# Watershed Management, Private Property and Squatters in the Northern Range, Trinidad

Thackwray Driver\*

## 1 Introduction

Any layman can see without any trouble that those thousands of homes on hillsides stretching from Diego Martin to Arouca make up a major disaster. <sup>1</sup>

Trinidad's Northern Range is the site of an 'environmental disaster'. The western half of the hills, clearly visible above the island's main population centres straggled along the East-West Corridor, are universally seen as being damaged beyond repair, while the eastern half of the hills, stretching from Arima to Toco are believed to be under imminent threat of destruction. The culprit for this environmental disaster is – according to almost all accounts – the squatter, who has illegally cleared hillsides either for housing or 'slash and burn' agriculture.

The hillsides above the Fast-West Corridor are a mix of grasses, low scrub and the occasional palm. Some of the slopes have been planted with pine over recent decades, while others are dominated by hillside farming or urban 'squatter' housing. Given the assumption that prior to Columbus's 'discovery' of Trinidad the island was entirely covered by forest, the existence of grassy areas on these hillsides is a visible symbol of degradation. Fire spreads across a large proportion of these grassy hillsides most dry seasons, leaving ugly burnt patches, and often resulting in a choking pall of smoke hanging over greater Port of Spain. The frequent floods that inundate low-lying areas along the East-West Corridor are seen as being the direct result of the destruction of these watershed areas and specifically a result of irresponsible squatters.

In this article, I explore the way in which the scientific and policy processes around this 'environmental disaster' have been framed by attitudes towards private property. I argue that a basic policy dispute over this issue has been partially resolved through the construction of a particular social and moral category: the 'squatter'. The (re)production of this simplified category within contemporary policy processes has masked the diversity and complexity of tenurial relations on the Northern Range, and their relationships with wider socio-economic, political and environmental processes.

The relationship between the State, private property and environmental protection is a key issue for

	Area (%)	Number of holdings
Small (<20 acres)	42.8	3,168
Medium (21-50 acres)	15.6	327
Large (50-100 acres)	7.5	68
Very large (>100 acres)	34.1	59

Table 1: Size of holding for private lands above the 300 ft contour in the western half of the Northern Range<sup>2</sup> Source: Government of Trinidad & Tobago: Forestry Division (1981)

watershed management. The science of watershed management has primarily involved mapping physical and socio-economic features and making determinations about what activities should take place in particular zones. This approach to the science of watershed management has been extensively utilised in Trinidad, and elsewhere in the Caribbean. In the mid-1980s, the Upper Watershed Management Project utilised the FAO watershed planning methodology to develop zoning recommendations for the Maracas Valley (Goswami 1986a,b). More recently, the World Bank-funded National Parks and the Watershed Management Project used a very similar methodology to develop land zoning recommendations for Maraval and St Ann's valleys (Kairi Consultants 1998 a,b,c). The key problem for this approach to watershed management has been finding means of ensuring that people follow the plans devised for them by the planners – a problem which is closely associated with issue of State vs. private property rights.

# 2 Private property and watershed management

Since the mid-1980s, there has been a significant shift in the Trinidadian policy discourse on private land and watershed management. Many of the policy or programme planning documents from the 1960s and 1970s listed the existence of large tracts of privately owned land in the western half of the Northern Range as one of the key management problems. By contrast, many of the more recent planning and policy documents emphasise the *lack* of secure property rights for occupiers as the key management problem for watershed protection.

The majority of land in the western Northern Range, including most of the upper catchment areas, is owned by private individuals often in large parcels of

land (see Table 1). In many cases, these owners are the descendants of the French Creole settlers who were originally granted the landholdings by the Spanish Crown. As far back as the work of the Land Advisory Committee in the 1930s and 40s, this privately owned land was seen as posing major problems for watershed management (Trinidad & Tobago, Land Advisory Committee 1944). The Land Advisory Committee's response was for the State (Crown) to acquire private lands in order to implement watershed protection measures.

The Land Advisory Committee identified the 'Heights of St Ann's', 'Morne d'Or, Tucuche and Tabor' and 'L'Opinot' as areas under private ownership in the western Northern Range that should be under State ownership. During the war vears, a limited amount of land acquisition did proceed: in 1942, 806 acres were acquired, principally in the Caura Hills. In the following years more than 6,500 acres were acquired according to Forestry Division reports (Government of Trinidad & Tobago: Forestry Division 1939–1945).3 This programme of land acquisition was not, however, ever fully implemented, partially due to longstanding problems in the country's land registration system and partially due to opposition from powerful land-owning interests.

