

**ENVIRONMENTAL COMMUNICATION IN *THE STAR*: AN  
EXPLORATORY BIOSOCIAL STUDY**

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## **ABSTRACT**

### **Environmental communication in *The Star*: an exploratory biosocial study**

The aim of this study is to investigate the biosocial linkages between South African society in a developing country and the biophysical environment by means of environmental communication i.e. the environmental themes presented in a South African newspaper *The Star*.

The investigation takes the form of a review of research published in the field of environmental communication, a quantitative analysis of environmental communication published in *The Star* over a period of 12 months, and an assessment of biosocial connections between man and biophysical environment.

The major findings of this study are that amongst all environmental themes dealt with in the newspaper, resource use receives considerable coverage, which indicates significant functional biosocial linkages between South African society and the biophysical environment. Another finding is that as a mass medium *The Star* contributes to more effective social interaction with the biophysical environment.

Key words: Environmental communication, mass medium, biosocial approach, resource use, developing country.

## OPSOMMING

### **Omgewingskommunikasie in *The Star*: 'n ondersoekende biososiale studie**

Die doel van hierdie studie is om die biososiale skakels tussen die Suid-Afrikaanse samelewing in ontwikkelende verband en hul biofisiese omgewing te ondersoek deur middel van omgewingskommunikasie, dit wil sê omgewingstemas soos voorgestel deur 'n Suid-Afrikaanse koerant, *The Star*.

Die ondersoek behels 'n oorsig van bestaande navorsing in omgewingskommunikasie, 'n kwantitatiewe ontleding van omgewingsberiggewing in *The Star* oor 'n tydperk van twaalf maande, en 'n waardebeoordeling van die biososiale skakels tussen die mens en die biofisiese omgewing.

Die belangrikste bevindinge is dat die omgewingstema van hulpbron gebruik beduidende dekking in die koerant verkry, wat dui op betekenisvolle en funksionele biososiale skakels tussen die Suid-Afrikaanse gemeenskap en sy biofisiese omgewing. 'n Verdere bevinding is dat *The Star* bydra tot die bevordering van doeltreffende sosiale interaksie met die biofisiese omgewing.

Sleuteltermes: omgewingskommunikasie, massamedium, biososiale benadering, hulpbron gebruik, ontwikkelende land.

## **FOREWORD**

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*Euna Easton*

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## CHAPTER 1

### INTRODUCTION AND OBJECTIVES

#### 1.1 Introduction

Due to environmental degradation the environment has been called a contemporary social crisis (Beck, 1992, as quoted by Myerson & Rydin, 1997: 377), and the use of the term "social" functions here to introduce the man-environment connection, or the biosocial perspective, of this study. McMichael (1994, as quoted by Fiedeldey-Van Dijk *et al.*, 1998: 4) ascribes the contemporary view of the earth in crisis to the fact that people are destroying and polluting their way towards a global catastrophe. Luhmann (1989, as quoted by Peterson, 1998: 371 – 372), points out that the degradation of the environment has resulted in a dissonant relationship between mankind and the environment - and vice versa. Environmental problems relate to human behavioural questions such as air pollution, water pollution, waste production, depletion of biodiversity, food supply shortages, and natural resource misuse (Miller, 1998: 20). Initiatives to address environmental problems move the world towards the goal of sustainability and this may lead to a desired state of beneficial man-environment interaction. Sustainability may be categorised within a prevalent approach, the answer culture model, which interprets reality as a set of problems to be solved (Myerson & Rydin, 1997: 377).

### 1.1.1 Definitions

A number of concepts need to be defined.

- Environment

In this study "environment" is intentionally limited to the biophysical environment. The biophysical environment is that part of the environment, which did not originate with, and is not dependent on human activities e.g. biological, physical and chemical objects and processes (Department of Environment Affairs, 1992: 3).

- Communication

This is a process of exchanging mutually understood symbols, resulting in the stimulation of meaning in another (Steinfatt, 1977, as quoted by Infante *et al.*, 1990: 197).

- Environmental communication

The definition applied in this study is that of Peterson. According to Peterson (1998: 371 - 372) environmental communication is the language used to structure the relationship between society and the biophysical environment. The meaning is that people use language to conceptualize and discuss the natural systems on which they rely. Environmental communication expresses the interaction between society and the biophysical environment. Here is an example: *May I suggest that our newspaper companies start planting trees every month to replace those they use in making the paper they print on?* (Du Preez, 2000). According to Luhmann, 1989 (as quoted by Peterson, 1998: 371 – 372) environmental

communication occurs when society is no longer able to ignore environmental disturbances, in other words when a state of dissonance reigns between society and its biophysical environment. Luhmann's term "ecological" communication lacks the human-centred meaning of environmental communication, where "environment" refers to the surroundings within which humans live (NEMA, 1998: 8).

- Mass medium and related definitions

All large-scale media of print, radio, film and electronic networks (e.g. the Internet), that disseminate communication to large audiences are termed mass or public media (Williams, 1989: 35 – 36). The communicator is generally an institution (e.g. a newspaper) that acts collectively to vastly multiply messages. The medium is the technology used to convey news and information, to interpret and comment on news to assist people to make sense of their world, and to warn and entertain people. News represents actuality occurrences, information deals with the public's need to be informed, warnings are aimed at protecting people, and entertainment addresses people's need for pleasure.

- Content analysis

Content analysis methods can be employed to categorise media content into quantitative data, or alternatively semiological (relating to signage and its application) data to uncover the communicator's presumed motives or communication rules underlying the message (Fourie, 1989: 35). Severin and Tankard (1988: 19 – 20) describe content analysis as an objective, systematic and quantitative method to analyze message content.

- Images and symbols

Symbols are representations of abstract or concrete entities in the form of words, gestures, diagrams or emblems. Peterson (1998: 379) identifies symbols as a powerful force in shaping human attitudes and actions towards the natural world. People impose order and meaning on human experiences by using symbols to express their thoughts and actions (Wood, 1992: 5). This capacity to symbolize concrete and abstract dimensions of existence – ideas, experiences, hopes, fears, passions, doubts, dreams and even themselves – is unique to humans. It enables them to persuade themselves to take new courses of action, make sense of their past and plan for their future.

- Biosocial

This concept relates to linkages between the social system and the environmental system (Bonnicksen and Lee, 1982, as quoted by Backes, 1995: 147).

- Environmental agenda of *The Star*

Environmental concerns which rank high enough in importance among *The Star's* general news priorities to warrant repeated media coverage. See section 2.6 for a statement of *The Star's* environmental agenda.

### 1.1.2 Environmental movement

Environmental concerns which benefit from man's bent for problem solving are at the root of the environmental movement, which today is a collective term for a variety of environmental organisations operating as moderators of human demands on the biophysical environment.

Environmentalism started in the USA in the 1960s (Miller, 1998: 43) and in its early years up to the early 1980s it was a radical resistance movement (e.g. Greenpeace) on the outer edge of society. This has since changed, according to Peterson (1998: 371). He quotes Senecah and Netzley (1996), who describe the impact of the environmental movement on society as considerable and "second only to the civil rights movement" in its ability to significantly change people's awareness, attitudes, lifestyles and public policies. As "the environment has become important" (Peterson, 1998: 371), one result is that environmentalism gives rise to environmental communication.

Today the environmental movement attracts both popular and academic identification within society. Recent examples of environmentalism as practised by some environmental activists include the protest marches, concerts, teach-ins and people's tribunals staged by various groups, including Friends of the Earth, at World Trade Organization (WTO) meetings (Greenhouse, 1999: 19).

Official recognition of the seriousness of the concerns occupying the environmental movement occurred in 1992 when the United Nations Conference on Environment and Development (UNCED) took place in Rio de Janeiro (DEAT, 1998). The Rio conference had broad support from

more than 178 governments, which adopted its decisions, and it resulted in a number of influential publications. Agenda 21 is a blueprint for the 21<sup>st</sup> century for action in every area in which human activity impacts on the environment. Other tangible results of the Rio conference are the Rio Declaration on Environment and Development, the Convention on Biological Diversity, and the UN Framework Convention on Climate Change.

The impact of the Rio conference 1992 and of environmentalism has continued with the World Summit on Sustainable Development in Johannesburg in August/September 2002 (Johannesburg Summit). It focused on a global issue - the needs of the developing world - and reflected a change in emphasis from environmental issues *per se* to sustainable social and economic development, in a context of environmental stewardship (Anon, 2002). More than ever, people are the pivot in environmental concerns.

Social organisation (which has to be imagined through communication before it can happen) is vital for environmental solutions, as Peterson (1998: 372) points out. The environmental movement constitutes a social system, which interacts with other social systems, such as the media (Muir & Veenendall, 1996, as quoted by Peterson, 1998: 379). For example, more people taking up the environmental cause may have contributed to mass media exposure of environmental issues worldwide. The activist group, Greenpeace, was transformed from an unknown organisation in the 1970s (Day, 1989: 44) to an environmental group with 2.8 million supporters worldwide in 2003 (Greenpeace, 2003). Its activism involves it in controversy, which enhances its appeal to the news media. Without the benefit of communication, such a groundswell of public support would

have been unlikely, and the environmental movement would possibly have remained obscure, for the media contributed to furthering people's exposure to the movement. Media images (powerful pictures) even more so than words, influence people's perceptions of the environment (Muir & Veendall, 1996, as quoted by Peterson, 1998: 379).

Communication is a process of exchanging mutually understood symbols, resulting in the stimulation of meaning in another (Steinfatt, 1977, as quoted by Infante *et al.*, 1990: 197). Communication is thus a cultural phenomenon, a process of information exchange by means of a set of symbols peculiar to a culture. Within the context of environmentalism the emphasis is on environmental communication (see section 1.1.1). It differs from other forms of communication in tenuously linking man's capacity to use symbols, and the biophysical capacities of the earth (Peterson, 1998: 384). The use of symbols is a social process, unique to man (Wood, 1992: 5). The link is tenuous because the social system depends on symbols, and the biophysical system is material (Peterson, 1998: 372). In this study the concept "environment" is limited to the biophysical environment (so excluding man-made aspects) in order to isolate social factors from biophysical factors, apart from the biosocial connections through communication investigated by the researcher.

