



# Of fast lanes, flora, and foreign workers: Managing land use conflicts in Singapore

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## ABSTRACT

This paper presents a preliminary land use conflict resolution model and then evaluates how Singapore measures up with three examples of land use conflicts. The study begins by arguing that the criteria of efficiency, equity, sustainability, and compatibility should be utilized to manage conflicts in land use. Efficiency involves having quick and conducive development and transactions of land that promote economic growth. Equity encompasses having a fair system that involves all relevant stakeholders. Sustainability relates to how environmentally and socially sound land use is for current and future users. Compatibility refers to how land use is integrated with other laws and regulations. The study then applies this framework to three case studies of land use conflict in Singapore: the demolition of a national library for the Fort Canning tunnel, the reprieve of Chek Jawa Wetlands, and the creation of a foreign workers dormitory in a residential neighborhood. We find that the Chek Jawa scheme scored the best according to our criteria, the workers dormitory second best, and the Fort Canning tunnel third. We conclude by offering implications for public policy and land use policy more broadly.

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## Introduction

Managing land scarcity is a perennial challenge for Singapore. Following its independence from British rule on June 3, 1959, Singaporean government planners focused on housing, jobs, and minimizing corruption as their three key issues. Everything else came second, and the resulting industrialization has caused rapid economic development and rising standards of living that have since come to be known as the “Singapore model” (Wong et al., 2008). Driving factors behind the growth have been greater household incomes, staggering investments in infrastructure, and a one-party democracy managed by a semi-authoritarian state capable of implementing its ideas with an almost flawless efficiency (Chua, 2009; Wong et al., 2008; Dale, 1999). As one study surmised:

The state-centered political economy of Singapore has bred a top-down land use planning system centrally controlled by the government. Not only has the government dominated the plan making process, the legislation has entrusted the public sector to scrutinize and guide private development through a discretionary development control system. The government is able to mobilize resources to implement plans with the tacit consent of a regulated and meritocracy-based society (Ng, 1999, pp. 2–3).

Despite the scope and efficiency with which the government’s plans have been implemented, however, Singapore is also one

of the most population-dense countries in the world. Therefore, planners must continuously balance various competing land uses to meet current and future needs. In striving for the best of all worlds—growing the economy, preserving the natural environment, enhancing social equity—one is often confronted with land use conflicts.

This paper presents a preliminary land use conflict resolution model and then evaluates how Singapore measures up. It first proposes that efficiency, equity, sustainability, and compatibility should be utilized to manage conflicts in land use. It then applies this framework to case studies in Singapore involving the demolition of a national library for the Fort Canning tunnel, the reprieve of Chek Jawa Wetlands, and the creation of a foreign workers dormitory in a residential neighborhood. We find that the Chek Jawa scheme scored the best according to our criteria, the workers dormitory second best, the Fort Canning tunnel third. We conclude by offering implications for public policy and land use policy more broadly.

## Conceptualizing land use conflict

As readers of this journal will already know, land use is a site of perpetual disagreement, since land is what Bogale et al. (2006) refer to as “the most fundamental resource.” Von der Dunk et al. (2011) define a land use conflict as “whenever land-use stakeholders (conflict parties) have incompatible interests related to certain land-use units (geographical component).” Conflicts often center on who is to maintain control a particular area of land, who possesses the right to participate in decision-making about its management, and the

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social or environmental impacts of its development or use (Andrew, 2003). Or, as Peltonen and Sairinen (2010, p. 28) explain, “conflict arises fundamentally because of competing demands for a limited resource; because of the uneven distribution of costs and benefits that result from the development; and because of environmental impacts that arise when the use of land changes.”

Several factors make land use conflicts unique from other disputes, such as clashes over social policy or disagreements over business strategy. First is complexity: compared to these latter types of conflict, land use disputes almost always involve multiple parties that have less common ground as to how to resolve their dispute. Moreover, because they involve complex environmental and technical factors, property rights, high stakes, and potentially irreversible consequences, such disputes typically require significant attention to scientific considerations and critical stakeholder analysis (Peltonen and Sairinen, 2010).

Second is scale: land use disputes transcend community scales and involve national and global actors alongside local ones, making them what (Ostrom, 2010) and Sovacool (2011) call “polycentric.” For example, in the case of land use in the Brazilian Amazon, one study noted that local actors became involved over issues related to poverty and landlessness, but so did national actors wishing to control economic growth, conservation, and deforestation as well as global actors concerned about the ranching plans of transnational corporations and the protection of indigenous rights (Simmons, 2004). Similarly, in the Galicia region of Spain, conflicts over forest management have involved claims on land tenure within communities, competition for resources between communities, conflicts with national planners over conservation areas and cession rights over resources, and the participation of global environmental groups (Gómez-Vázquez et al., 2009).

