

Land Tenure in the Sasumua Watershed

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A report on land tenure mapping for the **“PRESA Project”** component on
“Hydrologic Services in the Sasumua Dam Watershed”.
“PRESA” (Payment for Environmental Services in Africa) is a collaborative project
implemented by ICRAF and partners on Payment for Environmental Services (PES).

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The Terms of Reference for Land Tenure Mapping

To map Land Tenure in the Sasumua Dam watershed and produce maps of land tenure before and after independence (2008)

The Methodology

Mapping land tenure in the Sasumua water shed involved collecting data from the Ministry of Land on past and present tenure status. This was obtained from the Settlement and Adjudication departments at the head office and the district offices. The boundaries were obtained from the Survey of Kenya and the Physical Planning department. Supplementary information was obtained from interviews with key informants such as the Kenya Forest Services (KFS) and the Nairobi Water and Sewerage Company. Information was also obtained from secondary sources. The information was geo referenced and different map out puts obtained. The final outputs should be validated by the relevant stakeholders.

Pre independence land tenure scenario in the Sasumua watershed

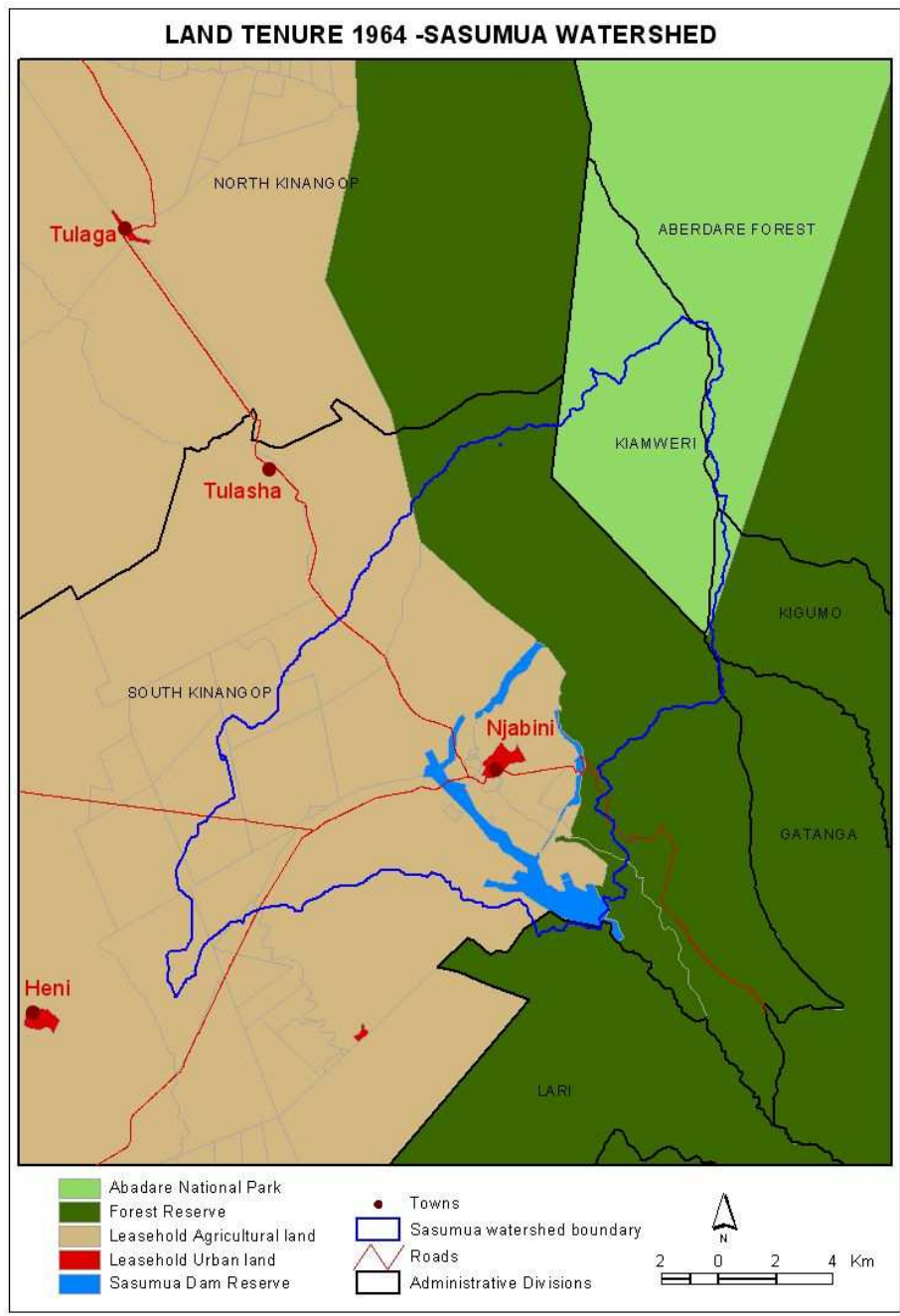
Land tenure in 1964-pre independence scenario

The Sasumua dam is found in South Kinangop, a highland area in central Kenya. The dams sits on the edge of the Abadare ranges which rise to the foot of Mt Kenya. The Sasumua watershed lies within the former “white highlands” which were set aside for exclusive European farming.

