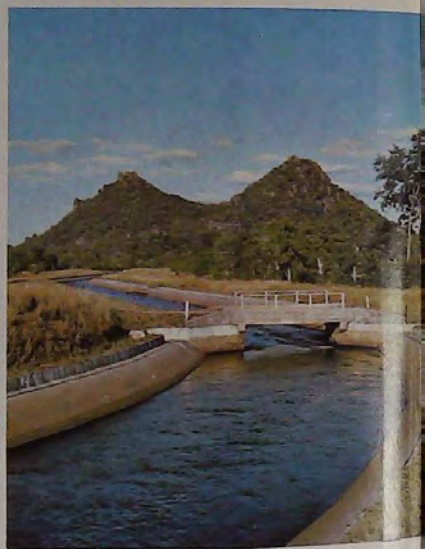


Rhodesia's
SOUTH-EASTERN LOWVELD





Some Lowveld rivers are already dammed for irrigation schemes. 36-square-mile Lake Kyle (*left*) is the main storage point on the Muliwe River, and is the country's largest internal lake. Completed in 1962, at a cost of £5.5 million, Kyle Dam, together with Bangala Dam and the Esquillingwe Weir, all on the Muliwe River, impound water for the irrigation of 63,000 acres, mainly sugar cane. The water from the Muliwe system passes along the 34-mile Triangle Canal (*below*) to private estates at Triangle and Hippo Valley. The Manjirenji Dam (*below left*), completed in 1966 at a cost of £2.8 million on the Chiredzi River, has the capacity to irrigate 20,000 acres, and now supplies the Sabi-Limpopo Authority's schemes at Mkwazine, where wheat and rice are among the crops grown. Along with 10,000 acres of wheat, 1,400 acres of rice (*right*) have been grown under spray irrigation in 1968, and promises to be a major Lowveld crop.





UNDER a clear sky, a fleet of combine harvesters swathe through vast acres of ripened wheat. Lines of cotton pickers move slowly through plants heavy with white bolls.

High, green palisades of sugar cane rustle their leaves in a passing breeze. Citrus trees extend in dark-green lines across the veld. Cattle, fat and sleek, graze in the shade of ancient baobab trees.

And everywhere is the hiss, patter and gurgle of irrigation, feeding the earth which has been husbanding its resources for a thousand years.

This is Rhodesia's South-Eastern Lowveld today. Its development to date ranks as one of the country's epic stories—but it is in its potential that it leaves most superlatives hopelessly wanting.

For untold centuries this great area, comprising Rhodesia's south-eastern corner, where the land falls away from the central plateau, or highveld, lay fallow. It was the home of herds of game and a handful of tribesmen who lived an isolated life, the region's harshness their protection against invaders.

Each summer the short, life-giving rains turned the rivers into torrents, scoring the countryside with deep, twisted scars, carrying away the precious topsoil in a pell-mell progress to the sea. During the long, dry months most of the river-beds were no more than sandy gullies, and the potentially fertile land lay exhausted, parched and brittle.

When Rhodesia was opened up in the 1890s, development first took place on the highveld, where a greater rainfall and lower temperatures made life and agriculture more of a proposition in those early days. Much was spoken then of the Lowveld as being unsuitable for European settlement, and at that time it was true.

The first to pioneer its potential were ranchers, and for a time the Lowveld could outdo even Texas, and boast one of the largest ranches in the world—the three-million-acre Nuanetsi Ranch. But the ranching could hardly be called efficient use of the land, for 40 acres were needed to support each animal.

The key to the Lowveld's riches lay in the provision of water, and as the area's rainfall was low it would have to be supplied by irrigation. But how?

Tom MacDougall, who settled in the area in 1919, showed the way, and with a limited amount of equipment but with boundless

confidence, cut an eight-mile canal from a weir he built on the Mtilikwe River. This mammoth task included a quarter-mile tunnel through a line of granite hills.

