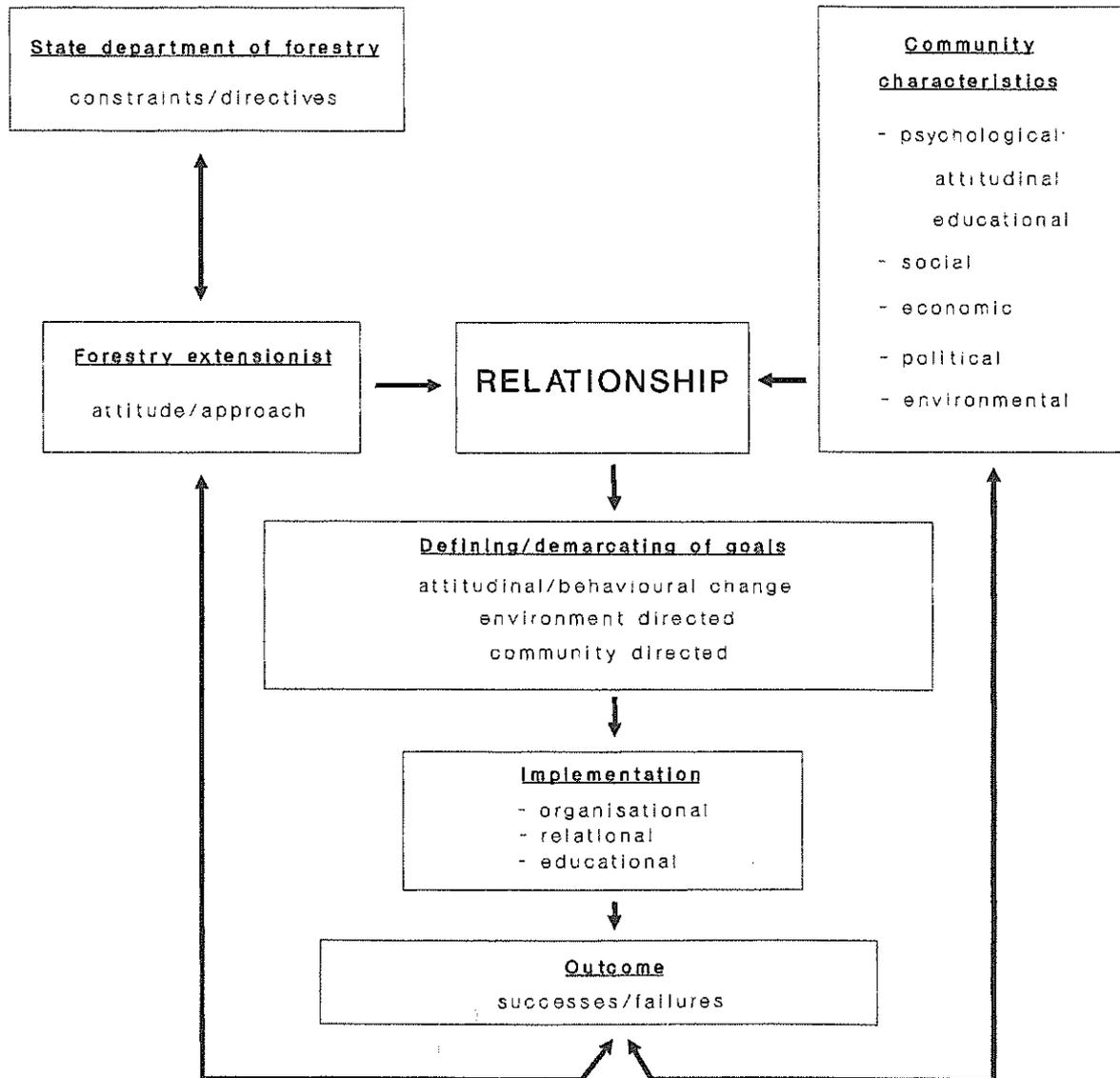
The model presented in Diagram 1 expresses the implementation of an extension approach which is directed and guided by the nature of the relationships

between the central-level office (state department), the extensionist and the community. The extensionist forms the liaising link between the central-level office and the community. Whilst acting as state department officials, extensionists' relations with the community are dynamic and form the essence of successfully directed forestry policy.