Third is timing: recent land use disputes may appear more controversial because they are still fresh in people’s minds. Sometimes conflicts arise as existing populations around a particular piece of land change their opinions or values; in other cases, new people can enter an existing space and clash with how those already there view geographic space (Henderson, 2005). In the case of opposition to land use related to wind farms and municipal solid waste incineration, opposition changes significantly before and after projects are completed, with projects contentious at the planning stage but generally accepted after they have been constructed (Sovacool, 2009). Put another way, people become more favorable towards projects after their construction and the degree of acceptance tends to increase the longer that project operates. Moreover, the potential for conflict might be greater now than in the late 1980s because of changes in the law (e.g., requirements to alert people when land development occurs near them) and the rise of social networking.

Fourth is competing land use goals pursued by various actors and interest groups, as well as the different characteristics of those for and against particular land use development. The most common land use conflicts for developing economies and rural areas occur over mining, agriculture, environmentally protected areas, forestland, archeological sites, and indigenous property rights (Kaliampakos et al., 2011; Henderson, 2005; Andrew, 2003; Smith and Kurtz, 2003; Hilson, 2002). In contrast, the most common conflicts for developed economies and urban areas center on the encroachment of residential spaces and community spaces (such as parks and gardens) near activities that produce negative externalities, such as livestock farming, quarries, airports, and waste disposal facilities (Henderson, 2005; Gómez-Vázquez et al., 2009; Magigi and Drescher, 2010).

Furthermore, studies have found that middle aged and risk-averse people are more likely to oppose projects than young or old respondents; that opponents of land use development tend to place a higher value on esthetics than on other aspects such as protection

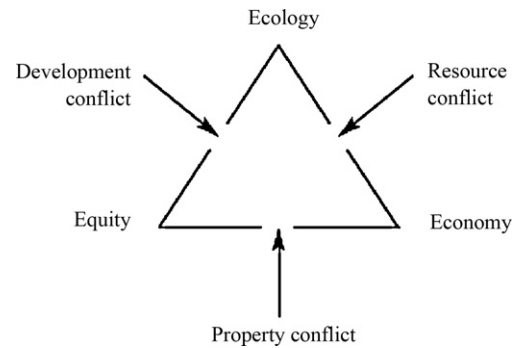


Fig. 1. Conflicts among sustainable development values.

Source: Campbell (1996).

of the environment or employment effects; that city dwellers are more likely to oppose projects than country dwellers (one explanation is that urban residents have a more romantic view of the countryside whereas rural residents view it as a resource to be harnessed); and that residents of “stigmatized” or degraded landscapes are more likely to welcome facilities that others might find objectionable or hazardous (Sovacool, 2009; Blowers and Leroy, 1994).

In essence, these four factors—complexity, scale, timing, and competing interests—mean land use conflicts have their own sort of political economy, their own “socio-politics of place” (Nash et al., 2010). Perhaps because of this political economy, land use disputes are frequently intractable. Furthermore, they at times result in severe negative consequences, including the degradation of the environment, injuries, increased insurance costs, litigation fees, private security expenses, decreased productivity, lost business partners, and in some cases loss of life and armed conflict (Andrew, 2003; Duke and Jost, 2003). Simmons (2004), for instance, cautions that some of the most monumental social and political transformations during the past few centuries have centered on land use conflict and the unequal distribution of property rights related to land, including the communist revolutions in China and the former Soviet Union in addition to internal civil wars in Bangladesh, Israel, Philippines, and South Africa as well as interstate wars between Senegal and Mauritania, and El Salvador and Honduras.

### Proposing a land use conflict resolution framework

Resolving and managing land use conflicts has thus become a public policy concern of import. But how ought resolution be achieved? We propose an optimal framework for resolving land use conflicts. We begin with Campbell (1996), who proposed a triangle of goals for planning which suggested that achieving economic development, environmental protection and social equity (three goals at each point) would lead to three types of conflicts (along the axes of the triangle presented in Fig. 1). One attains sustainable development only when all of these conflicts are resolved. This idea resonated with that of the World Commission on Environment & Development (1987) which stated that sustainability occurs through reconciling conflicts between economic development, ecological preservation, and intergenerational equity.

Godschalk (2004) expanded Campbell’s model and suggested that planners should also achieve “livability” by focusing not only on resolving property, resource, and development conflicts, but conflicts related to “New Urbanism” and “Smart Growth.” A livability goal was added, creating three more conflicts related to growth management, gentrification, and green cities shown in Fig. 2.

Though the models presented by Campbell and Godschalk do an exemplary job identifying conflicts between various land uses and values, they do not offer a qualitative template for how to resolve

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