The colonial government identified and set aside land suitable for European settlement. These lands were popularly called the “white highlands”. Within these regions land was alienated for the development of urban settlements (Ogendo, 1991). The government also identified and reserved land suitable for forests.

In the 1940s, the area was identified as suitable for the construction of a dam due to its physiology and by 1955 the Sasumua dam had been constructed and was operational as a source of water for Nairobi city some 100 km away. Land was alienated and reserved for the dam and a treatment plant.

The map 1 shows the pre independence scenario and combines all four land tenure types that existed; leasehold agricultural land, leasehold urban land; forest reserve and the Sasumua dam reserve.



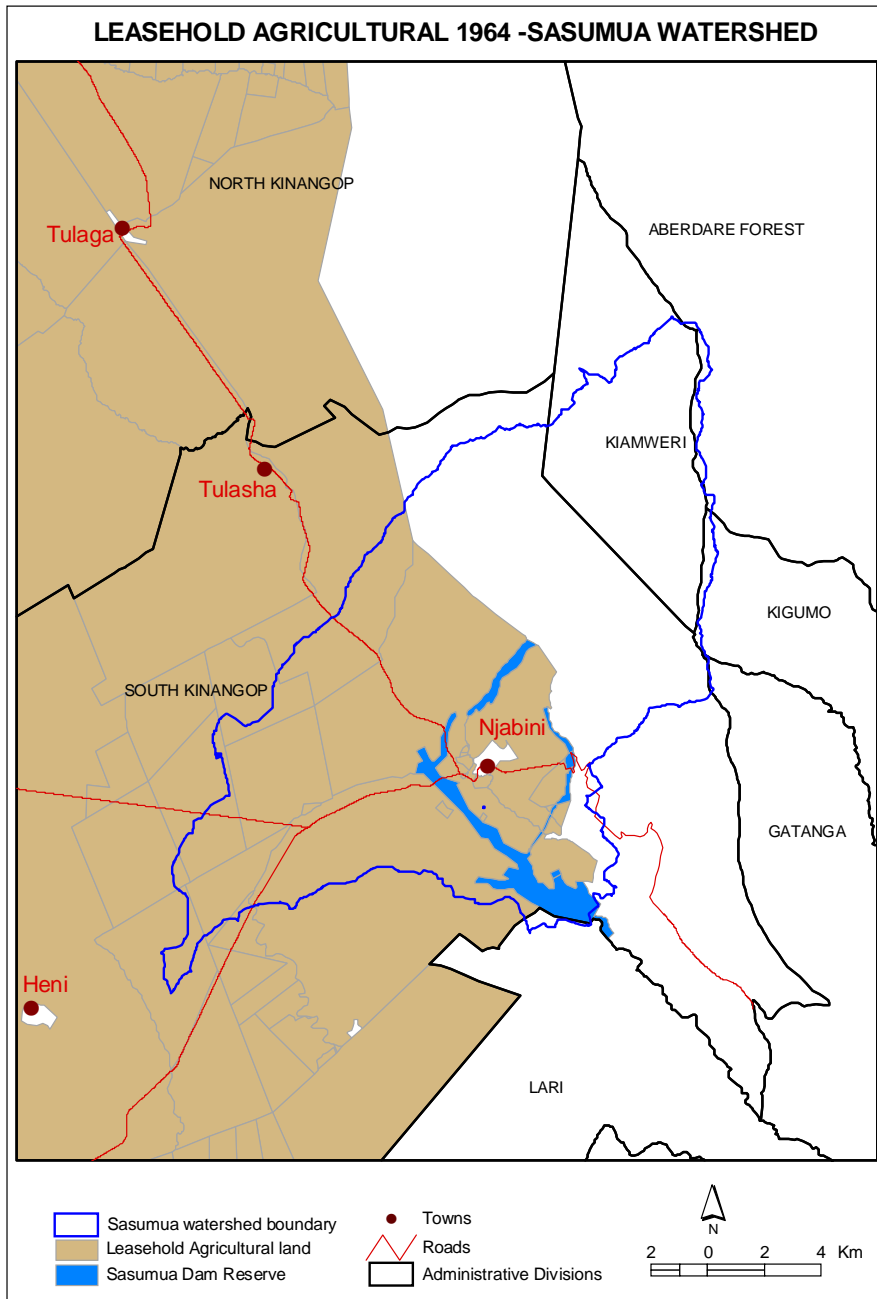
Map 1: Land tenure in 1964-Sasumua Dam Watershed

Leasehold agricultural land (1964)

The Crown Lands Ordinance of 1915 declared all land in the Kenya Protectorate to be Crown Land and allowed the colonial government to allocate land to European farmers as large scale commercial farms on 999 year agricultural leases (Onyango 2008). The total land area in the basin is 5593 hectares and 49% was taken up by the leasehold farms.

The population on these farms was low as it often comprised only the settler farmer and his laborers. Entry into the white highlands was restricted and the laborers were not allowed to come with their families. Movement permits were used to regulate the movement into and out of the region by locals. Agricultural activities tended to be expansive rather than intensive due to the large size of the farm units.

The map 2 shows the pre independence location of the leasehold agricultural lands within the Sasumua watershed.