### Relations between central-level office and extensionists

Ffolliott *et al.* (1995) argue that the relations between central-level office and field-workers are critical to the whole forestry extension organisation. The assigned responsibilities should be mutually acceptable with sustained support and feedback

Figure 1: Outline of a socially responsive forestry extension process



provided at both ends. Blair and Olpadwala (1988) comment on the considerable time it takes for most extension programmes to become successful - up to 10 years - and the counterproductive influence of administrations who tend to set unrealistic quantitative short term targets. Whereas extension programmes are generally mounted in response to a

pre-defined need, Tyson's (1994) survey of a number of African state departments handling environmental portfolios found that they still used prescriptive, distant and authoritarian approaches. Tyson concluded that extensionist goals are likely to be more successful when both state department administrators and field workers adopt participatory

methods for developing departmental policy as well as for defining community needs.

### Extensionist-community relations

The importance of becoming involved with the community as a whole and not only attempting to address one aspect of community life, is emphasised in the literature (Bhandu & Garg, 1986; Ffolliott *et al.*, 1995; Hall & Green, 1989; Hisham *et al.*, 1991; Leach & Mearns, 1988; Munslow *et al.*, 1988; Poffenberger, 1990; Underwood, 1993). Van Staden (1996) found that nearly 20% of the goals formulated by South African extensionists in his study dealt with human development issues rather than environmental issues. These involved empowerment goals such as the strengthening of self-esteem, a sense of responsibility, self-reliance, productivity and problem solving behaviour. Whereas a number of community characteristics (for example: apathy, illiteracy, lack of accountability) were regarded as constraining the implementation of extensionist goals, the acknowledgement of these constraints and taking steps to actively address them contributed significantly to the successful implementation of forestry extension programmes.

The conclusion that an environmentally literate community can only develop through having their basic community needs addressed is expressly recognised by a number of authors. Irwin (1991) and O'Donoghue (1993) argue that environmental education is in the first place about political processes enabling people to participate in decision-making about environmental issues. To this view, Van Staden (1992) adds that freedom of speech and an educational approach through which applied skills are attained, form the backbone of sustainable environmental management programmes. Tyson (1994) advocates the use of an ecosystemic approach whereby a community addresses both its economic and ecological concerns through inclusive participative strategies.

Community characteristics as well as the extensionist's attitude and approach toward the community are crucial in establishing a functional relationship. Along with being sensitive to the cultural traditions of the community in which extensionists operate, they also have to adopt the necessary respect and openness as outsiders who are entering established systems. Ffolliott *et al.* (1995) and Munslow *et al.* (1988) are of the opinion that extensionists need vocational and professional

training to help them in dealing with the barrier of being outsiders entering communities. In this regard Van Staden (1996) contends that formalised selection and training courses for newcomers (and follow-up programmes for those who are already employed in extensionist programmes) are likely to ease and shorten the process of developing the necessary skills to implement successful forestry extension programmes.

It falls to reason that the organisational strategies used by extensionists to execute and maintain forestry programmes also play a role in the development of functional extensionist-community relations. The group of South African extensionists in Van Staden's (1996) study found traditional 'top-down' strategies unsuccessful. They maintained that characteristics of communities such as political rivalry, existing structures and the cooperation of generally accepted leaders had to be considered when becoming involved with a community. Hisham *et al.* (1991) conclude that while no general rule exists, participative practices tend to be most successful in ensuring active community involvement and motivation. Through participative practices the community is enabled to harness its own systems, structures and expertise to address relevant needs or problems. Tyson (1994) supports this view by emphasising the importance of discarding outdated paternalistic development strategies in favour of participatory methods.

### CONCLUSION

One of the roads towards community empowerment starts with implementing sustainable community forestry programmes. Forestry extension programmes can not be regarded as an end, but rather as a means through which the quality of life within a community can be strengthened. A shift in focus from an elementalistic perspective (namely, implementing forestry programmes to enhance environmental conservation and sustained environmental management practices) towards a holistic approach where the emphasis is placed on community development as a whole, is evident (Ffolliott *et al.*, 1995; Hisham *et al.*, 1991; Irwin, 1991; Tyson, 1994; Van Staden, 1996). A paradigm transformation is taking place where the ultimate goal is not only to empower through sustainable environmental management, but also to develop sustainable environmental management programmes through empowerment.

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