The belief that 'unrestricted freehold land' was the cause of environmental problems in the western Northern Range was also expressed in many of the early planning documents of the Northern Range Reforestation Project (NRRP) (see, e.g. Dardaine and Look Kin 1971: 7). This project, generously funded by the Government throughout the oil boom years of the 1970s and early 1980s, undertook massive replanting programmes, primarily using Caribbean Pine, on State-owned watersheds (see Lackhan 1980, 1984, for details).

The belief that private property holders were the root cause of problems for watershed management was in keeping with the general policy direction of the People's National Party (PNM) government during the 1970s. The Third Five-Year Development Plan, published in 1969, committed the Government to active involvement in the productive economy wherever the local private-sector was not taking advantage of opportunities (Conway 1984). State intervention in the land market was argued to be necessary as large land-owners were not responding to 'normal market signals' and withheld their land from the market (Government of Trinidad & Tobago: Town & Country Planning Division, 1982: 83). The fact that many of the large landowners, especially in the western half of the Northern Range, were members of the old colonial elite was seen as a significant factor – and added to the sense that they did not have the interests of the national community at heart.

In July 1979, following serious floods, Cabinet appointed a Committee to look into the possibility of acquiring all private land above the 300 ft contour line. The Committee reported in August 1981 and recommended the acquisition of all lands above what it referred to as the 'watershed line'. In total, the Committee recommended that the Government purchase 9,236 acres of private land and subsequently replant them, for demarcation as forest reserves. It recommended that the priority should be for the State to acquire the larger estates, as this would be an easier administrative task and therefore more cost effective (it also tallied with the belief that the large land-owners were not responding to market signals). The Committee estimated that the total cost of acquiring these lands would be TT\$65 million and the estimated price of afforestation, TT\$50million (Government of Trinidad & Tobago: Forestry Division 1981).

This recommendation was accepted by Cabinet and was referred to in subsequent policy documents throughout the 1980s (e.g. Government of Trinidad & Tobago: Northern Range Hillside Development Policy Committee 1988). The recommendation also received some support from international development agencies (see, e.g. Caribbean Development Bank/Deutsche Forestinventur Service 1983). Despite this support, the policy of acquiring private lands to ensure watershed protection was never

implemented, mainly because the rapid downturn in the economy after 1984 led to severe fiscal constraints on the State.

Existing alongside the ideology that watershed protection could best be ensured if the land was directly controlled by the State, is a competing ideology that productive utilisation of land is maximised, when clearly owned by an individual or company. A policy direction based on this ideology came to the fore in Trinidad in the late 1980s and early 1990s, although it has a much longer history stretching back into the early colonial period.

Unlike the NRRP, the FAO-funded Upper Watershed Management Project, implemented during the mid-1980s, emphasised working with individual farmers to ensure watershed protection, and even recommended that tree planting in State forests be undertaken by individuals through a leasehold system. This policy shift obviously needs to be understood in the context of Trinidad's adoption of a programme of IMF-led structural adjustment under the National Alliance for Reconstruction (NAR) administration, and moves towards the privatisation of State assets.

In keeping with the political environment of the times, the solution to watershed management problems was increasingly seen to lie in a partnership between the State and private landowners. In 1989, Eden Shand, a Junior Minister of Environment in the NAR administration, argued that the problems of watershed management in the Northern range could be 'easily solved' through a partnership between Government, the private sector and local communities.<sup>4</sup>

The FAO/UNDP-funded Tropical Forest Action Programme (TFAP) of the early 1990s was also highly critical of the approach taken by the NRRP towards watershed management. The programme proposed an alternative approach to watershed management in the Northern Range, based closely on the ideology that lack of private ownership of the degraded areas meant there was little reason for individuals to invest in their protection. The TFAP proposed that areas of State land be rented out to private farmers and that they be provided with incentives to plant timber species on the land and to practise agro-forestry. Funds would be sought from

international organisations interested in forest protection and lodged in an Agroforestry/Reforestation Fund, which would disburse funds to individual farmers. These funds would officially be in the form of a loan, though one that would be written off in 'debt for tree swaps' (Chalmers 1992: 57).