This biosocial interrelationship was introduced with the publication of the book *Silent Spring* by USA biologist Rachel Carson in 1962 (Miller, 1998: 43), an event that had a considerable influence on both environmentalism and on environmental communication. The book, popularly written, documents the pollution damage to the environment caused by pesticides in the United States of America. It was the first publication that made people sit up and take notice of threats to the environment.

The resulting public concern ensured that the environmental movement was well established in the USA during the 1970s, where a number of environmental groups were operating in different niche areas. For the first time the biophysical environment had a voice, or more precisely, a chorus of voices. Among these groups was a Washington-based anti-pollution group, Environmental Action, that became a co-initiator of the first Earth Day celebration in 1970 (Day, 1989: 216). Greenpeace started as an obscure organisation from Canada, achieved media prominence by conflicting with Russian whalers in 1975, and later achieved a high global profile (Day, 1989: 44), if only for a time.

The political arena also fell under the influence of growing environmentalism. The environment was interpreted as a series of problems crying out for resolution. Governments responded to the need to legislate to protect the environment and so became participants in environmental communication. In the United States of America this occurred in 1969 when the National Environmental Policy Act (NEPA) was promulgated. Some developing countries were relative latecomers. South Africa responded timeously to pressures on the environment by promulgating the Water Act 54 of 1956, the Atmospheric Pollution Prevention Act no. 45 in 1965, the South African Environmental Conservation Act in 1989, and the National Environmental Management Act in 1998. Exposure of parts of the developing world to the media (including environmental communication) occurred later than in the case of the developed world, partly due to economic constraints such as cash strapped media institutions and inadequate communication infrastructure (Mukasa, 1998: 10).

### 1.1.3 Environmental communication

These proceedings – legislation, environmental activism, conferences and publications - are social responses to environmental problems and can not happen without environmental communication. The term environmental communication is applied consistently throughout this study, although the literature search investigated other terms such as environmental reporting, ecological communication, green reporting, “ecospeak”, environmental rhetoric or discourse, and environmental accounting or disclosure, as well as media. Environmental communication has become prevalent in the past decade and more, as indicated by a report on institutional investor needs for corporate environmental information (GEMI, 1992). According to the report the preceding two years had seen many companies responding to increasing public concern about the biophysical environment by publishing documents on environmental issues. A growing economic imperative to communicate with corporate stakeholders about environmental performance, is behind these efforts. Backes (1995: 147) refers to the growing emphasis in the mass media about such issues as global warming, the ozone layer, tropical deforestation, acid rain and the inconsistent management of national parks and forests. There are economic consequences to many of these environmental problems.

Couch (1993: 24) stresses the importance of environmental communication. His company (Anheuser-Busch) has the firm belief that environmental communication is driving the company's successes and helping to turn its vision into reality. He quotes Sir Isaac Newton:

"Communication is not reaction, it is an essential part of the action". This allocates a central role to communication in addressing environmental problems.

Myerson and Rydin (1997: 377) study the impact on society, or the social change, wrought by environmental communication. Their two models, or approaches to environmental communication, are relevant in the light of the biosocial perspective of this study.

The first (and prevalent) approach interprets the environment in terms of problems demanding solutions, which locates it within the answer culture model (Myerson & Rydin, 1997: 377). Typical in this category is a *Saturday Star* report (Delmar, 1999: 6) quoting an official British research document that Southern Africa is among those areas facing growing water scarcity unless global warming is reversed. Uncontrollable global warming is expected to set in motion a further chain of problematic events such as threats to future crop yields. Fiedeldey-Van Dijk *et al.* (1998: 2) also detect a growing awareness of the "problematic nature" of environmental issues in official South African documents on the environment.

A second approach to environmental communication is the culture of argument (Myerson & Rydin, 1997: 378), which they identify as a new paradigm. There is a movement away from the previous culture of problem-solution to a democracy of many empowered voices in argumentative resolution. What transpires is a series of discussions with no single central concept, no simple opposition in debate, and no preset selection of ideologies. Here discussion is more than a means to an end - the goal is discussion, although it does not preclude resolution. While the

debate continues, the environment (i.e. the biophysical system) “waits” (Myerson & Rydin, 1997: 376).

The culture of argument is not confined to environmental communication, but operates in a broader social context, for example ethics. Myerson and Rydin (1997: 378) ponder the question of how this new culture of argument will suit environmental discourse. They speculate on new alliances and coalitions forming, which could challenge existing configurations and affect political action and change. Overlap between the two models is likely, as there may be a gradual transition from problem culture to culture of argument, or alternatively both approaches to environmental communication may continue to co-exist.

Peterson (1998: 373 – 374) also detects shifting alliances within the environmental debate. He quotes Killingsworth and Palmer (1992) who explore a rhetorical connection between environmental activism and science. In this context they describe diverse “discourse communities” active in the environmental movement: the mass media, radical environmental groups, government and even writers of fiction.

An interpretation of Myerson and Rydin's (1997: 377 – 378) two models of environmental communication allows for every social response to the environment to slot into a continuum of social behaviour. At the one end of the continuum is a problem statement and search for solutions, and at the other end no action apart from exchanging symbols holding environmental meaning. This interpretation will be applied in this study.

## **1.2 Environmental communication in South Africa**

The discussion up to now has dealt with environmental communication in general in the developed (Western) world as represented mainly by the United States of America. However South African society displays a unique combination of developed and developing world elements, which complicates all communication, including environmental communication. Environmentalism is alive and well in South Africa in the shape of a number of active environmental groups such as the Wildlife and Environment Society of Southern Africa, Earthlife Africa and the World Wide Fund for Nature South Africa. These groups have specific agendas, which vary between raising people's environmental awareness (culture of argument) and taking action when threats occur e.g. getting a court order to prevent pollution (answer culture).

### **1.2.1 Democracy**

The democracy established in 1994 in South Africa when the previous political dispensation came to an end through a general election, has been characterized by a new culture of rights among a previously marginalized majority. This includes environmental rights enshrined in the Constitution of the Republic of South Africa, Act 108 of 1996, including the right of every South African to an environment that is not harmful to their health or well-being (Andrews, 1999: 3).

Democratization of the environment is supported by the National Environmental Management Act of 1998 (NEMA). The principles of

sustainable development are espoused and NEMA requires that community well being and empowerment be promoted by means of environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means. At the core of every one of these activities is the process of communication.

Environmental communication is further supported by the Access to Information Act No. 2 of 2000. One of the objects of this act is to give effect to the constitutional right of access to any information that is held by the State and by another person and that is required for the exercise or protection of any rights. In terms of everyone's right to an environment that is not harmful to their health or well-being such information may relate to environmental laws, to the state of the biophysical environment and to actual and future threats to the environment.

Democracy has given rise to a strong drive to encourage public participation in developments potentially affecting people's rights to a non-harmful biophysical environment. South African environmental law demands public participation (e.g. NEMA, environmental impact assessments under the Environment Conservation Act (ECA) of 1989, and the Minerals Act of 1991). Public participation answers to the description of the culture of argument: cognizance is taken of many different voices and not all problems brought to the discussion are solved. Some regard public participation as a synonym for communication, such as Jackelman and Britton (1995: 9). They define public participation as both two-way communication to facilitate better decision-making, and as an iterative continuing communication process between an informed public and environmental planners.

Environmental law is an output of government in the ongoing environmental discourse and is typified as problem solving. On the other hand the South African mass media may have an important role as promoters of environmental debate (culture of argument). In the past two decades there has been a move away from earlier theories depicting mass media as a powerful force of change "capturing" and influencing passive audiences. Contemporary theories acknowledge the active role of the audience in the communication process. Like other communicators, the media face the challenge posed by the heterogeneous nature of the South African people. This includes the problem that much remains to be done to improve environmental literacy among South Africans (Ballantyne & Tooth-Aston, 1990: 99).

Levels of education among South Africans vary widely: from those who are generally illiterate, those with a primary school education, some secondary school education, to matriculants and at the top end, graduates (*The Star* readers' profile in section 2.3.1). Many people depend on the media for their environmental information instead of taking part in formal programmes of environmental education (Lipsey, 1977, as quoted by Fiedeldey-Van Dijk *et al.*, 1998: 8). This indicates the potentially influential role of mass media in increasing people's environmental awareness.

Other factors may also further the media role in positively influencing people's environmental literacy. General illiteracy is decreasing in South Africa – 21% in 1985, 16% in 1997 (Dixon & Pretorius, 2001: 12) and in 1999 lowest in Gauteng 14.5%, highest in Northern Province 30.8% (Statistics SA, 2002). The fact that South Africa boasts five TV channels and numerous radio stations, also broadcasting in the nine black languages, means that

many South Africans theoretically have access to news even if they are illiterate. Groenewald (1992: 64) expresses the opinion that dire socio-economic circumstances ensure that it is the people who appear to most need the mass media who have least access to them, so there may be a need for non-mass media with access to the rural poor.

Another beneficial factor is that, in contrast to many other African countries where the media are government owned, not geared towards audience needs, and generally short of money, the South African print media are corporately owned, consequently not without funds and independent of the government (Mukasa, 1998: 11). This means government performance, also on environmental matters, may be assessed openly, and people appear to receive information from diverse sources.

However Willers, 1996, (as quoted by Fiedeldey-Van Dijk *et al.*, 1998: 8), questions the extent to which black readers' attitudes may be influenced. He argues that environmental news is scarce in local newspapers catering for mainly black readers. Support comes from Mukasa (1998: 10). According to him there is some doubt that the African print and electronic media are capable of interpreting environmental issues for the public. His argument of "institutional mediocrity" and journalists untrained in dealing with environmental topics, may be weakened by recent attempts at informing environmental journalists, such as the publication of a media handbook on the Southern African environment (SADC/IUCN/SARDC, 1998).