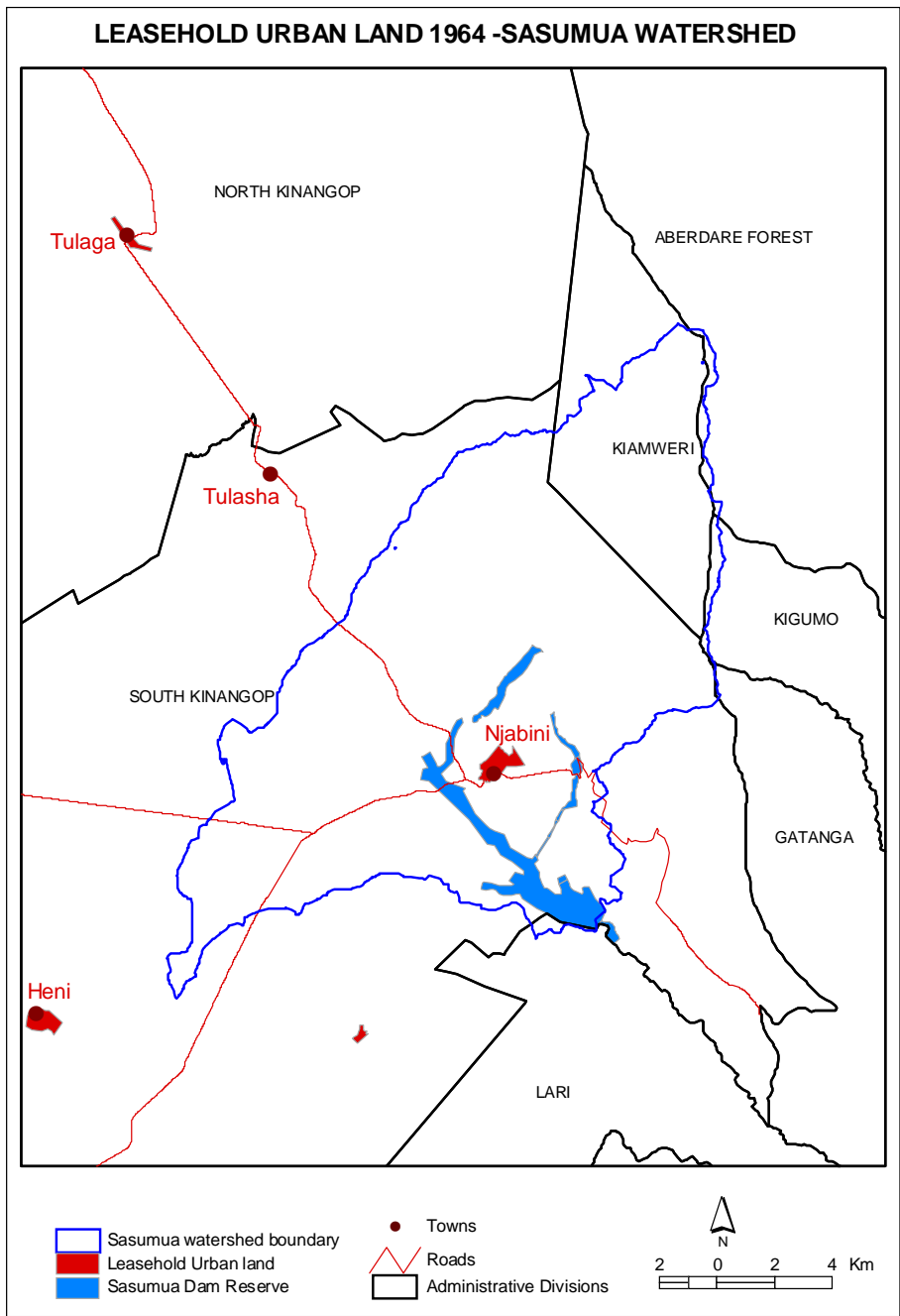


Map 2: Leasehold agricultural land – Sasumua Dam Watershed

Leasehold urban land (1964)

Njabini town is the only planned urban settlement within the Sasumua watershed. The planned township covered an area of 11 hectares.

The map 3 shows the pre independence location of leasehold urban land within the Sasumua watershed. This land tenure covered 0.2 % of the total water shed.