The approach taken to environmental protection through clear individual tenure has also been strongly supported in Inter American Development Bank (IADB) -funded programmes over the last decade of the twentieth century. As part of the Basic Agriculture Sector Studies Programme in the early 1990s, the Land Tenure Center, University of Wisconsin, developed a proposed investment programme to be funded by an IADB loan (Land Tenure Center 1992). The proposed loan programme included a project to regularise the tenure of occupiers of State agricultural land under a revised leasehold system. Part of the justification for this programme was that individual occupiers with secure title would take better care of the land under their control:

Land holders without secure title are less inclined to invest in preserving the long-term productivity of the agricultural land they inherit or purchase than they otherwise would be with secure title. This lack of productivity investment contributes to soil loss through erosion, and the overall lack of secure title inhibits the investment in the maintenance of forest resources which require a long planning horizon and the security that investments made today will be enjoyed 20 years or even longer in the future by the investor or his heirs or purchasers (Land Tenure Center 1992: A1–23).

Although this loan was never implemented in full, many of the policy objectives found their way into the IADB-funded Investment Sector Reform Programme and a subsequent Agriculture Sector Reform Programme.

Support for the idea that individual tenure did not necessarily lead to destruction of watersheds also came from a UNDP-funded research project conducted by John Cropper, through the University of the West Indies – Sustainable Economic Development Unit (Cropper 1997). Cropper pointed out that many squatters in the Northern Range already plant fruit trees and other plants in

their housing lots or gardens. He concluded that watershed protection projects should try to build on these existing personal initiatives and that the Government and NGOs should work with other low-income households to encourage them to plant more vegetation on their housing lots.

At the present time, the policy framework supporting private ownership as a mechanism for environmental protection, including watershed areas, is clearly in the ascendancy. Nevertheless, the one thing that unites Trinidad's environmentalists and foresters is a belief that fragile environments must be protected by the State and under direct State ownership, though there are huge disagreements over which State agency should manage these areas (see Fairhead and Leach 2001, forthcoming). Trinidadian foresters are aware that advocating State acquisition of watersheds is very much out of vogue, and generally avoid making such statements in public forums, but nevertheless most of them continue to believe that this is the ideal solution to watershed management problems.

# 3 The leasehold system and State land

The tension that exists between the policy of increasing private citizen's security of tenure over land and the policy of State control of land to ensure environmental protection is partially resolved through the advocacy of a leasehold system. The leasehold system for managing Crown/State lands was put in place in Trinidad in the 1940s, when the Land Advisory Committee made it clear that granting Crown land as freehold was largely to blame for the country's environmental problems:

The system of land tenure universally in force has, until recently, been that of freehold. This has permitted the widespread abuse and neglect of land, the adoption of types of crops and agricultural practices in areas to which they are totally unsuited and a harmful form of shifting cultivation, resulting in a waste of land through disuse (Trinidad & Tobago, Land Advisory Committee 1944: 3).

The Land Advisory Committee strongly recommended that all future grants of land in Trinidad should be in the form of leases, under which

the Government could include clauses about the suitable use of the land in question. The move to leasehold tenure for grants of Crown land had actually been implemented in 1942, prior to the Land Advisory Committee's final report, and in keeping with a general shift around the British Empire.

This policy of only allocating Crown or State land as leasehold has remained basic Government policy since 1942, and was reaffirmed in the 1992 *New Administration and Distribution Policy for Land* (Government of Trinidad & Tobago: Ministry of Planning and Development 1992), the current published State land management policy document.

During the discussions that led to the Agriculture Sector Reform Programme in 1995, the IADB placed great pressure on the Government to amend this policy and regularise occupation of State land under a freehold system. This IADB recommendation was actively resisted by the Government, who argued that they needed to retain a leasehold system in order to ensure that occupiers conformed to good agricultural and environmental practices. Eventually it was agreed that State agricultural land would be leased under 30-year leases, with an automatic right to renewal of a further 30 years. The policy of only granting State land through leases means that the State, at least at a rhetorical level, is able to maintain control of these areas and avoid the sort of problems highlighted by the Forestry Division, with respect to private ownership of watershed areas in the western Northern Range.

# 4 Squatting and watershed management

Another way in which the tension between State and private ownership in the context of environmental protection is 'resolved' is through the social and moral category of 'the squatter'. While environmentalists and foresters on one side, and planners and international development experts on the other, may disagree about the relationship between private property rights and watershed protection, there is general agreement that occupation of watersheds by individuals without legal title is bad for the environment.

