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# Lifecycle Models

## By the end of this chapter, the reader will be able to:

- Describe the biological basis of destination lifecycle models
- Evaluate the validity of Butler's and Plog's lifecycle models
- Analyse the strengths and limitations of each model
- Compare and contrast the two models and describe how they integrate closely
- Explain the role of carrying capacity

## Introduction

Two tourism lifecycle models developed by Butler (1980) and Plog (1974, 2001) more than 40 years ago have dominated the conceptualisation of this topic. But, while the Plog and Butler models are well known, they are not necessarily known well, for the original sources are somewhat dated, and in the case of Butler's work, obscure. Indeed, one wonders how many people have actually read the original papers? Instead, they are so common that knowledge generally comes from secondary sources which invariably summarize the manuscripts into a few sentences or short paragraphs, and in doing so, simplify the complex and subtle issues raised about the nature of destinations and how they change over time.

Each had humble origins as each was written first as a conference paper and only later converted into a journal article. They are also a product of their times. Tourism in the mid to late 1970s was undergoing rapid expansion as the development of jet aircraft led to the massing of tourism for the first time. Many remote economies identified tourism as their only economic development option and pursued a path of large scale development under the guise that the economic benefits would outweigh any adverse social and environmental impacts. They were unaware of

many of the realities of tourism and so, it took authors such as Budowksi (1976), Doxey (1975), Jafari (1974), Wenkman (1975) and many, many others to write cautionary tales about spontaneous development and the inherent risks involved. Butler, in particular, focused on the social and physical environmental impacts of tourism when developing his lifecycle model, and used carrying capacity as the deterministic variable to define the health of destinations. Plog took a demand-side perspective and wanted to understand reluctance to fly commercially.

The basic strengths and weaknesses of each model must be recognised before they are discussed in detail. The devotion to the product metaphor is the main reason why Butler's work is simultaneously praised and criticized – praised because of its elegance, simplicity and intuitive logic, and criticized because it is difficult to prove empirically (Tooman, 1997; Weaver, 2000) and is deficient as a predictive tool (Agarwal, 2002; Hovinen, 2002, Moss et al., 2003). Likewise Plog's work has been both praised and criticized – praised as an early attempt to segment the tourist market by psychographic profile (Chandler & Costello, 2002; Harrill & Potts, 2002; McGuiggan, 2003) and criticized for not accurately depicting lifecycles (McKercher, 2005a).

## Biological origins

Both Butler's and Plog's models, have their origins in one or more biological theories (Osland, 1991). The first and simplest analogy is the life cycle that all higher organisms progress through (Crawford, 1984). As Tellis and Crawford (1981) note, individual biological specimens live predictable patterns of birth, growth, maturity, decline and death. Polli and Cook (1969) cite the usefulness of this analogy, for the identification of each stage permits the evaluation of a series of tactical and strategic considerations that can be taken to either progress to the next stage or stem decline. However, this idea is overly simplistic for the biological model applies only to individual specimens, such as a person, a frog or a leaf (Crawford, 1984). It does not apply when groups of things are considered.

Instead, Osland (1991) suggests we need to consider studies of populations of species. This modification forms the second model. Here Osland (1991), summarising the literature, notes the collective shape of the lifecycle curve is influenced by a range of biological factors, including food supply, competitors and the carrying capacity of the environment where the entity lives. Polli and Cook (1969) found it related well to the theory of the diffusion of products, innovation and the overarching lifecycle collections like entities evolve through. As they note, a product finds initial resistance to widespread acceptance and is purchased by only a limited segment of the buying population. Later, a larger segment of buyers adopt it, and sales begin to increase but eventually, the rate of growth decreases as the proportion