### 1.2.2 Developmental communication

As a developing country South Africa also has proponents of developmental communication, which is defined by Groenewald (1992: 59) as planned social change to improve people's lives. Many journalists in developing countries advocate journalism independent of state controls, but sometimes they experience great difficulty in practising it (Hachten, 1992: 34 – 38). The developmental communication concept emerged in the last few decades of the 20<sup>th</sup> century in developing nations after they gained political independence from their colonizers. This concept essentially rejects the Western model of the press, which entails media operating outside state controls, backing diversity and supporting a free flow of information. Central to the concept is a didactic or ideological role of guiding people in building a new social order, supported mainly by politicians and government officials.

According to the developmental communication concept all communication media must be harnessed by the government towards the all-important goal of nation-building, which consists of promoting economic development, constructing a political consciousness (and a distinct South African image), and combating social ills like poverty and illiteracy. Problem solving is the objective and this corresponds to the answer culture model (Myerson & Rydin, 1997: 377). The developmental communication concept is a variation of the authoritarian concept (Hachten, 1992) – information must be used to promote national goals, the media should not challenge authority but support the government. The implied approach is that national issues override individual rights of

expression. The question arises to what extent the South African government is able to make use of independent media to promote national goals? The researcher's opinion is that this probably occurs to a lesser extent than the government would like to, but nevertheless not to an insignificant extent, as issues high on the government's list of priorities gain coverage in the media by virtue of its potential impact on society. Environmental issues do feature on the South African developmental communication agenda.

Within the unique set of social circumstances in South Africa, including its racial, cultural and socio-economic diversity, a mixture of developed and developing features, as well as remnants of past political and social discrimination, it can be expected that environmental communication here will be influenced by these circumstances.

### 1.3 Environmental communication research

Theory is the starting point in every scientific investigation, and also guides the investigation process (Jansen & Steinberg, 1991: 9). Existing theory affects the way every researcher deals with the relationship between the phenomenon he investigates and his way of looking at the phenomenon (Fiedeldey-Van Dijk *et al.*, 1998: 2). According to the latter, the pervasive influence of theory occurs at all data steps during a study, from conceptualization, through data collection, data analysis, data interpretation, to final reporting.

Two aspects of mass communication theory relevant to this study are the functional approach and agenda setting. Infante *et al.* (1990: 347 – 349) list five functions of mass media to society i.e. surveillance (information and news provision), correlation (selection, interpretation and criticism of news), cultural transmission (imparts a society's rules, norms and values, often through social role models), entertainment and mobilization (rallies the nation in crisis). Agenda setting is the media's ability to tell people which social issues are important and require their attention (Infante *et al.*, 1990: 349). An eventual outcome of the agenda setting process may be that people respond to media emphasis of particular issues by growing awareness and/or social action, although this is beyond the scope of this study. *The Star's* environmental agenda will form part of the empirical investigation of environmental news as this agenda is taken to refer to environmental concerns repeatedly represented by the newspaper. Such repeated representation is taken by the researcher to indicate that the newspaper selected these specific issues in preference to other (also

general) news because it judged these environmental concerns to be more newsworthy (important) than other issues, which were not printed.

In 2001 a review by the researcher of environmental communication research found that one aspect of environmental communication i.e. corporate environmental reporting, was well covered. A total of 9 South African dissertations and theses both current and completed dealt with corporate environmental reporting, as did 22 other studies. These studies are not reviewed here, as corporate environmental reporting is deemed to fall outside the scope of this study, which focuses on media environmental reporting. Apart from the work on corporate environmental reporting a total of only five studies (all published abroad) were found that dealt with environmental communication and these are listed in the following paragraphs.

*Environmental communication: tales of life on earth* (Peterson, 1998: 371 – 386) deals with the association between environmentalism and environmental communication. This work by Peterson as well as the studies reviewed by him<sup>1</sup>, deal with the environmental movement which is relevant to this study as it is linked to the development of environmental communication (see sections 1.1.2 and 1.1.3). In this context he reviews a number of books of which three are worth naming here. Peterson refers to *Ecospeak: rhetoric and environmental politics in America* (Killingsworth & Palmer, 1992, as quoted by Peterson) as a pioneer of the genre, which explores communication practices related to the environmental movement. Two subject-related works appeared in 1996, namely *Earthtalk: communication empowerment for environmental action* (edited by Muir and Veenendall, 1996, and quoted by Peterson) and

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<sup>1</sup> Peterson refers to a number of publications, which were not accessed by the researcher.

*Green culture: rhetorical analyses of environmental discourse* (edited by Herndl and Brown, 1996, and quoted by Peterson). Peterson quotes from Luhmann's *Ecological communication* (1989) which is also referred to by other writers.

A second research piece, *The future of environmental rhetoric* (Myerson & Rydin, 1997: 376 – 379) explains two approaches to environmental communication (see section 1.1.3), which are applied in this study to categorise concepts. A third study, *Difficult questions about environmental communication* (Muir, 1997: 374 – 376), lists some oversights in studies on environmental rhetoric which add to an understanding of the field. A fourth piece of research, *Media agenda setting with environmental issues* (Atwater *et al.*, 1985), looks at the transfer of environmental information to audiences and its relevancy to this study is the focus on the media environmental agenda. According to the fifth study, *The biosocial perspective and environmental communication research* (Backes, 1995: 147 – 163), biosocial theory presents a conceptual framework for exploring communication linkages between society and the environment. This framework based on biosocial theory is applied in this study. Biosocial theory received its name from Bonnicksen (Bonnicksen & Lee, 1982, as quoted by Backes) and refers to reciprocal relationships between the environment and society. This theory is explained as a series of interactions between two different systems, the social system and the environmental system.

The interactions consist of two processes operating reciprocally. The first process involves social organisations changing structurally, behaviourally and also in their resource use practices, in reaction to input from both other social groups and from their physical environment. The second

reciprocal process involves changes in the structure and function of environmental systems reacting to the resource use practices of social organisations. This two-way interaction happens through the exchange of material, energy and information.

Bonnicksen (Bonnicksen & Lee, 1982, as quoted by Backes, 1995: 149) built his biosocial theory on ideas developed by Firey, who argues that the most important link between society and the biophysical environment is not spatial but functional, referring to the way people use natural resources. What was innovative was Firey's (1960, as quoted by Backes, 1995: 149) applying this definition of a natural resource in systems analysis. Human values and associated behaviour constitute the vital link between social and biophysical systems.

Research from a biosocial perspective investigates the functional links between the social system, which is typically innovative and determined by cultural processes, and the biophysical system characterized by biophysical processes. The particular relevance of Backes' (1995: 147 - 161) work to this investigation, is his linking one aspect of the social system – mass communication – to biophysical systems through studying the ways people perceive and behave towards the environment.

Two further studies were found that dealt with aspects of interest to this study. *Towards a global knowledge for environmentally sustainable development agenda in 21<sup>st</sup> century southern Africa* (Mukasa, 1998: 1 – 27) focuses on information and media in Southern Africa in a context of environmentally sustainable development. *Complexity as reality: a cybernetic analysis of trans-cultural data on human perceptions of*

*environmental change* (Fiedeldey-Van Dijk *et al.*, 1998: 1- 34) contains a section on media and environmental awareness.

A further body of work dealing with environmental communication consists of documentation generated by proceedings such as public participation (undertaken as part of development projects), as well as by conference proceedings dealing with environmental concerns. These publications are not included in this study as the focus of this study is the media.

It is evident that environmental communication research is the emergence of a new field of study (Myerson & Rydin, 1997: 376) and in 1997 Muir (1997: 376) reported a rapid growth phase in the field. The phenomenon of environmental communication yet remains to be fully explored. Apart from numerous studies on corporate environmental reporting (see earlier part of section 1.3), a search of South African research has failed to reveal other work on environmental communication. What is further lacking is environmental communication research done by environmentalists – of the five studies listed above, only one had the contribution of a researcher not identified as a communications academic, namely a geographer. Peterson (1998: 371) nevertheless welcomes the contribution from communication scholars because they are well equipped, understanding symbolic interaction, to also understand environmental communication.

The conclusion of the literature search is that there is a considerable gap in work published on environmental communication, both in the South African context and elsewhere.

#### **1.4 Problem statement**

The gap indicated in published research in this field is also pointed out by Backes (1995: 147) and Myerson and Rydin (1997: 376), who say despite extensive attention given to environmental issues in the mass media, the field of environmental communication research is still surprisingly small. Backes also comments on the fact that environmental communication research in recent years has focused mainly on a few aspects such as news production, knowledge of and attitudes about issues, and the dynamics of social conflict related to the environment. Aspects not addressed include the environmental agendas of mass media, cross-cultural communication, the influence of specific mass media “save the environment” campaigns, and the watchdog role of mass media in environmental communication.

In the field of environmental communication a lack in orientation towards biophysical systems is the result of the social system orientation of researchers trained in the communication field. Backes (1995: 147) comments on the irony of this, seeing that researchers involved in environmental communication, are likely to be motivated by environmental interest and concern.

The literature search as part of this study found media studies on social issues such as development, but tracing published research on the phenomenon of environmental communication, and particularly on biosocial linkages, resulted in the total of five studies listed in section 1.3.

The research question posed by this study is intended to fill some gaps relating to the contribution of a print mass medium to environmental

communication, and in particular in its expression of biosocial interactions as it occurs in the South African context. The research question is addressed by means of a content analysis to establish how one South African newspaper (*The Star*) deals with environmental themes. The outcome of the content analysis is applied to assess the possible functional links between South African society and the South African biophysical environment.

The research question is: How does *The Star* represent South African environmental themes and what does this representation reveal about society–environment linkages (the biosocial perspective)?