Within both policy documents and in the media, watershed management problems (deforestation, fire,

accelerated soil erosion, siltation and flooding) are linked to the issue of squatting. This close link between the issue of squatters and environmental destruction has a long history in Trinidad. From the mid-nineteenth century onwards, the impact of squatters on Trinidad's forests was seen as a major issue of concern. In 1875, Sylvester Devenish, the Crown Surveyor, noted that one of the major causes of forest loss was the 'wanton felling and burning of forests by 'a roving set of semi-civilised African squatters' who had ruthlessly destroyed whole tracts of rich forests' (quoted in Pemberton 1996, unpublished PhD thesis). These colonial concerns about the impact of squatters on the Trinidadian environment during the nineteenth and early twentieth century clearly have to be understood in the political context of the 'labour question' and concerns to control access to peasant holdings for agricultural labourers who were needed on plantations (as in Pemberton 1996, unpublished PhD thesis).

Within contemporary policy documents 'squatting on forest lands is seen as the most serious threat to forests and the environment in the country' (Ramnarine 1998: 581; see also Government of Trinidad & Tobago: Environmental Management Authority 2000: 45). Both residential and agricultural squatting in the western foothills of the Northern Range are seen as particular problems (see Tropical Forest Action Programme 1993: 2; Symes 1991: 7), while agricultural squatting is identified as a problem in more ecologically intact eastern portions of the Northern Range (see, e.g. Government of Trinidad & Tobago: Eastern Northern Range Project 1991: 3). Agricultural squatters are seen by the Forestry Division as being a particular problem mainly because of their use of fire as an agricultural tool to clear land at the end of the dry season, and they have become labelled as 'slash and burn hillside farmers'. Bush fires, set by agricultural squatters, were seen as the number one problem constraining the ability of the NRRP to meet its original objective of planting 16,200 hectares of new forests (see Lackhan 1980).

Trinidad's daily newspapers have also regularly reported on the issue of squatting, fire and watershed protection in the Northern Range, especially in the wake of flood events, landslides or during sharp dry seasons when there are a large number of bush fires. The press have consistently blamed the frequent bush

fires on illegal 'slash and burn' hillside farmers. The journalist Ann Hilton, in particular, has frequently attacked the idea of natural fires and argues that the major culprit is the 'slash and burn' farmers who are 'hard at work destroying as much of the nation's environment as possible before the rains set in'. <sup>5</sup> Forestry Division staff have also used the press to point the finger of blame for bush fires at 'slash and burn' farmers: the current Director of Forestry told one reporter in 1992 that 'slash and burn' agriculture can account for 90 per cent of the fire damage, with marijuana cultivators responsible for the rest. <sup>6</sup>

As major bush fires are very visible events in Trinidad, they are important in setting the policy agenda and creating momentum around environmental issues. The most vocal of the local conservation organisations, the Caribbean Forest Conservation Association (CFCA) claims that it 'came into being in 1989 following a number of highly destructive fires caused by squatters, which shocked us out of our complacency' (Bishop 1994:4).

Discussions about the environment have a strong moralistic theme. This is particularly the case in stories about flooding, which are frequently seen as being 'retribution for our environmental sins'. In the case of squatters, most commentators in the local print media see them as being both environmental sinners and sinners more generally: deforestation by squatters is often described in terms of rape<sup>8</sup> and they are seen as immoral 'filthy, uncaring people', who want 'everything for free'10, spend their money on 'liquor and the like'11 and 'don't or refuse to understand, the terrible damage they are doing to our environment'. 12

It is often implied that squatters are illegal aliens, <sup>13</sup> specifically from Grenada, and that 'nothing bothers them, least of all the law or the good of the nation as a whole'. <sup>14</sup> Furthermore, it is not uncommon for articles, or letters to the Editor, to allege that squatters hide under 'the guise of poverty' while they own land elsewhere, have 'luxurious houses' and make 'trips abroad'. <sup>15</sup> Clearly the term 'squatter' in Trinidad is more than a description of an individual's legal rights to the land they occupy: it is also a social and moral category.