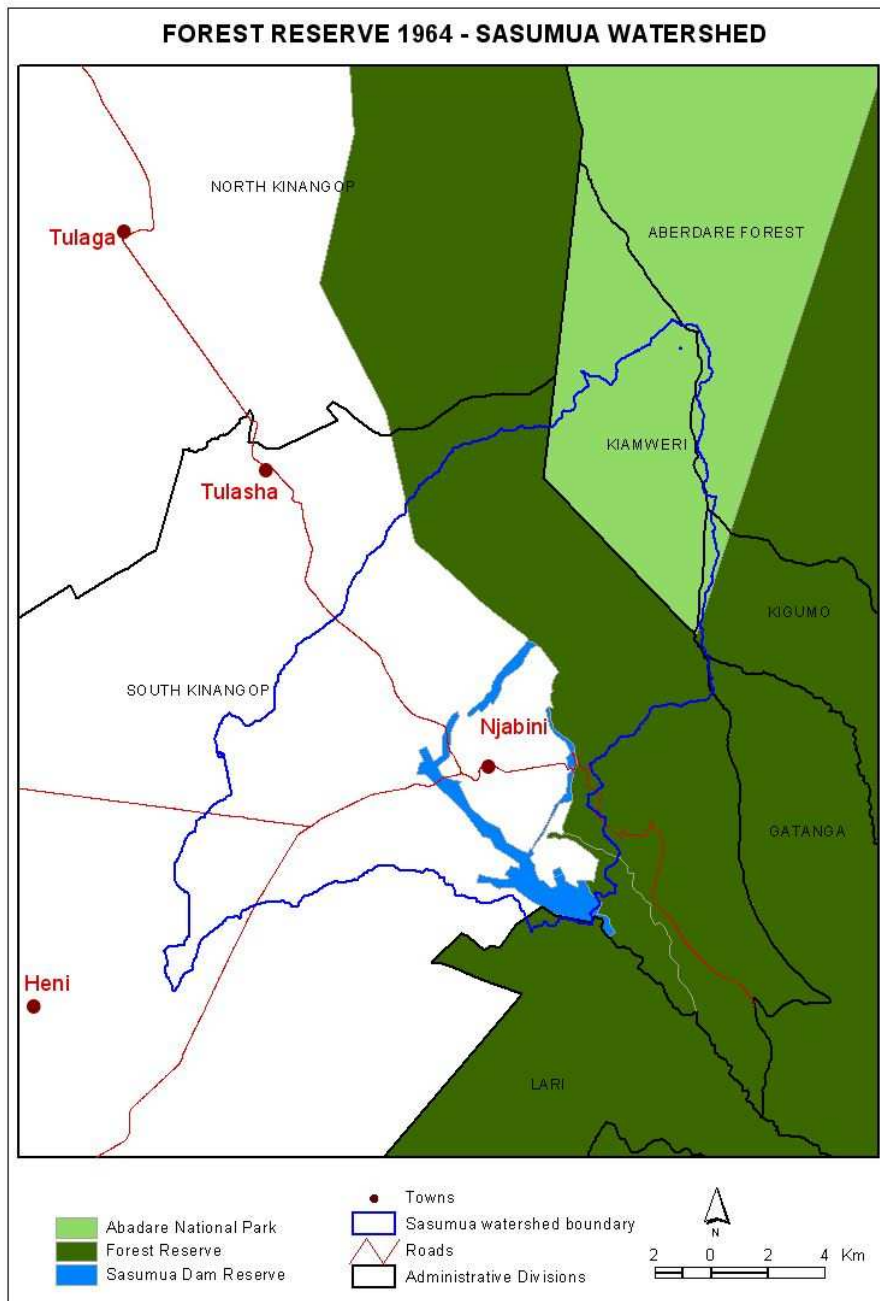


Map 3: Leasehold urban land- Sasumua Dam Watershed

Forest reserves (1964)

The Abedare forest forms part of the eastern end of the Sasumua watershed. To the south is the Kikuyu escarpment forest. The pre independence forest boundary within the watershed has not changed. The forests have patches of both indigenous and plantation forest. The plantation forests were initially maintained through the “shamba system” (non resident cultivation) but this has since been banned by the government. It was followed by a ban on logging which has reduced activities within the forests.

The map product 4 shows the location of forest reserves within the Sasumua watershed. Forest reserves covered 50 % (2816 ha) of the total water shed.