## **1.5 Objectives**

To answer the research question, the following objectives are formulated:

- To examine existing literature on environmental communication and relevant mass media theory.
- To investigate *The Star's* environmental agenda in terms of environmental themes presented in news reports.
- To examine if and how *The Star* links environmental themes to social perceptions, values and behaviours relevant to South African social problems.
- To assess the nature of linkages between aspects of the biophysical system and aspects of the South African social system.

The objective of this study is to address the existing gap in the communication aspect of environmental research by doing a scientific investigation of links between social systems, as expressed in a mass medium in a South African context, and biophysical systems.

The investigation will examine *The Star's* environmental agenda, as well as the connection of environmental themes to social perceptions, values and behaviours, leading to an assessment of these connections.

## **1.6 Central theoretical proposition**

The central proposition is guided by the researcher's suggestion that *The Star* selects particular environmental themes for publication, and these themes throw light on social processes at work in contemporary South African society.

## **1.7 Method of investigation**

The field of study is introduced in chapter 1 of the dissertation. The chapter further reviews environmental communication literature and sets the study objectives. This is followed in chapter 2 by an empirical investigation of environmental news presented in *The Star* over a 12-month period from 1 July 1999 to 30 June 2000 (chosen as the sample of study material to narrow down the volume of material available). It covers *The Star's* environmental agenda and a quantitative content analysis on environmental news reports. Chapter 3 explores linkages between society and the biophysical environment through communication in *The Star*. This is done by an exploration of media messages dealing with environmental concerns (themes the newspaper selects as part of its environmental agenda) and linking these to South African social values, perceptions and behaviours. Direct or indirect calls to social action or social choices are identified, and conclusions are

made from these values and actions. Chapter 4 deals with the conclusions drawn from the empirical exploration results.

This introductory chapter explains the context and motivation for the empirical study on environmental communication, in terms of environmental issues, environmentalism, South African social realities and published research on environmental communication. The following chapter will detail the content analysis conducted on a sample of environmental news from *The Star* over a period of 12 months.

## **CHAPTER 2**

### **EMPIRICAL STUDY: AGENDA SETTING AND CONTENT ANALYSIS**

#### **2.1 Introduction**

The preceding chapter describes the evolution of environmental communication and identifies it as a largely unexplored area in environmental management studies. This study has as its broad goal to investigate biosocial connections - linked by means of *The Star*, a mass print medium, which selects environmental themes relating to social issues facing South Africa. The literature review indicates a scarcity of published scientific studies on environmental communication in general, and in particular done from a biosocial perspective. This chapter will deal with the empirical part of the study, which has as its objective a content analysis of environmental news in *The Star* over 12 months from 1 July 1999 to 30 June 2000.

#### **2.2 Nature of the Investigation**

The investigation is based on the research question: How does *The Star* represent South African environmental themes and what does this representation reveal about society-environment linkages (the biosocial perspective)? This biosocial approach is discussed later in chapter 3. As analysis method an empirical study has been chosen. The content analysis is preceded by an examination of *The Star's* environmental agenda relating to the environmental issues it selects for publication. This leads to a proposition that the newspaper appears to effectively connect environmental themes to social perceptions, values and behaviours in the context of South African social problems and realities.

In deliberating the choice between a qualitative or quantitative approach, an early impression that *The Star* rated environmental news as important enough to give it considerable coverage, has been put to the test by an environmental theme count and percentages of theme representations (Table 2.5). The outcome is that this study is intended to be quantitative.

### **2.3 Method of the investigation**

To establish a foundation of existing research in the field of environmental communication on which to construct this study, and to help channel the investigation, an extensive data base search was undertaken of the Repertorium for South African Journals, the Social Sciences Index, the National Research Foundation Nexus data base system, and ABI Inform.

The focus of this study is a biosocial perspective on the intricate connections between social systems and environmental systems, the latter interpreted here only as biophysical systems.

#### **2.3.1 Selection of a mass medium**

To study these connections, a mass medium *The Star*, a South African daily newspaper, was selected for an empirical investigation. *The Star* was selected because as a major daily newspaper its average circulation of 164 364 (last six months 2002) and 162 703 in Jul-Dec 1999 (*The Star*, 2003) ensures that it reaches a large sector of Gauteng. Demographic details of the 625 000 daily readers (AMPS, 2001B Jan. to Dec., 2002) are given below. These demographics indicate a racially and socio-economically

diverse readership, which typifies South African society. The newspaper also has a tradition of environmental journalism (Clarke, 2002), <sup>1</sup>

A newspaper was chosen for this study rather than a magazine, the radio or television because of the researcher's familiarity with the newspaper medium. Other reasons for the choice were the apparent regularity and diversity of environmental news covered in this newspaper. Magazines, and radio and TV programmes tend to cover environmental issues in greater detail, but may lack the diverse coverage of environmental issues in this newspaper.

#### **Demographic details of *The Star* readers:**

**Ethnic groups:** African **64%** White **29%** Coloured **4%** Indian **3%**

**Education:** Matric **40%** Some high school **28%** Post matric **27%** Some primary school **5%**

**Monthly Incomes:** R7000+ **40%** R2500 - R6999 **31%** R900 - R2499 **21%** Less than R900 **8%**

**Employment:** Full-time **48%** Unemployed, retired, students **40%** Part-time **12%**

**Age (years):** 35 - 49 **33%** 25 - 34 **29%** 16 - 24 **19%** 50+ **19%**

**Gender:** Male **66%** Female **34%**

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<sup>1</sup> The *Star* has practised environmental journalism since 1971 when James Clarke became a full-time environmental writer for the newspaper, and even in the early 1950s John Bond of the Africa News Service (part of *The Star*) was a pioneer in the field of environmental journalism.

### 2.3.2 Selection of environmental news reports

Newspaper reports were accessed in *The Star* library in Johannesburg. There was no need for the researcher to search newspapers from the chosen period for environmental news, nor to decide which report matched which environmental issues. News clippings of the period 1 July 1999 to 30 June 2000 were filed according to a long existing indexed system of files or categories. Limitations of this system were that clippings did not indicate *The Star* page number, and no record was reportedly kept of the total of clippings filed. Cutting and indexing were done at the discretion of the chief librarian (Alexander, 1998: 3). There are six basic file names. These are the South African files (the most important category according to the indexers), the biographical files (not subject-based), the subject files (including news not in the SA headings or alternatively of international importance). The other three heading categories are the country files (files about other countries e.g. Great Britain environment), the crime files and the company files (these are name, not subject-based and used mainly by Business Report – the business pages of the newspaper). Some environmental reports indexed in the first three basic file names were included in the study.

The 17 heading categories used by *The Star*, which are relevant to environmental reports during the research period, are as follows:

**Table 2.1 Heading categories in *The Star***

<u>South African files</u>	<u>Biographical files</u>
SA pollution environment	Jordan, Pallo
SA pollution water	Moosa, Mohammed Valli
SA refuse	
SA reserves general	<u>Subject files</u>
SA reserves Gauteng	Sub pollution air
SA reserves Kruger National Park	Sub pollution environment
SA reserves Tvl	Sub pollution water
SA water general	Sub refuse
SA zoology wildlife	Sub water
	Sub weather temperature

A limitation on the scope of the dissertation has necessitated selecting certain files or categories for the content analysis and excluding others from the study. In terms of the research question (i.e. how does *The Star* represent South African environmental themes and what does this representation reveal about society-environment linkages), the sample from the newspaper's environmental reports may be deemed to be representative to the extent that the sample covers South African environmental concerns during all 12 months of the study period (1 July 1999 to 30 June 2000).

The following categories were analyzed. As environmental news in a South African context was well covered in the six categories and all 12 months of the study were found to be covered in the content analysis, the researcher is satisfied that the sample is representative.

**Table 2.2 Selected categories**

SA pollution environment
SA pollution water
SA reserves general
SA zoology wildlife
Moosa, Mohammed Valli
Sub refuse

There are some issues that receive extensive coverage as part of *The Star's* environmental agenda. Tourism as an aspect of the environment receives much newspaper space and 12 news stories during the research period cover aspects of tourism and the benefits of tourism for South Africa. Another popular issue is the proposed ban on the use of thin plastic bags which is exhaustively reported – a total of 9 stories deal exclusively with this issue.

### 2.3.3 Content analysis

Content analysis is systematic and the methodology involves a number of steps (Wimmer & Dominick, 1987: 171), which can vary in sequence. The researcher used the Wimmer and Dominick framework in the following sequence.

#### i Formulation of the research question

Preliminary examination of environmental news clippings from *The Star* was done to list headings and content. A connection between the environmental issues in reports and the social context was readily apparent. This led the researcher to formulate the research question as follows: How does *The Star* represent South African environmental themes and what does this representation reveal about society-environment linkages (the biosocial perspective)?

#### ii Definition of the population in question

Inspection of *The Star* environmental files revealed an abundance of news material and it was decided to narrow the study material down to environmental news stories published in *The Star* over a period of twelve months as indexed in the newspaper files (see Table 2.1). The period 1 July 1999 to 30 June 2000 was selected as appropriate when the study commenced early in 2000.