Existing alongside, and cutting across, this discourse on squatting in the national press and

among many foresters and environmentalists, there is a general social acceptance of occupation of lands without documented legal title among the majority of the population of Trinidad. A Land Tenure Center, University of Wisconsin, survey of five agricultural areas undertaken in the early 1990s found that a high percentage of households had no formal documentation to back up their claims to the land they occupied: in other words from a legal perspective they could be considered squatters (see Table 2).

Based on the findings of this survey, Harry Lemel concluded that 'squatting is effused with popular legitimacy' (Lemel 1993: 85). Fieldwork in Brasso-Seco-Paria, a primarily agricultural village in the central Northern Range, also revealed that occupying land without holding legal title, or paying rent, was seen as a socially acceptable activity, though, for obvious reasons, the label 'squatter' is often resisted. Amongst the residents of the area, there was a high degree of respect for an individual's rights to any land they cleared of forest, no matter the legal title of the parcel (Driver and Kravatsky 1998).

It is noteworthy, however, that there is a large number of different factors that impact on how the surrounding community regards an individual's claim to land, including the length of occupation, the person's geographical origins (and possibly ethnicity or gender) and the amount of labour the person has put into clearing an area of land. As much of the western half of the Northern Range is, or was previously, occupied by large estates, many of the current occupiers are ex-labourers (or the heirs of ex-labourers). Many others have, or had, some form of contractual relationship with previous or current land-owners. In assessing the possibility of a programme to deliver security of tenure to squatters, Lemel concluded:

In weighing claims to land, it will quickly emerge that from a strictly technical and legal point of view, a very large number of people indeed are 'squatters', and from a legal perspective might be denied a claim to the land they occupy. However, one is struck by the variety of situations that would bear on the relative equity of potential claimants' positions and the necessity of taking these circumstances into account (Lemel 1993: 87).

No documents  Documents naming another person (tax receipt, private purchase/rent lease, deed, will)  Unrecorded/informal document naming user as holder of rights	27.6% 17.7%
(a) tax receipt (b) private purchase/rent agreement Legal document in name of user	4.4% 10.1%
(a) lease (b) deed or will	16.4% 23.8%

Table 2: Existence of formal documents defining land rights in 'high priority' areas for agriculture in Trinidad and Tobago'6

Source: Stanfield and Singer (1993)

# 4.1 Squatter policy

The fact that a large proportion of households in Trinidad occupy lands over which they have no legal title has helped push a policy agenda that has emphasised the regularisation of squatters, in order to ensure their security of tenure and encourage long-term investment in the land. Foresters have expressed reserved support for the policy of regularisation (see Ramnarine 1998), but have concerns about how it is to be implemented and exactly which squatters are eligible. Government policy on squatting has tended to vacillate between advocating strict enforcement of the State land laws, and evictions of squatters and regularisation programmes. Within the Government, different agencies have tended to emphasise different policy directions, and over time, different approaches to squatting have come to the fore.

During the late 1990s, the United National Congress administration was seen as being particularly sympathetic to the rights of squatters. John Humphrey, widely identified as being a 'friend of the squatter', took up the post of Minister of Housing and Settlements. Under new legislation, Humphrey established a new semi-autonomous Land Settlement Agency, which was given the power to grant residential squatters a Certificate of Comfort. This insured them against being evicted, unless the Government was able to provide them with an alternative housing lot elsewhere.

This new Act and the powers of the new Agency were greeted with great concern by the country's environmental movement, and many others, who felt the Government was giving people a licence to squat. Humphrey was widely seen by environmentalists as

irresponsible and as precipitating a land grab by individuals hoping to benefit from the rights outlined in the new regularisation legislation. Within the Forestry Division, serious concerns were also raised about the Act, as it gave power to the new Land Settlement Agency to regularise squatters within existing forest reserves.

At the same time, other technocrats in both the Ministry of Housing and Ministry of Agriculture opposed the new regularisation legislation, as they felt that the subsidised lease rents to be charged to newly regularised squatters went against the stated policy of rational economic utilisation of land. These officials tended to argue for the 'property rights' approach to dealing with land policy, which had been advocated by the Land Tenure Center. This property rights approach underlay the objectives and assumptions of the Agriculture Sector Reform Programme, which included a project to regularise agricultural squatters under leases where they would have to pay a rent, based on the open market value of the parcel of land. In a number of cases the agricultural squatter regularisation programme of the Ministry of Agriculture and the residential squatter regularisation programme of the Land Settlement Agency have come into direct conflict, as the different agencies have tried to regularise squatters in different ways in the same geographical location.