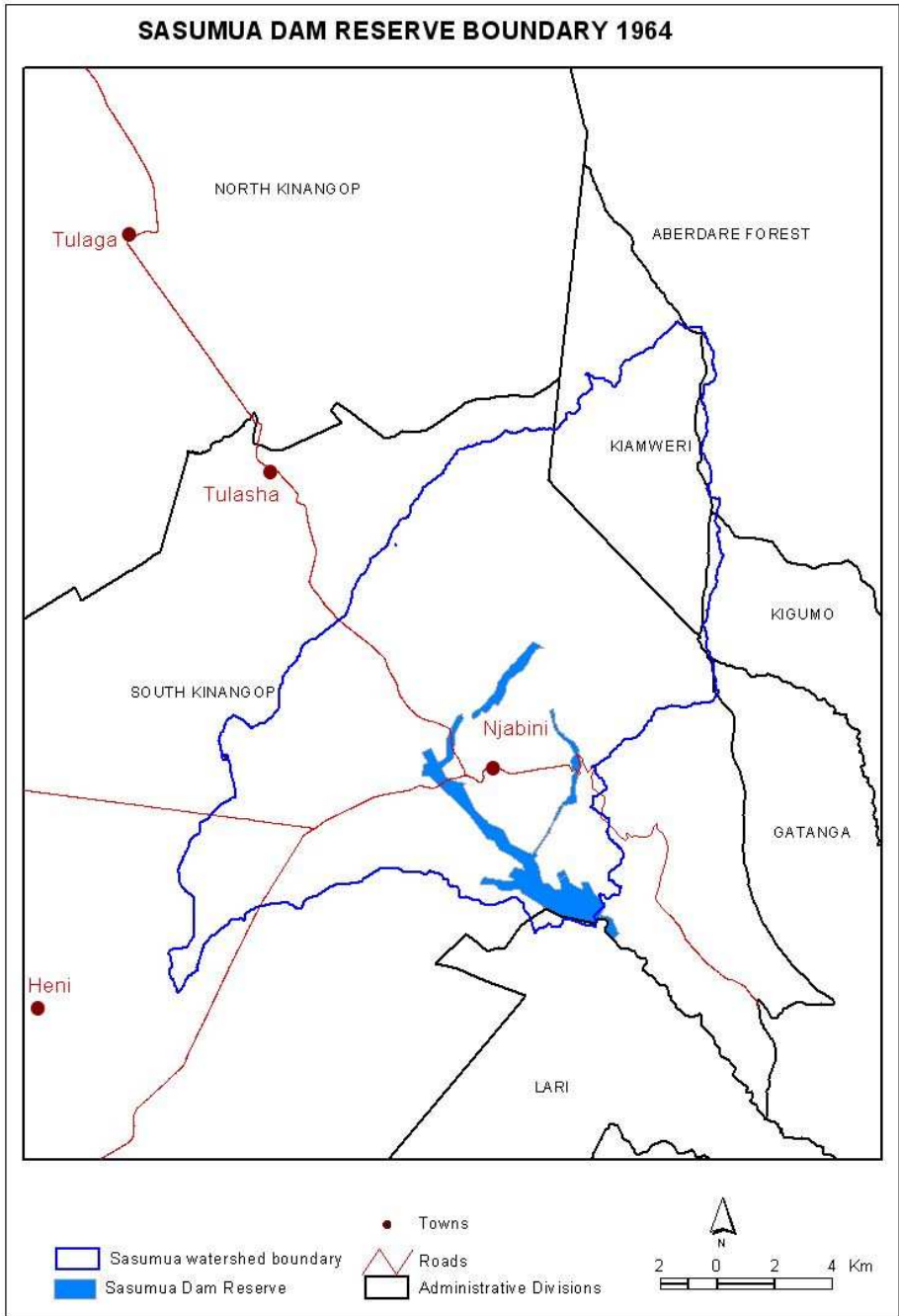


Map 4: Forest reserve – Sasumua Dam Watershed

Sasumua dam reserve (1964)

Land that was set aside for the dam was surveyed and reserved for exclusive use by the dam management (Kenya, Republic of. 1970). The Nairobi City Council which owned the water works managed the dam until a policy change in the water sector transferred the management of water supplies to private water undertakers (Kenya, Republic of. 2002). The dam is now managed by the Nairobi Water and Sewerage Company in which the City Council is the main share holder.

The map 5 shows the location of the Sasumua Dam Reserve.
It cover 0.8 % (43 ha) of the total water shed.



Map 5: Sasumua dam Reserve

Post independence land tenure scenario in the Sasumua watershed

Post independence land tenure (2008)

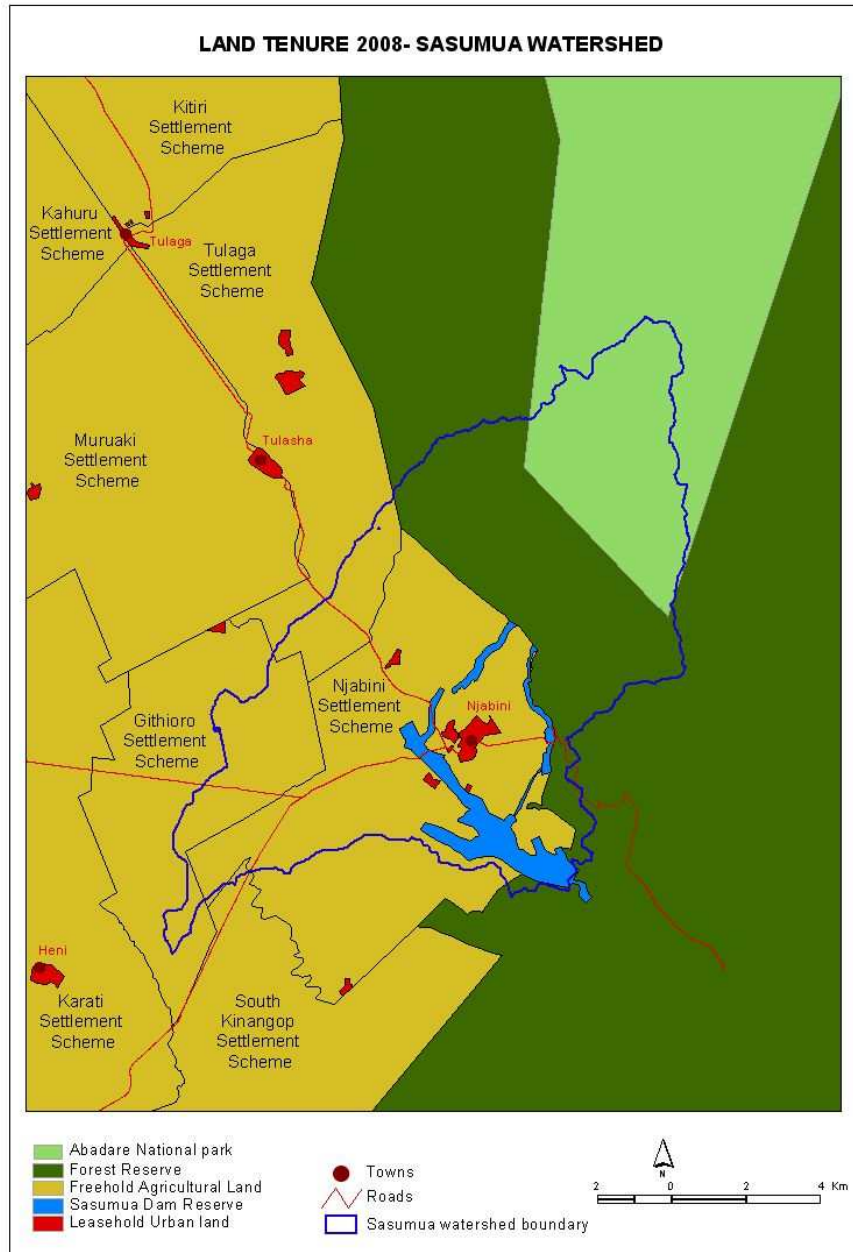
At independence all crown land converted to government land. The government embarked on a land redistribution programme whose objective was to involve local farmers in commercial agriculture (Kenya, Republic of.1980). This led to the establishment of the settlement schemes. The leasehold farms were converted to freehold settlement schemes.