#### iii Selection of an appropriate sample from the population

Environmental reports (also from Business Report, *The Star*'s business pages) were selected from six heading categories of indexed files of clippings in *The Star* library. The files were then deemed to be suitably representative as they covered South African environmental issues

reported over all 12 months of the study period. Issues include environmental problems such as pollution and refuse, natural resources e.g. conservation areas and wildlife, and matters relating to the current Minister of the Environment and Tourism, Valli Moosa. These heading categories are:

**Table 2.3 Population sample**

SA pollution environment
A pollution water
SA reserves general
SA zoology wildlife
Moosa, Mohammed Valli
Sub refuse

These files were paged through in chronological sequence. Initially report headings were listed together with publication date, the file name, the writer if indicated, and a brief summary of the essence of the story. The decision was later made to copy reports to facilitate examination of the content. Although some preference was given to the longer reports because one of the indicators of a story's importance is the newspaper space allocated to it, shorter reports were also included. A total of 65 environmental newspaper reports and headings were analyzed from *The Star* files within the selected period.

iv Selection and definition of a unit of analysis

Studying the environmental news reports resulted in a crop of recurring phrases, themes, words, types of language, values and reasoning (Wimmer & Dominick, 1987: 171) which started to suggest a pattern of social concerns showing up in environmental context. The unit of analysis

was every indicator of a separate social category, whether a single word (e.g. tourism), or a complex phrase.

v Construction of the categories of content to be analyzed

Mainly by a thorough reading of the sample stories as well as by consulting a reference (Jonkheid, 1996: 93) which contributed the category of emotional appeal, a preliminary list was drawn up of categories of content. This list was changed during a process of assessment as the coding itself progressed. Some categories were discarded because they turned out to be of little importance in terms of very low numbers. These categories of content occur in varying numbers and combinations in every clipping taken from the six heading categories in the newspaper archive. The categories chosen are given in Table 2.4.

vi Coding of the content according to established definitions

The researcher's definitions of what constitutes each of the categories of content are as follows (Table 2.4):

**Table 2.4 Definitions of categories of content**

<b>Code</b>	<b>Definition</b>
1 Indigenous values	Qualities valued by African communities
2 Cooperation	Constructive joint initiatives by diverse groups
3 Resource use	Utilising a natural resource towards fulfillment of a human need
4 Actions credited/ discredited	Approval or criticism of behaviour relating to environmental issues
5 Income from environment	Financial benefit derived by people from any aspect of the biophysical environment
6 Job creation or shortage	New employment opportunities or a lack of employment opportunities
7 Environmental rights	The right to a non-harmful environment
8 Tourism	Foreign visitors to South Africa spending foreign currency here
9 Hope or success	A positive outcome to an event
10 Emotional content	Language with the potential to trigger readers' emotions
11 Praise/criticism of government	Evaluation of official initiatives or action
12 Status	Attributing importance to SA or its people
13 Nation building	Efforts to create national pride or unity
14 Previous political dispensation	Identifying negative aspects of the apartheid regime

The story headings listed were analyzed and the copies of stories were studied sentence by sentence to identify recurring social indicators. These were compared to the selected categories of content to identify phrases or themes, and fit each one into one of the 14 content categories. Code

numbers (Table 2.4) were used to facilitate coding directly on the copies of news stories. A single sentence containing more than one category of content was coded for each category.

To check the repeatability of coding done by the researcher a self-check was done five months after the first counting, which consisted of a repeat theme count on a randomly selected sample of 5.6% of the previously counted newspaper clippings. The results were as follows: 21 totals for the clippings were identical to those in the first theme count (43.8% of the check sample). In another 23 totals the variation was small and insignificant (1 or 2) - 47.9% of the sample, and in the case of only 4 totals the two results varied significantly (3 or more). This means that in 91.7% of the check sample the coding of environmental themes was proved to be repeatable and therefore reliable.

## 2.4 Discussion of theme count results

A sample of each theme is provided below in italic font. No newspaper page numbers could be ascribed.

**Table 2.5 Results of themes found in *The Star***

<u>Code/Theme</u>	<u>Number</u>	<u>%</u>
1. Indigenous interests	29	3.1
2. Cooperation	48	5.1
3. Resource use	212	22.5
4. Actions credited/discredited	45/67	4.8/7.1
5. Income from environment	32	3.4
6. Job creation/shortage	33	3.5
7. Environmental rights	40	4.3
8. Tourism	74	7.9
9. Hope/success	15	1.6
10. Emotional content	170	18.1
11. Criticism/praise of government	71/25	7.5/2.6
12. Status	38	4.0
13. Nation building	34	3.6
14. Previous political dispensation	8	0.9
<b><u>Total</u></b>	<b><u>941</u></b>	<b><u>100</u></b>

### 2.4.1 Indigenous interests and values (Code 1)

There are many references to indigenous interests and values (29 in number, 3.1%) for example: *Ubuntu is not possible without treasuring our planet* (Du Preez, 2000).

Issue: Idealism is rated above materialism

*Moosa puts African unity ahead of profit (Yeld, 2000c).*

Issue: Local wisdom is celebrated

*Rural folk see practical value of conservation (Anon, 1999e).*

Issue: Nurturing the biophysical environment, rather than exploiting it

*Questioning sustainable utilisation – the West is rejecting its attitude of domination over nature, and reverting to beliefs held by indigenous people (Patterson, 2000).*

In the researcher's opinion promoting indigenous values may encourage South Africans to develop pride in their own culture and heritage.

#### 2.4.2 Cooperation (Code 2)

Various instances of cooperation (48 in number, 5.1%) between government, business organisations, local communities and international agencies are brought to readers' attention. *Government...in partnership with the private sector is working on projects across the country to develop competitive advantages that (could) make South Africa a country with huge tourism potential (Moosa, 2000a).*

In the researcher's opinion cooperation, or team effort, can surpass the achievement of one single agency and may contribute to building a winning nation.

#### 2.4.3 Resource use (Code 3)

Occurrences of this environmental theme (212 in number, 22.5%) far exceed those of any other single theme: *...Although greater use of paper bags would put additional pressure on forests, trees were a renewable resource if managed properly (Gainsborough-Waring, 1999). ... People who live and farm in areas which cannot sustain farming any longer (Du*

Preez, 2000). *South Africa was not in favour of elephants being killed for their ivory...* (Anon, 2000a).

The preponderance of representations of resource use suggests that South African society depend greatly on natural resources i.e. on its biophysical environment for personal and economic survival.

#### 2.4.4 Actions credited or discredited (Code 4)

This theme (45 credits 4.8% and 67 discredits 7.1%) includes amongst others, environmental pollution, abuse of animals, and hunting for sport. Communities, groups or individuals harming the environment are identified: *Informal settlements pollute water sources* (Cox, 1999a). Official disapproval was expressed in the proposed punishment of environmentally harmful actions: *Penalties for offences cover a broad range, including fines, remedial costs, permanent or temporary cessation of operations, forfeiture of property, imprisonment, loss of income and devastation...of corporate reputation* (Patrizi, 2000). People who shot animals for sport were scorned: *Do hunters have a sexual problem?* (Van der Sandt, 1999). There was disapproval of animal abuse: *Trainers given marching orders after public anger at elephant beatings* (Feris, 1999a).

By appearing to censure certain forms of social behaviour, and to approve of other behaviours, the newspaper may unwittingly be espousing a code of environmental conduct for its readers. Also suggested are some lessons in environmental ethics: *Conservation's future lies in using our resources wisely* (Moosa, 2000b).

#### 2.4.5 Income from environment (Code 5)

This theme occurs 32 times and adds up to 3.4% of the total theme count. The perception is expressed that the South African environment is a resource that can earn money for South Africans: *Eco-tourism, handled sensibly, is our untapped gold, and much better for our earth than agriculture (Du Preez, 2000), and Kruger Park ivory might be sold to Japan for cultural artefacts (Anon, 2000a).*

#### 2.4.6 Job shortage and job creation (Code 6)

Here is a sample of this theme which numbers 33 (3.5%): *Tourism...can create and sustain jobs faster than any other economic sector (Moosa, 2000a), ...Government is under attack from trade unionists for not living up to job creation promises...(Spence, 2000), and It has also become the accepted trend that residents of the township Zamani should benefit, not only in finding jobs through tourism but also in becoming entrepreneurs (Guy, 1999).*

By persistently acknowledging people's need for work, *The Star* appears to ensure that it addresses many readers' number one problem, their daily struggle for economic survival.

#### 2.4.7 Right to a non-harmful environment (Code 7)

This theme occurs 40 times (4.3%). Readers are informed about their right to a non-harmful environment: *Dust-up at dam (Anon, 1999b) and Stench and soot angers residents (Cox, 1999b).*

#### 2.4.8 Tourism (Code 8)

Linked to the need for employment is tourism. Numerous references to tourism (74 in number and 7.9%) extoll the economic benefits tourism holds for South Africans. Because the views of opinion leaders carry considerable weight, *The Star* frequently quotes the Minister of the Environment and Tourism, Valli Moosa, on tourism: *There are hard economic reasons why the government has made tourism a national priority* (Moosa, 2000a). Moosa values the environment as playing an important role in tourism: *To think we can have tourism growth without environmental protection is short sighted. The two go hand-in-hand* (Anon, 1999f).

#### 2.4.9 Success and hope (Code 9)

Aspects of success and hope (15 in number, 1.6%) concerning the environment are reported: *The Amanzi Water Treatment Project, that will produce 240-million litres of drinking water per day from underground mines around Johannesburg is on track to become the largest private water treatment project in the world* (Feris, 1999c). The relatively small percentage of successes in this category can not be taken as a media tendency for negative reporting as a number of other categories of content (e.g. cooperation, income from the environment, praise of the government) also refer to successful initiatives.

#### 2.4.10 Emotional content (Code 10)

Here is a sample (170 in number, 18.1%) found in *The Star's* language use, which is imbued with varied degrees of emotional content: *The plight of Soweto garbage collectors* (Eksteen, 1999) – eliciting sympathy.

*Scavenging birds and flies compete for a piece of this rotting pie* (Eksteen, 1999) – eliciting horror. *The accusation by the majority of South Africans that tourism is simply a way of making whites rich* (Graham, 2000), – stirring anger.

Such emotional language appears to aim at engaging the reader on an emotional level through hooking into his/her potential feelings of fear, shock, guilt or sympathy. The reader's indifference to the message may be affected. The reader may be aided to identify with the message in an emotional sense. Such emotional appeals to the reader appear to be aimed at social action.