MacDougall, who had grown sugar in British Guiana, had recognised the promise of the land, and in 1932, a year after the first water flowed on to the virgin soil, he planted a crop. By 1937 he had built a small mill and was producing sugar. Government interest was aroused to such an extent that they bought MacDougall out in 1944, and for the next ten years the Sugar Board conducted extensive experiments on his land.

In Rhodesia, a developing country with an expanding population, such an area of potential wealth could not be long ignored, and, in the later years of Federation, and particularly afterwards, when the Rhodesian Government was again master in its own house, eyes were once more turned to the South-Eastern Lowveld.

The overall development of the area was so important, imposed such responsibilities and required so much capital, research and planning that preliminary work was done over a period of 20 years to provide an answer to the vital question: Was large-scale irrigated agriculture a feasible proposition?

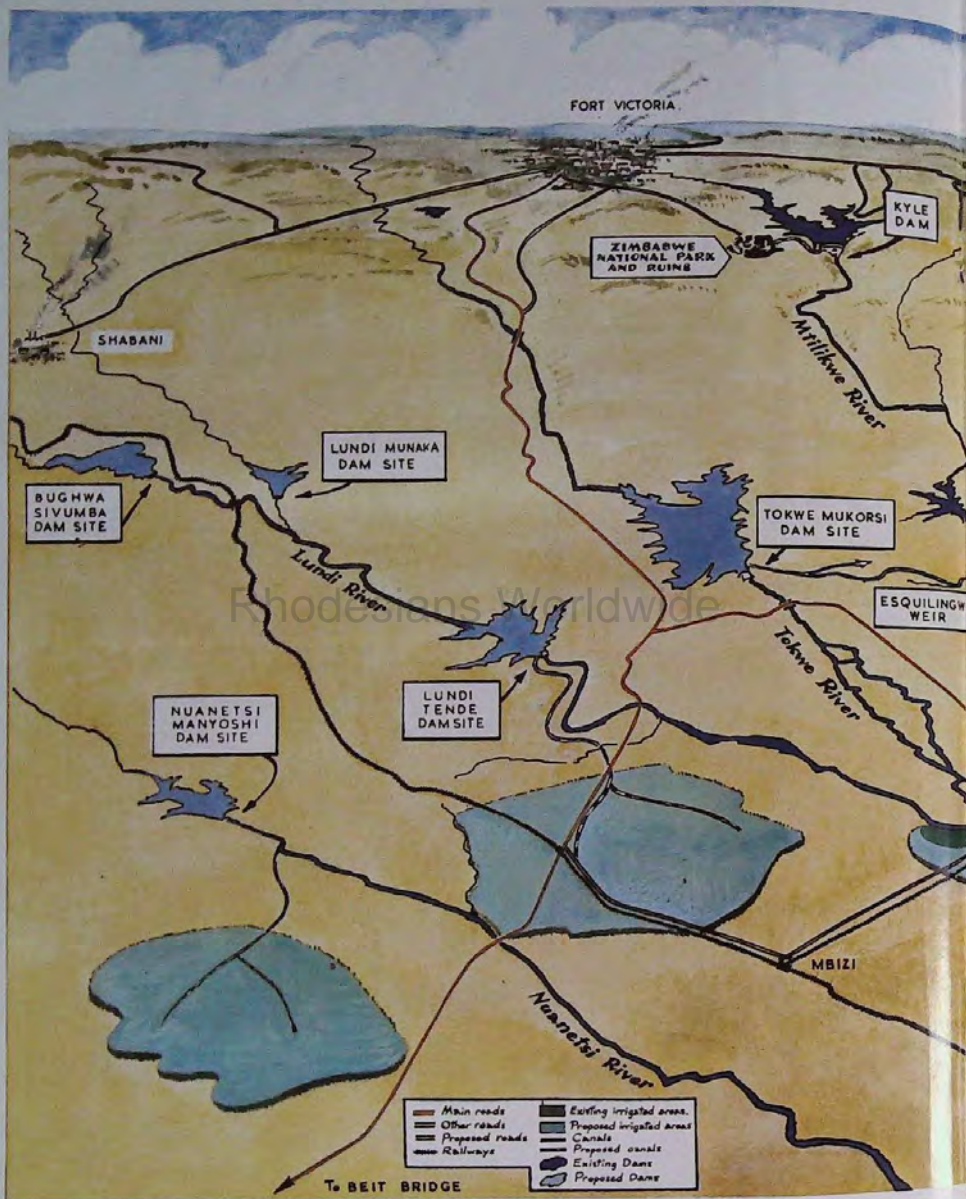
Government committees reported, rivers were surveyed and rainfall records over past years examined. Soil types were catalogued and potential dam sites visited. Agricultural research stations were also established to provide long-term research.