The leasehold urban land remained the same even after independence but urban sprawl increased without a corresponding change of user.

The forest boundaries remained the same but there were changes in the forest activities.

There was a small increase in the land reserved for the Sasumua dam for expansion after independence.

- 1.1 The map 6 shows the post independence scenario and combines all four land tenure types that exist today; freehold agricultural land in the settlement schemes, leasehold urban land; forest reserve and the Sasumua dam reserve.

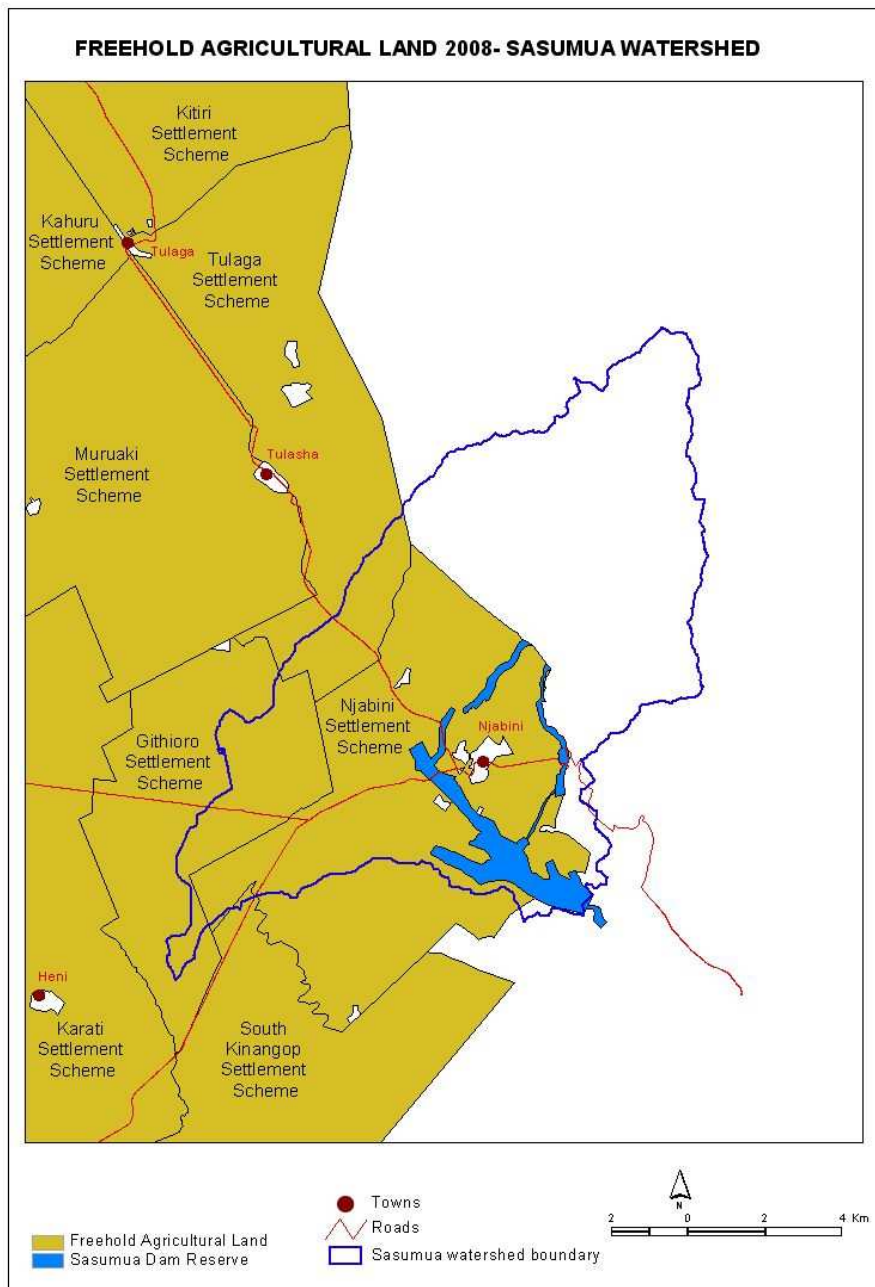


Map 6: Land Tenure Today (2008) - Sasumua Dam Watershed

Post independence freehold agricultural land (2008)

The Settlement Fund Trustee (SFT) was set up by the post independence government under the Agriculture Act Cap 318, to identify, plan and allocate land to local farmers. The farmers were allocated land and given seed money to set up their farms. They were to pay for the land and the seed money over a period of 25 years after which they obtained freehold titles. The large scale farms were purchased by the government and converted to settlement schemes. The resettlement exercise was started in 1964 and continued into the 1970s. By 1980 most of the prime land had been allocated but due to consistent demand even marginal areas were converted to settlement schemes. In the Sasumua watershed all leasehold farms were converted to settlement schemes.