#### 2.4.11 Criticism or praise of government (Code 11)

Criticism (71 in number, 7.5%) and praise (25 in number, 2.6%) of the government occur in reports: *The explanations also do not go all the way in addressing rumours of corruption and nepotism* (Anon, 1999d), ... *Asked to comment on chaos claim in division* (Loxton, 2000), *Moosa... a keen environmentalist who leads by example* (Anon, 1999e).

#### 2.4.12 Status (Code 12)

Status (38 in number, 4.0%) is conferred on South Africa or South Africans in an environmental context: *Dirty work, but someone's got to do it* (Eksteen, 1999). *Now that it's art, junk is trendy – two local artists seek out metal scrap in order to create artworks* (Dyantyi, 1999). *World Environment Day marked by cleanup of Jukskei bank in Alex* (Feris, 2000). *Drive to make tourists feel at home – campaign aims to turn all South Africans into ambassadors for their country* (Feris, 1999d).

#### 2.4.13 Nation building (Code 13)

The theme of nation building occurs 34 times (3.6% of environmental themes identified). *...As South Africa grapples with the question of how best to position itself as a winning nation, a great debate beckons on patriotism, "true" South Africanism...*(Johnson, 2000).

The efforts on the part of *The Star* to promote unity amongst South Africans will be discussed in greater detail in section 2.5 of this chapter and in chapter 4 section 4.2.2.

#### 2.4.14 Previous political dispensation (Code 14)

The frequency of this theme is 8 occurrences (0.9%). *Despite their obvious value, the South African Government promoted the drainage of wetlands up until the early 1980's* (Feris, 1999b), *And just as the supporters of that former government largely did not question the oppressive, exploitative political system...so a sector of our society failed to question the exploitative systems of so-called "sustainable utilisation" implemented to manage wildlife for profit (for mostly the white man),* Patterson, 2000.

References to socio-political conditions before the inception of the 1994 democracy in South Africa may be aimed at acknowledging past inequities and possible lingering resentment on the part of those affected by the inequities.

## 2.5 Classification of content categories

Examination of the results of the content analysis led to five groupings (with common denominators) of the content categories (Table 2.6):

**Table 2.6 Groups of content categories and frequency**

<b><u>Identify</u></b> 21.7%	<b><u>Economic upliftment</u></b> 14.8%
Indigenous values (Code 1)	Job shortage and creation (Code 6)
Status (Code 12)	Tourism (Code 8)
Success/hope (Code 9)	Income from environment (Code 5)
Nation building (Code 13)	
Environmental rights (Code 7)	<b><u>Call to social action</u></b> 18.1%
Cooperation (Code 2)	Emotional content (Code 10)
<b><u>Code of environmental conduct</u></b> 11.9%	<b><u>Watchdog</u></b> 10.1%
Actions credited/discredited (Code 4)	Criticism/praise of government (Code 11)

Each grouping may correspond to a media function to *The Star's* readers. This finding will be expanded on in the conclusion. A number of categories deal with social and environmental problems or identify solutions to these problems.

## 2.6 Conclusion

Analysis of the five groupings (Table 2.6) of *The Star's* content categories suggests that these groupings correspond to some of the media functions as listed by Infante *et al.* (1990: 347 – 349), see section 1.3. *The Star* appears to address identity or nation building (including the aspect of economic upliftment), which may be interpreted as a call to social action: South Africa needs every South African's help to build the nation. The researcher finds indications that may fit this interpretation in *The Star's* praising of indigenous interests and values, pointing out environmental successes achieved by cooperation, conferring of status to a previously marginalized majority as well as assurances that this majority have environmental rights, and its practising the developmental concept towards nation building.

*The Star* also appears to (possibly unwittingly) present an environmental code of conduct to its readers by reporting the approval of certain public behaviours and censure of others. This may help to promote environmental awareness in people with little exposure to environmental education. Frequent comment in reports on government actions suggests to the researcher that *The Star* aims to act as a watchdog of the government. This includes applause as well as criticism of government performance in an environmental context. The theme count result (Table 2.5) shows that criticism of the government (7.5%) by far exceeds praise (2.6%). The preponderance of criticism may be due to a characteristic media bias towards contention (which is more newsworthy than agreement). Nevertheless a by-product of *The Star's* criticism of

government performance may be that the newspaper operates as expected of a free press in South Africa by keeping a check on government conduct. In terms of the two models of environmental communication (Myerson & Rydin, 1997: 376) the role of *The Star* may extend to identifying government failings in environmental context, which places it within the answer culture model with its emphasis on problem solving.

Comparison of *The Star* content categories (Table 2.4) to the functions of mass media to society listed by Infante *et al.* (1990: 347 – 349) in section 1.3, namely mobilization, surveillance, correlation, cultural transmission and entertainment, shows some overlap. A call for nation building may be a form of mobilization during the birth pangs of a new nation. The use of apparent emotional appeals to readers may mobilize them to respond to perceived wrongs expounded by the newspaper.

Construction of what appears to be an environmental code of conduct corresponds to cultural transmission by imparting South African society's environmental rules, norms and values. The watchdog function may be similar to correlation, which refers to the way *The Star* interprets and criticizes news on government environmental performance. In action here is the benefit of the freedom of the press in South Africa. The entertainment function and the mobilization function in times of environmental crisis do not feature significantly in this study.

These media functions which *The Star* may aim at addressing, appear to indicate the newspaper's relevancy in the task of involving readers in environmental communication. This leads to the question: which environmental matters are high on *The Star's* environmental agenda? *The Star's* environmental agenda was defined (see section 1.1.1) as environmental concerns which rank high enough in importance among *The Star's* general news priorities to warrant repeated media coverage.

The results of the environmental theme count indicate that number one on *The Star's* environmental agenda is resource use (22.5%). The high score is significant in the light of the argument presented as part of the biosocial theory (Backes, 1995: 149) that the strongest link between society and the biophysical environment is functional i.e. the way people use natural resources. The number of references to resource use in *The Star's* environmental news suggest that the biosocial connection between South African society and its biophysical environment is alive and well. Communication reflects this.

Second to resource use on *The Star's* agenda is what appears to be emotional appeals (18.1%) to readers to involve themselves in environmental concerns. This is followed by tourism (7.9%), which may be seen to relate to government priorities of alleviation of poverty and socio-economic upliftment in South Africa. A number of other environmental themes feature on *The Star's* environmental agenda in diminishing frequency namely criticism of government (7.5%), discredit of certain environmental behaviours (7.1%), cooperation (5.1%) and others.

The link between South African society and the biophysical environment reflected by reporting on resource use will be further investigated in chapter 3 when detailing various resource use practices by South Africans. Impacting on resource use are current local socio-economic problems as represented by the mass medium *The Star*.

## CHAPTER 3

### BIOSOCIAL LINKAGES AND ASSESSMENT

#### 3.1 Introduction

The empirical study in the previous chapter concludes with the finding that the high incidence of the environmental theme, resource use, found in *The Star* in the 12-month research period, points to a significant functional link between South African society and the South African biophysical environment. As biosocial linkages are not so easily indicated in the other environmental themes represented by *The Star*, the further focus of the study is on resource use. It is this biosocial link which will be further explored and assessed in this chapter.

#### 3.2 Assessment of linkages

The relationship between the South African biophysical environment and society is assessed within the framework of biosocial theory (section 1.3), which deals with reciprocal interactions between these two different systems, the social system and the biophysical system. These links are functional – through the way people value and use natural resources. *The Star* as a mass communication medium appears to represent people's perceptions of, and behaviour towards natural resources.

#### 3.3 South African social reality as portrayed in *The Star*

Biosocial theory presents a means to examine South African social reality in terms of the exchange of information, energy and material between society and the surrounding biophysical environment. Various social groups appear in *The Star* as they interact with one another and with the

biophysical environment. These include local communities, the poor, consumers, government agencies, non-government organisations, business, industry, educational organisations, tourists, the media and environmental groups.

Certain distinctive features of South African society affect these interactions. One such feature is that there is little homogeneity amongst South Africans. There are various races i.e. blacks, whites, Indians and coloureds. Levels of education vary widely, as do socio-economic circumstances. Attention is given to socio-economic disparities in *The Star* reports: *South Africa has been warned to include more black people in tourism or face the accusation by the majority of South Africans that "tourism is simply a way of making whites rich" (Graham, 2000)*. The newspaper quotes a policy maker, Minister of Water Affairs and Forestry, Ronnie Kasrils on this issue: *...Once they (the wealthy) start consuming more than, say 250 litres (of water) a day, then they really have to pay for it. In that way they 'subsidise' and assist the have-nots (Anon, 1999a)*. According to Fraser-Moleketi (1997: 44), at the time of writing Minister of the Civil Service, the war on poverty and inequality is South Africa's most important priority and greatest environmental challenge.

The alleviation of poverty receives considerable attention in *The Star*: *Spatial Development Initiatives are regional initiatives planned by the government to uplift poor areas (Yeld, 2000b)*, and...*Make the communities of the area part and parcel of the new venture and combat poverty and illiteracy at the same time (Du Preez, 2000)*.

There is explicit criticism of any reminder of the previous political dispensation. References to race are scarce and when these occur, it is

often as part of such criticism: *I detailed how this conservation culture is rooted in the apartheid past. In the South Africa of old, the former white government and its supporters were masters of exploitation of both man and animal and, like that government, the hierarchy of the "conservation government" of the day was headed by whites imbued with a utilitarian ideology with regard to wildlife (Patterson, 2000). But (Moosa) also expressed concern that many of the established environmental organisations had memberships which displayed the racial patterns of the old South Africa (Anon, 1999e).*

There is a tendency to political correctness in environmental reports, for example: *Moosa...had been struck by the total absence of black exhibitors. "It is not just a question of being politically correct," Moosa said (Graham, 2000).*

The social reality reflected in *The Star's* environmental reports reveals the painful awareness of a majority still experiencing the effects of social and economic marginalization in the wake of decades of an alienation which spanned the whole spectrum of life in South Africa. Consequences of these socio-economic problems manifest in the biophysical system as an array of environmental issues. Examples are: *The (Jukskei) banks are strewn with debris (Feris, 2000), and (People) don't have enough dustbins and toilets, so they use the river (Feris, 2000).*

### **3.4 Biosocial linkages: resource use**

The interrelationship between socio-economic and environmental issues is evident: *Water will increasingly become a limiting resource and the supply will become a major restriction to future socio-economic development in*

terms of both the amount and quality available (Anon, 1999c). To illustrate the link between the South African biophysical system and the social system, a number of local resource use practices are discussed in order to focus on the role of the mass media.