Fears over the impact of the residential squatter regularisation programme have waned since the passage of the new legislation in 1998, largely because of the slow pace at which the programme has proceeded (with the Ministry of Agriculture's programme also proceeding very slowly indeed). While some 23,000 people applied for Certificates

of Comfort by the cut-off date, only a handful have actually received the document and fewer still have received the full statutory lease. After the December 2000 national elections, which returned the ruling UNC to government, Humphrey took over a new portfolio of Minister of Integrated Planning and Development. The new Minister of Housing, Sadiq Baksh, has placed renewed emphasis on State-funded housing projects, rather than the regularisation of squatters on State land, and has reportedly sought to clip the wings of the well-resourced Land Settlement Agency.

### 5 Conclusions

Underlying much of the policy debate on Government squatter policy, and the competition between agencies, is the question of the environmental impact of squatters, and in particular the protection of watersheds. Squatters have been cast in the role of environmental villains and there is an assumption that any hillside farmer is a squatter, including those on private lands. Hillside farmers are characterised as 'invaders' of both State and private land who have illegally occupied land to which they have no legal rights (see, e.g. World Bank 1995). In reality, many hillside farmers in Trinidad's Northern Range have long, complicated, and located associations with the land they occupy. The creation of the social and moral category 'squatter' has, however, shut-off inquiry into actual land use practices and patterns of land tenure. The characterisation of all hillside farmers as 'squatters' has meant that there has been little attempt to work with them to understand the specific issues they face in managing the land under their control.

In many cases, the Ministry of Agriculture declines to offer its services to 'squatter' farmers. The current farmers' registration programme only allows farmers with legal title to register. This means that farmers without legal title are unable to receive incentive

# **Notes**

\* Acknowledgements are due to Ms Leigh Moreton for research assistance, and to funding made available through the DFID/ESCOR-funded 'Forest Science, Forest Policy' project. This paper has been written in a personal capacity and in no way represents the views of the Government of Trinidad & Tobago for whom the author works, or DFID. payments from the Ministry, including the 'watershed management' incentive under which farmers get subsidised seedlings from the Forestry Division. In some cases, Ministry extension agents have stated that they will not work with 'illegal squatters'. Those extension agents who do work with hillside farmers often see themselves as working against official Government policy, as expressed in Town and Country Planning regulations.

Extension agents working in Paramin, a hillside farming community in the Northern Range, for example, are proud of the extension work they have done to encourage farmers to utilise contour ridging and other soil conservation techniques, but see themselves as doing this work despite Government policy. They also, very quietly, argue that these farmers, the vast majority of whom do not have legal title, do not cause much erosion, citing the lack of sediment load in the streams flowing out of the area as evidence that soil conservation techniques are working.

The image of the uncaring and irresponsible 'slash and burn squatter farmer' has sustained a policy process that sees the State as the appropriate custodian of the Northern Range, either as the direct land-owner or as the rational planner, determining what activities should take place in which zone. Government 'squatter policy' only addresses illegal occupiers of State lands, while watershed management policy documents look to planning (i.e. land use zoning) to control the use of private lands. The science of watershed management has repeatedly drawn clear distinctions between State, private and 'illegallyheld' land, but these distinctions ignore more complicated relationships between people and the land they occupy. The simple category of 'squatters' reveals neither the complexity of people's social relationships with land, nor the varied land-use practices associated with them.

- 1. The Evening News, 14 October 1988, Editorial, 'Danger in those Hills'.
- Based on 1966 cadastral sheets. The definition of 'small parcel' used in this report is much larger than the definition of 'small' commonly used in the Ministry of Agriculture – a small parcel usually refers to a parcel of less than 5 acres.

- 3. These figures from the Forestry Division annual reports should be treated with some caution data from the Lands and Surveys Division indicates that some acquisitions in Trinidad have been outstanding for 40 years without being resolved. In my experience, Government agencies have a tendency to report matters as being completed in Annual Reports, when they have actually only been initiated.
- 4. The Express, 20 August 1989, Neil Parsanlal, interview with Eden Shand: 'Shand: Don't just Replant our Trees, Guard our Forests!'
- The Guardian, 6 May 1992, Anne Hilton's Environment column: 'What are the Plans for Forest Conservation', see also The Guardian, 5 April 1992, 'Trees for Life! Help Prevent Forest Fires'.
- The Guardian, 6 May 1992, Krishendaye Rampersad's Environment Friendly column 'Man in the Street Must be More Aware of Climate'.
- Robin Maharaj quoted in *The Guardian*, 7 June 1998, 'Flood Alert'; also quoted in *The Express* 16 June 1998, 'Met Office: We're in for rough times: T&T heading for wettest June in living memory'.
- 8. *The Express*, 9 July 1979, Letter to the Editor, Ean Mackay, Petit Valley 'We must preserve the Northern Range, and *The Express*, 29 November 1981, Davan Maharaj 'T&TEC raping our forests'.