The map 7 shows the location of freehold agricultural (settlement schemes) land within the Sasumua watershed. Today freehold agricultural land covers 48 % (2696 hectares) of the total water shed.



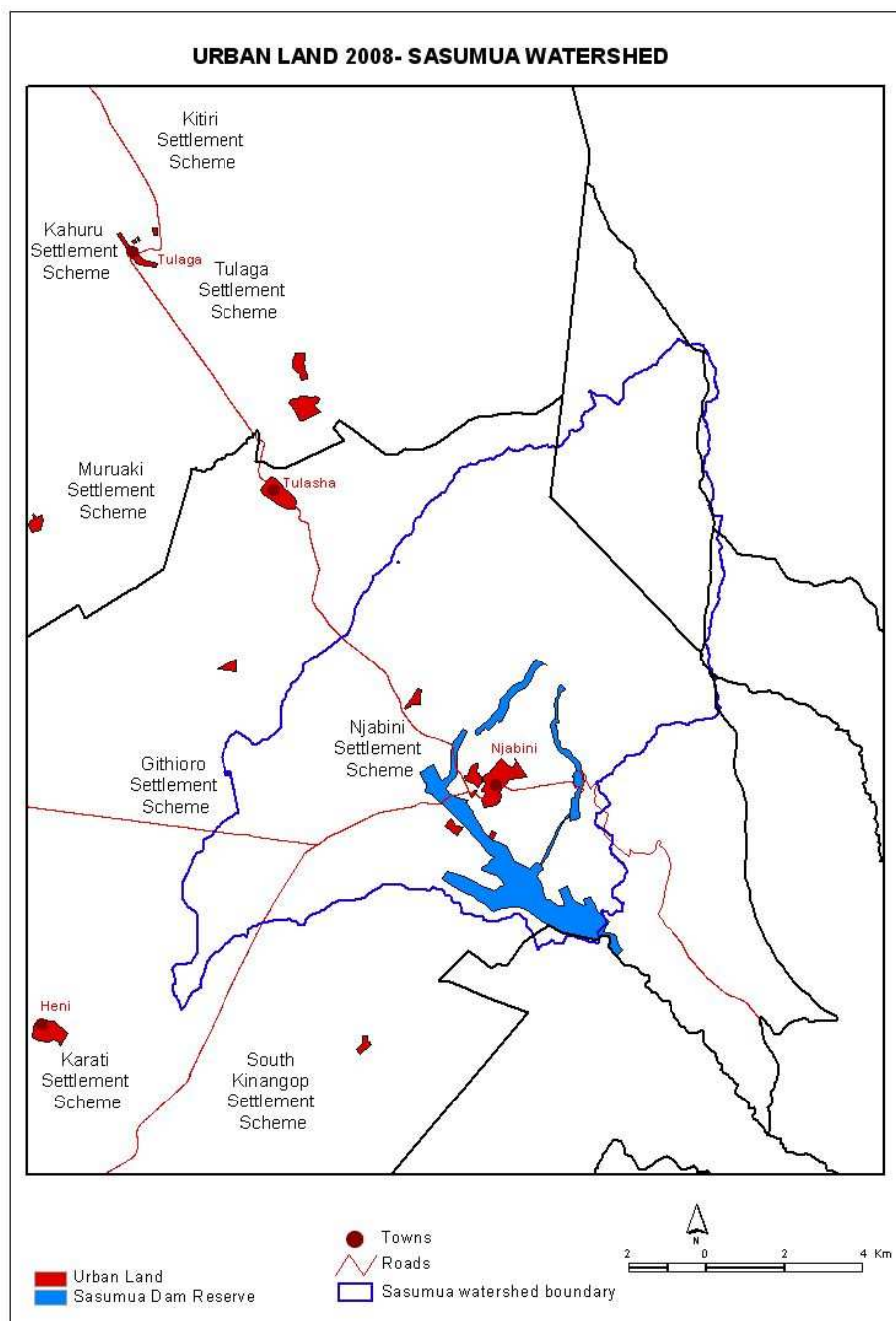
Map 7: Freehold agricultural land- Sasumua Dam Watershed

Post independence leasehold urban land (2008)

The original town boundary has not changed since independence. However the town has grown and there are many urban developments on land that is designated as agricultural. In the ideal situation the owners of these developments should apply for change of user from agricultural to the new user (Kenya, Republic of.1996). This would lead a corresponding change in land tenure status. Very few property owners have applied for change of user from agricultural freehold to non agricultural leasehold land tenure. The environmental implication of not doing so is poor environmental health since there can be no effective development control of urban developments on freehold land.

To get the accurate area of the land that has converted from agricultural freehold to non agricultural leasehold requires a lot of time and resources therefore this product does not present the accurate area. More time would need to be put into collecting and verifying data on applications, approvals and developments involving change of user within the watershed.