#### 3.4.1 Water use (occurs in 8 newspaper reports)

The two-way process of change happens through resource use practices. Water is one of South Africa's most vital natural resources, because of its scarcity in this semi-arid country. Its unavailability as piped supply to many South Africans places it high among the government's social upliftment priorities.

Different demands on the available water supply cause conflict because of the varying needs of social groups. Mining activities, for example, lead to contamination of ground water, which poses a threat to the health and well being of many people (often the poor) who depend on (polluted) rivers and streams for drinking water and washing purposes. Poverty and lack of residential sanitation, and a lack of environmental education often result in people unwittingly using the same water source for drinking and for sewage disposal. Such pollution also impacts negatively on resource use by South Africans who utilise rivers and dams for leisure activities such as fishing.

Damage due to waste material ending up in water systems through human action has to be remedied since the government legislated (for example the National Environmental Management Act No 107, 1998) to place the financial responsibility for pollution on polluters. This has led to some mining companies adapting their resource use practices, for

example by purifying contaminated mine water for drinking purposes as part of the Amanzi water treatment project in Gauteng (Feris, 1999c).

### 3.4.2 Whaling and tourism (2 news reports)

Whale watching, although not a common leisure activity practised by the developing world, is important to South Africa's tourism industry. Few examples of change in resource use are as dramatic as that involving whales in South Africa and in the rest of the world. Between 1785 and 1805 whaling fleets in South Africa slaughtered an estimated 12 000 whales (Gainsborough-Waring & Williams, 1999). The accepted attitude of the time was that whales were there to be killed for their products.

In 1908 the modern whaling era began and the result was that the SA whale population of about 20 000 dwindled to a mere estimated 100 by 1935. Until that year, *The Star* reports, anyone who wanted to look at whales would have been laughed out of town.

Whales are protected by the Convention for the Regulation of Whaling (1935), enforced in South Africa since 1940. The spectator value of whales as a natural resource is now very high. Currently there are around 5.4 million whale watchers worldwide. The extent to which society's attitudes have changed since the early part of the 1900s, is evident from *The Star*: *A navy spokesperson said...the area was patrolled by naval craft to ensure there were no whales in the area...(before firing started)* (Gainsborough-Waring & Williams, 1999).

South African tourism benefits from the fact that whale watching is a growth industry as seen from the growing numbers of tourists lured to

Hermanus and other Western Cape coastal towns by whale watching opportunities.

### 3.4.3 National parks and leisure (8 news reports)

Conservation areas are natural resources, which were in the past in South Africa predominantly utilised by developed world people for leisure activities such as wild life viewing and the "bush" experience. *The Star* quotes Valli Moosa, Minister of Environmental Affairs and Tourism: *The future of conservation and our national parks rests on all our people believing that there is a value in our natural resources. To establish this value, South Africans must feel a sense of ownership of these resources and the benefits of our conservation work through the sustainable use of the fauna and flora in our country* (Moosa, 2000b).

Currently another resource use is the opportunity for local developing communities to earn income by managing conservation areas in partnership with government agencies. In this context the SA National Parks supported the return of the land in the northern Kruger National Park to the Maluleke community, who had a land claim to this area. The authority has set up a joint conservation plan here with this community.

Sustainable resource use appears to require an environmentally literate people, and the mass media may contribute to promoting such literacy in a developing country.

### 3.5 Role of the mass media

As a mass medium *The Star* collects, processes and interprets information. By providing information on the biophysical environment to South Africans, it may enable society to interact with its environment more effectively than without such information. How successful the mass medium is in its role as presenter of environmental communication i.e. in contributing to effective man-environment interaction, depends on how well it understands the needs of the society it serves. Meaningful information exchange happens only if the needs of society are met (Mukasa, 1998: 5).

*The Star's* environmental agenda has been shown by this study to be pre-eminently resource use and emotional appeals to the readers. This is followed in frequency by tourism, criticism of the government, discredit of certain environmental behaviour, and a number of other less frequently represented environmental themes. The newspaper's environmental agenda, which will be discussed in the next chapter (see section 4.2.1), indicates that the newspaper understands that the large majority of South Africans who were previously marginalized in all spheres of society (politically, economically and environmentally), now need a sense of ownership of their land and their environment (here encompassing both biophysical and social aspects).

This mass medium may have an important role to familiarise South Africans with problems and processes in their biophysical environment as it affects their lives today and tomorrow. The long-term benefits of beneficial interaction with the environment are evident.

In the hands of government a similar ongoing information campaign will prove to be prohibitively expensive. According to Nel (1999: 1,7) environmental governance increasingly occurs outside government structures, such as non-government organisations using the media to communicate.

### 3.5.1 Government perception of media role

Informing the public on environmental issues serves people's need to know, nevertheless official South Africa takes the approach that the media should serve government's interests. Occasionally there is direct comment on the role of media in environmental communication: *Media reports harm tourism, says Moosa* (Anon, 2000d). Another occasion was a series of parliamentary briefing sessions for diplomats and journalists in 2000 (Johnson, 2000) when the following views were expressed on the issue. There seemed to be a broad consensus among Mbeki's<sup>1</sup> ministers that positioning South Africa as a winning nation demands fostering a distinctive and positive image of the country. Some ministers went even further. The late Safety and Security Minister Steve Tshwete and the then (2000) Intelligence Minister Joe Nhlanhla stated that a national interest such as presenting a positive image of South Africa should not allow "playing up" of news detrimental to a positive image in the name of media independence or even the public right to know. Such an approach taken by politicians is characteristic of the developmental concept (chapter 1, section 1.2.2) in action.

There is certainly incongruity between politically motivated patriotism of this kind and the government's Access to Information Act No. 2 of 2000

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<sup>1</sup> President Thabo Mbeki, President of South Africa at the time of writing.

which requires public access to any information which would reveal a serious public safety or environmental risk. Some categories of risk tourists visiting South Africa face, such as personal security, answer to this description of a serious public safety risk. The situation in South Africa's neighbouring state Zimbabwe in 2002, where President Mugabe attempted to manipulate the media, is a living example of incongruity between democratic ideals of the freedom struggle and a lack of media freedom.

### 3.5.2 A journalist's perception of media role

Among the ranks of journalists there are some strong opinions on the role of the South African media in environmental communication. James Clarke, former assistant editor and environmental journalist on *The Star*, criticises newspaper editors for not giving enough attention to environmental issues (Clarke, 2001: 18).

According to him the truth is that there are too few environmental reporters because newspapers have lost interest in environmental campaigning, and that the electronic media have taken over from the print media as the public's environmental watchdog. His first accusation seems to be substantiated by the fact that there has not been a major "save the environment" campaign waged in the media since the high-profile St Lucia mining controversy during 1991 – 1993. The Tuli elephant controversy, although well documented in *The Star*, is in a different league, because the environmental impacts are fewer and it affects fewer people. The incidence of criticism levelled by *The Star* at the government in an environmental context suggests some intention on the part of the newspaper at monitoring the government's environmental

behaviour, although the criticism may be partly motivated by a media propensity for contention (which is newsworthy). It was found in this study that *The Star* criticised (7.5%) and praised (2.6%) government environmental actions. If newspaper criticism (7.1%) and approval (4.8%) of other parties' environmental behaviour are taken into account, *The Star's* environmental agenda includes a total of 22.1% represented environmental themes, which may be part of a media aim to function as a public watchdog. This is considerable and challenges Clarke's accusation against the print media.

*Editors think that 'environment' is all about fluffy animals and whales. It's about the air, soil, water, urban design, population dynamics, and health...it should be the most important beat on the newspaper. It should be addressing this country's most singular shortcoming – our lack of an attainable and exciting image of the future South Africa (Clarke, 2001: 18). In terms of environmental management principles, (SABS ISO 14 004, 1996: 3) every organisation aims at managing its environmental performance through setting an environmental policy, and acting out its commitment to it through planning, implementation, evaluation and review. Officially South Africa has done this. The Star may not reflect this integrated environmental vision, but nevertheless appears to contribute significantly to environmental information presentation by the multiple functions (section 2.5) it attempts to address in environmental communication.*

### **3.6 Conclusion**

The application of biosocial theory in a South African context has been discussed in this chapter. The mass medium *The Star* constitutes one

aspect of the South African social system, and imparts information on human environmental values and behaviour. Information on resource use practices appears to reveal much about a society's environmental values. This is a functional link between the social system and the biophysical system.

South African society is afflicted by poverty and this tends to force environmental sustainability to take a back seat to dire economic need, even though consequent environmental degradation could have long term adverse economic consequences. The developed world generally blames developing people for causing extensive damage to the biophysical environment (e.g. by chopping down trees for firewood), and vice versa the developing world regard developed world industry and commerce as the biggest culprit of environmental degradation through unsustainable resource use.

This approach is compatible with the problem culture paradigm (section 1.1.2) where the environment is dealt with as a set of problems and the objective is to find solutions to these problems. Unsustainable resource use requires solutions. The new culture of argument on the other hand, will seek to engage role players in ongoing environmental debate, and the mass media may have a significant role here.

The next chapter deals with South African social dynamics in the context of this study.