Gradually the pattern emerged. Paradoxically, although the Lowveld, had a reputation for being dry for so much of the year, approximately half of Rhodesia's rainfall flowed down the catchment areas of its main river systems—the Sabi, Lundi and Limpopo.

There was adequate water, if it could be stored and released as needed, instead of hurting to the

This potential settler on the Sabi-Limpopo Authority's scheme for African farmers at Chisumbanje holds some cotton grown under flood irrigation from the Sabi River. Yields on the area's rich, black-basalt soils are over 3,000 lb. seed cotton to the acre.





FORT VICTORIA

KYLE DAM

ZIMBABWE NATIONAL PARK AND RUINS

SHABANI

LUNDI MUNAKA DAM SITE

BUGHWA SIVUMBA DAM SITE

TOKWE MUKORSI DAM SITE

ESQUILINGWE WEIR

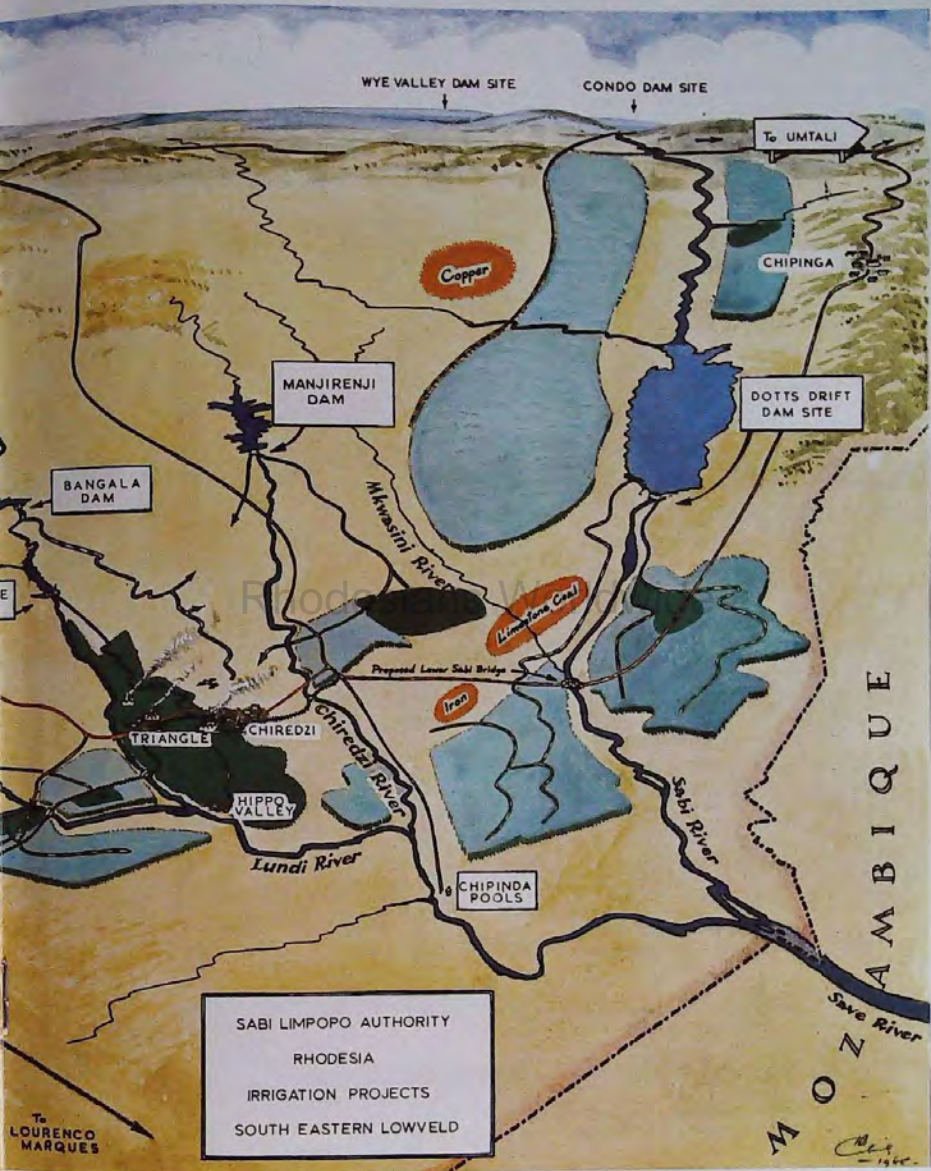
NUANETSI MANYOSHI DAM SITE

LUNDI TENDE DAM SITE

MBIZI

To BEIT BRIDGE

- | | | | |
|--|----------------|--|--------------------------|
| | Main roads | | Existing irrigated areas |
| | Other roads | | Proposed irrigated areas |
| | Proposed roads | | Canals |
| | Railways | | Proposed canals |
| | | | Existing Dams |
| | | | Proposed Dams |



WYE VALLEY DAM SITE

CONDO DAM SITE

To UMTALI

Copper

CHIPINGA

MANJIRENJI DAM

DOTS DRIFT DAM SITE

BANGALA DAM

Mhwasini River

Limpopo Coal

Proposed Lower Sabi Bridge

Iron

TRIANGLE

CHIREDZI

Chiredzi River

HIPPO VALLEY

Lundj River

CHIPINDA POOLS

Sabi River

Save River

MONZAMBIQUE

SABI LIMPOPO AUTHORITY
 RHODESIA
 IRRIGATION PROJECTS
 SOUTH EASTERN LOWVELD

To LOURENÇO MARQUES

1966

Indian Ocean in a few short months. In fact, research revealed that there was sufficient water to irrigate nearly one million acres.