## References

- Bishop, C., 1994, 'Welcoming Address', Proceedings of the Caribbean Forest Conservation Association seminar on National Parks and Protected Areas, Institute of Marine Affairs, Chaguraramas, Trinidad, 20 August 1994
- Caribbean Development Bank/Deutsche Forestinventur Service, 1983, 'Regional Forestry Sector Study – Country Report: Trinidad and Tobago', Report for the Caribbean Development Bank, Barbados, December 1983
- Chalmers, W.S., 1992, Trinidad and Tobago National Forest Action Programme: Report of Country Mission Team, Port of Spain: FAO/Forestry Division
- Conway, D., 1984, 'Trinidad's Mismatched Expectations: Planning and Development Review', *Universities Field Staff International Reports*, No. 26 [DC–1–84], Hanover: NH
- Cropper, J., 1997, 'Regreening the Foothills of the Northern Range, Part 1: first assessment of the potential for implementation of a programme of revegetation of squatter and other low income communities on the hillsides of the East-West corridor in Trinidad', unpublished report submitted to UNDP, Port of Spain

- The Guardian, 14 May 1993, Letter to the Editor, Lloyd Carter, Westmoorings 'Mourning the Mora Forest'.
- 10. The Guardian, 23 June 1989, Editorial 'No Need to Squat'.
- 11. *The Guardian*, 26 April 1988, Letter to the Editor, 'Discrimination Against Taxpayers'.
- 12. The Guardian, 4 April 1993, Anne Hilton, 'The Haitianisation of Trinidad'.
- 13. This was a particular theme in the late 1980s, with national debates about an amnesty for illegal aliens resident in T&T; see, e.g. *The Guardian*, 26 July 1988, 'Voice of the People: Menace of Illegal Immigrants' and *The Guardian*, 23 June 1989, Editorial 'No Need to Squat'.
- 14. The Guardian, 23 June 1989, Editorial 'No Need to Squat'.
- 15. *The Guardian*, 4 April 1997, Letter to the Editor, Blue Vex Land Owner (via e-mail) 'Advantage to Squatters'.
- Survey of 435 land users in Warren-Munro, Fairfield-Bromage, Couva, Penal/Puzzle Island and Freeport in Trinidad and Goldsborough in Tobago.
- Dardaine, S. and Look Kin, W., 1971, 'National Report for Trinidad and Tobago on Existing Problems in Watershed Management', unpublished report prepared for the Latin America Seminar on Watershed Management organised by FAO, Argentina, 22 November–16 December
- Driver, T. and Kravatsky, A., 1998, 'Community Institutions for Natural Resource Management in Brass-Seco-Paria, Trinidad and Tobago', unpublished report prepared for SEDU Annual Conference, University of the West Indies, St Augustine Campus, 1998
- Fairhead, J. and Leach, M., 2001, 'Science, policy and national parks in Trinidad', paper presented at the Workshop Changing perspectives on forests: ecology, people and science/policy processes in West Africa and the Caribbean, Brighton: Institute of Development Studies, 26–27 March
- Fairhead, J. and Leach, M., forthcoming, Science, Policy and Society: African and Caribbean Engagements with Transnational Environmental Knowledge and Power, submitted to Cambridge University Press
- Goswami, P., 1986a, 'Watershed management plan for Maracas watershed, Northern Range, Trinidad', FAO Project: TRI/79/069, St Joseph, Trinidad: GORTT, UNDP & FAO