## **CHAPTER 4**

### **CONCLUSIONS**

#### **4.1 Introduction**

The objectives of this study focus on investigating connections between two distinct systems. On the one hand there is the South African biophysical environmental system as reflected in the content of mass media communication. On the other hand is the South African social system, which includes mass media and the communication process. This investigation presents a reflection of this society and its environmental, socio-economic and political perceptions, behaviours and expectations as observed in one newspaper archive over a period of twelve months, from 1 July 1999 to 30 June 2000. The biosocial theory allows for this concentrated focus on the interactions between these two systems.

#### **4.2 Results of the environmental communication study**

This investigation entailed a literature review of international and South African research on environmental communication, supplemented by an empirical study of *The Star's* news on the environment over a 12-month period.

The effect of social interaction with the biophysical environment was discerned even when environmental communication was yet an unrecognised phenomenon.

The environmental movement was shown to be a driving force that set environmental communication on its course from a modest start in the

1960s when it informed a largely uninterested and uninvolved public on their biophysical environment. With developing environmentalism, environmental communication grew into an influential global interaction between man and environment on issues affecting human survival.

As environmental communication escalated, the environment moved from a peripheral place on the social agenda to a central position from where its demands now shape political and economic decision-making world-wide. Examples are: the Montreal Protocol for the protection of the ozone layer which is a treaty developed by 36 nations in 1987 to reduce chlorofluorocarbon (CFC) emissions into the atmosphere (Miller, 1998: 389). The Basel Convention on the control of transboundary movements of hazardous wastes and their disposal was adopted in March 1989 and came into force in May 1992. The priority is to protect developing countries from environmental damage (Agenbach, 1999: 27).

This social shift has spurred researchers' interest in the phenomenon of environmental communication, particularly during the past decade. One development has been a paradigm shift from approaching the environment as a problem to be solved, to an approach seeking an ongoing and democratic debate on environmental issues.

An active environmental movement also exists in South Africa, where environmentalism is further supported by environmental rights enshrined in the Constitution of the Republic of South Africa, Act 108 of 1996 and the National Environmental Management Act of 1998 (NEMA), providing for the public's right to public participation in projects affecting the environment. The public has a right to access to environmental information ensured in terms of the Access to Information Act No. 2 of

2000. There are various other pieces of legislation that protect the environment, such as the National Water Act of 1998 and the Atmospheric Pollution Prevention Act 45 of 1965.

The mass media are participants in environmental communication and they function as informers, interpreters, "culturisers", entertainers, mobilizers and setters of the media environmental agenda. The dominant environmental theme found in *The Star* in the empirical study was resource use. It adds up to 22.5% of the total theme count among 14 environmental themes and overtakes the second largest category of 18.1% (emotional content). This finding on resource use, serves to indicate the biosocial connections between South African society and the biophysical environment and contributes to achieving the study objectives. The emotional content found in environmental news may be an effective tool in the hands of journalists, for it may engage readers and may galvanise people into a response. Environmental journalist James Clarke confirms this: *Emotive journalism...is a great deal more effective than unemotional science. To toss out the scientific jargon is not sensationalising – it is a newspaperman's duty to the public* (Clarke, 1993: 50). The effectiveness of the media in using emotive language to affect readers is acknowledged by scientist/academic dr. Ted Avis. The following comment of his refers to the St Lucia anti-mining campaign by the media (1989 to 1993): *This emotive, conservation oriented stand by the press has strongly influenced public opinion and resulted in an anti-mining mindset* (Avis, 1993: 49).

#### 4.2.1 The media agenda

A complete evaluation of *The Star's* environmental agenda is not possible in this study due to its limitations – the study was limited to the period 1 July

1999 to 30 June 2000, and some news reports from only six out of a total of 17 environmental categories found in *The Star* files were examined. The extent of an evaluation of the newspaper's environmental agenda is limited to the above-mentioned six environmental categories. To achieve the study objective to investigate *The Star's* environmental agenda in terms of environmental themes presented in news reports (see section 1.1.1), the content categories counts result in the following conclusions:

Resource use is well covered, as the results of the empirical study show. One category of resource use is the suggested selling of elephant tusks to generate income, which is the subject of four news stories during the research period. Emotional content occurs frequently in reports, as referred to in section 4.2.

Tourism is an issue high on *The Star's* agenda. A total of 10 news stories during the research period focus fully on tourism and the environmental theme count shows that 7.9% of the environmental themes concern tourism. Tourism ties in with government objectives of economic upliftment and alleviation of poverty.

Attempting to solve the South African littering problem is an issue well covered in the newspaper. Altogether 9 news reports deal with the controversy when the Minister of Environmental Affairs and Tourism, Valli Moosa, announced his intention to ban thin plastic bags. Interest in this issue may be ascribed to the fact that it affects nearly everyone, it created a considerable controversy in the media, and it involved an opinion leader in the person of Moosa.

News stories on animals are frequent – editors seem to favour these for stirring readers' emotions and creating controversy. One case in point was the Tuli elephant saga where there was alleged abuse, which resulted in a lively controversy.

*The Star's* environmental agenda chiefly covers resource use, emotional appeals to readers, tourism, and criticism of government and other parties' environmental behaviour. South African social themes, as the empirical investigation indicated, featured prominently in *The Star's* environmental communication.

#### 4.2.2 Social processes in South Africa

*The Star's* multi-faceted reflection of social reality in South Africa in its environmental communication is evident in this 12-month window (1 July 1999 to 30 June 2000), the period covered by the study.

Politically South Africa is facing a struggle to find an appropriate identity after decades of escalating internal political turmoil. This new identity has to be constructed from a culturally and socio-economically highly diverse people where the one common factor is sharing a country.

Therefore it is highly advantageous for the government to find a common goal for its people at this time of transition. Nation building seems to be an appropriate goal.

Government initiatives reported in the newspaper fall into two distinct categories i.e. measures approved of by *The Star*, and actions subjected to negative media criticism (which dominate). The attempted media watchdog function is in conflict with the developmental concept where

government priorities are promoted, which is the social dynamic behind the themes on nation building found in *The Star*.

Clearly discerned in the coverage of environmental issues in *The Star*, is the South African government's political agenda, which is focused on urgent national concerns and on the creation of a national identity, nationhood and the process of nation building.

In this study Valli Moosa, Minister of Environmental Affairs and Tourism, is heard as the government's voice, calling for a commitment to nation building. In official pronouncements on environmental affairs, Moosa frequently used key words and phrases such as 'nation', 'South Africa' and desirable attributes of national identity.

**Table 4.1 Nation building phrases**

<b>Key word/phrase</b>	<b>Quote</b>
Nation	<i>Build our nation, nation in the making, a winning nation, national pride.</i>
South Africa	<i>Pride in being South African, Sell South Africa to its own citizens.</i>
Others	<i>An icon that unites us – our flag, a sense of patriotism, self-belief.</i>

To achieve this vision of nationhood, the government declares its commitment to fight poverty and to promote opportunities for economic development for all South Africans in particular previously marginalized black South Africans.

Possibly due to the urgency of South Africa's economic issues, certain social themes are merely addressed in passing in environmental

communication, such as crime, corruption and lack of capacity in the country. This is despite the detrimental effect of crime on the economy as well as on tourism. Of the few examples, the following comment by Moosa may be taken as representative of the government's laissez-faire approach to the problem: *When Moosa discussed the impact of crime on tourism, he said attacks on tourists made the promotion of tourism an uphill battle. The government was so serious about fighting crime – and particularly attacks on tourists – that it had placed the highest priority on the arrest of culprits. While he accepted that it was necessary for tour operators and hotels to tell holiday makers about crime, he asked that a systematic, thoughtful approach be adopted so that visitors were not frightened away (Graham, 2000).*

#### **4.3 Summary and conclusions**

In this study the role of *The Star* as environmental communicator is shown to be important within the context of South Africa as a developing nation. Large numbers of people are illiterate and also not exposed to environmental communication due to other socio-economic factors such as poverty and living in remote rural areas. A newspaper can be revisited, unlike radio and TV. Even old newsprint has information value to those hungry for knowledge, and can be passed from hand to hand, enlarging its circulation considerably.

Society is served in a number of ways by the newspaper. It provides environmental information, critically interprets this information by social appeals to readers to act on this information, and guides readers on the environmental norms and values held by society. This function is of particular importance in South Africa where the majority of people are

poorly acquainted with appropriate environmental behaviour particularly in crowded, industrialised urban circumstances out of traditional African context. The entertainment function and the mobilization function in times of environmental crisis do not feature significantly in this study.

That the watchdog function typical of independent news media, is attempted by *The Star*, is seen in the frequent instances of both negative and positive criticism of government actions in environmental news reports in Table 2.5. The emphasis is decidedly stronger on negative criticism (7.5%) as against support of government environmental actions (2.6%).

This study contributes to filling a research gap by exploring biosocial links expressed in a South African mass medium, *The Star*. The newspaper, a subsystem of the South African social system, records a developing society in dynamic interaction with its biophysical environment.

#### **4.4 Limitations of this study**

This investigation was limited to the role in environmental communication of one South African print medium. Numerous other print media e.g. Afrikaans newspapers, magazines and other printed material, were not part of the study and neither were electronic media (radio, TV and the internet). To assess environmental communication in a wider context, other role players such as government, environmental organisations and businesses need to be included.

As is the case with all social processes, communication is a dynamic process therefore changes will be evident with the passing of time. The

12-month time period (1 July 1999 to 30 June 2000) covered in this study, limits the results to a particular time slot in a continually evolving process.

#### **4.5 Recommendations**

- There seems to be a scarcity of published research on environmental communication in South Africa. Even internationally a limited body of work has been done and many gaps remain to be filled in this new and growing field. This study offers a point of departure for further research into environmental communication in South Africa, for example cross-cultural environmental communication.
- This study contributes to an understanding of the role of the print media in environmental communication in a developing world context. The role of other mass media remains to be investigated.
- Linking up to this investigation, the biosocial perspective offers further scope for environmental communication research into the way South African society values and uses natural resources.
- The role of the environmental movement in environmental communication, which was a side issue in this study, remains to be researched.

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