We can however conclusively state that non agricultural land use in the watershed has increased over time; 0.2 % in 1964 to 1.0 % in 2008. Map 8 shows leasehold urban land in the Sasumua watershed today(2008)

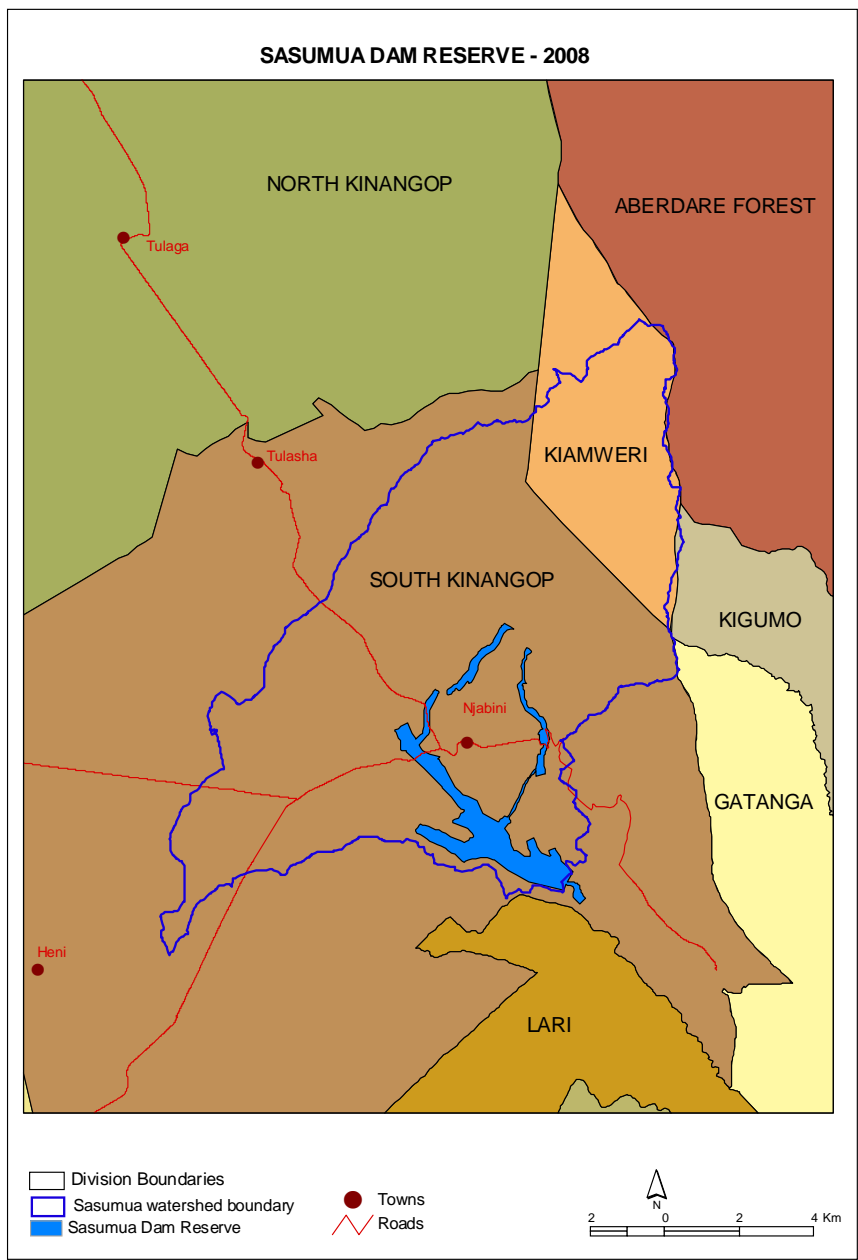


Map 8: Leasehold urban land-Sasumua Dam Watershed

Post independence Sasumua dam boundary-(2008)

The land reserved for the Sasumua dam was increased after independence for expansion.

The map 9 shows the current boundary of the Sasumua dam reserve. It covers 1 % (55 hectares) of the total water shed.

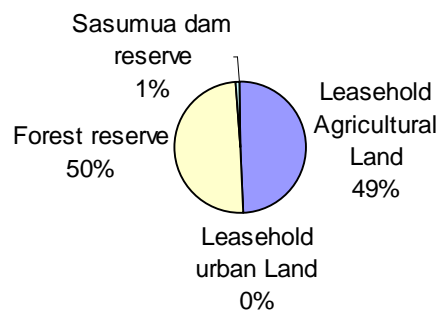


Map 9: Sasumua dam boundary today (2008)

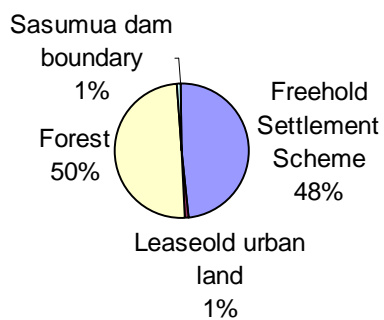
Summary of Land Tenure Status in the Sasumua Dam Watershed

Out put code	Land tenure	Area(ha)	%
	Pre independence scenario Land tenure in 1964	5593	100
1.1	Leasehold agricultural land	2723	49
1.2	Leasehold urban land	11	0.2
1.3	Forest reserve	2816	50
1.4	Sasumua dam reserve	43	0.8
	Post independence scenario Land tenure today (2008)	5593	100
2.1	Freehold agricultural land	2696	48
2.2	Leasehold urban land	26	1
2.3	Forest reserve	2816	50
2.4	Sasumua dam boundary	55	1

Lant Tenure in the Sasumua watershed (1964)



Land Tenure in the Sasumua Watershed today (2008)



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