- Goswami, P., 1986b, 'Guidelines for preparation of integrated watershed management plans with special reference to the Northern Range, Trinidad', FAO Project: TRI/79/069, St Joseph, Trinidad: GoTT, UNDP & FAO
- Government of Trinidad & Tobago: Forestry Division, 1939–1941, *Annual Reports*, Port of Spain: Government Printers
- Government of Trinidad & Tobago: Forestry Division, 1981, Report of the Cabinet-appointed Team on the Acquisition of Private Lands above the 300 foot Contour in the Northern Range, Port of Spain: Forestry Division
- Government of Trinidad & Tobago: Town & Country Planning Division, 1982, 'National physical development plan: Trinidad & Tobago', *Development Planning Series* No. TT3 – September, Trinidad and Tobago: Ministry of Finance and Planning
- Government of Trinidad & Tobago: Northern Range Hillside Development Policy Committee, 1988, Report of the Committee on Northern Range Hillside Development Policy, Port of Spain: Town and Country Planning Division
- Government of Trinidad & Tobago: Eastern Northern Range Project, 1991, Draft of the Eastern Northern Range Plan in Trinidad, 1991–1995: Diagnostic Study and Project Profiles, Port of Spain: Forestry Division/OAS
- Government of Trinidad & Tobago: Ministry of Planning and Development, 1992, A New Administration and Distribution Policy for Land, Port of Spain: Government Printers
- Government of Trinidad & Tobago: Environmental Management Authority, 2000, Bio-diversity Strategy and Action Plan for Trinidad and Tobago, Port of Spain: Environmental Management Authority
- Kairi Consultants, 1998a, 'National Parks and Watershed Management Project Watershed Areas: Development of Watershed Management Plans and Related Studies: *Main Report*', unpublished report for Government of Trinidad & Tobago/World Bank, Kairi Consultants, Tunapuna
- Kairi Consultants, 1998b, 'National Parks and Watershed Management Project Watershed Areas: Development of Watershed Management Plans and Related Studies: *Maraval Watershed*', unpublished report for Government of Trinidad & Tobago/World Bank, Kairi Consultants, Tunapuna
- Kairi Consultants, 1998c, National Parks and Watershed Management Project – Watershed Areas: Development of Watershed Management Plans and

- Related Studies: *St Ann's Watershed*, unpublished report for Government of Trinidad & Tobago/World Bank, Kairi Consultants, Tunapuna
- Lackhan, N., 1980, The Northern Range Reafforestation Project, Port of Spain: Government Printers
- Lackhan, N., 1984, 'Watershed management in Trinidad & Tobago', Commonwealth Forestry Review, Vol 63 No. 2: 107–14
- Land Tenure Center, 1992, 'Land Tenure Rationalization and Development Programme', report submitted to Ministry of Agriculture, Land and Marine Resources/Inter American Development Bank, February
- Lemel, H., 1993, 'Data analysis and findings on tenure, documentation and land use', in D. Stanfield and N. Singer (eds), Land Tenure and the Management of Land Resources in Trinidad and Tobago, Part 1, Land Tenure, LTC Research Paper, Madison: University of Wisconsin July: 43–91
- Pemberton, R., 1996, 'The Evolution of Agricultural Policy in Trinidad and Tobago, 1890–1945', unpublished PhD Thesis, University of the West Indies, St Augustine
- Ramnarine, A., 1998, 'Forest Policy in Trinidad and Tobago', in FAO/European Commission Forestry Policies in the Caribbean, Volume II: Report of 28 selected countries and territories, FAO No. 137/2, Rome: FAO: 559–607
- Stanfield, D. and Singer, N., 1993, 'Introduction: land tenure in Trinidad & Tobago', in D. Stanfield and N. Singer, (eds), Land Tenure and the Management of Land Resources in Trinidad and Tobago, Part 1, Land Tenure, LTC Research Paper, Madison: University of Wisconsin: July: 1–43
- Symes, G.A., 1991, Report on Forest Policy and Forest Management, National Forestry Action Programme, Port of Spain: FAO/Forestry Division
- Trinidad & Tobago, Land Advisory Committee, 1944, 'Proposed Land Allocation Policy', *Council Paper* No. 56, Trinidad: Government Printers
- Tropical Forest Action Programme, 1993, National Forestry Action Programme: Trinidad and Tobago. Main Issues, Summary Report and Priority Project Profiles, Port of Spain: Forestry Division/FAO
- World Bank, 1995, 'Trinidad and Tobago National Parks and Watershed Management Project', project briefing: http://www.worldbank.org.cgi-bin/waisgat ...9913+/pub20/ internet/pic/pid/tt40269.tt