To put this figure in perspective, this is nearly equal to the total of the present acreage of land worked by European farmers in Rhodesia. Thus, with the ability on the fertile Lowveld soils of harvesting two crops a year, and, under irrigation of obtaining greater yields, the country's agricultural output could be more than trebled.

In 1965 the Government made the decision that the development of the area was to be treated as a whole, with the establishment of the Sabi-Limpopo Authority. Its task was to co-ordinate, correlate and promote the expansion of the South-Eastern Lowveld by exploiting the water resources which flow through it.

The problems were vast and complex, and to cope with them the Authority was given wide-ranging powers over an area of 26,000 square miles—a region larger than Holland, Belgium and Luxembourg.

Much had been accomplished even before the creation of the Authority.

On the Mtilikwe River the Government had built two great dams, Kyle and Bangala, and the Esquillingwe Weir, to store water which passes through the 34-mile Triangle Canal. This water now irrigates 58,000 acres of sugar cane, 1,200 acres of citrus and over 3,000 acres of mixed crops on private estates.

At Triangle and Hippo Valley estates almost £25 million of private investors' money had been invested, and three mills now process sufficient cane to make sugar the third-largest crop produced in Rhodesia. Cattle are also becoming a profitable proposition here, with the residues of the mills and stockfeeds grown under irrigation providing an ideal diet.

On the Chiredzi River, the Manjirenji Dam, built by Government, now supplies water for one of the Sabi-Limpopo Authority's own schemes at Mkwasi—for, where private enterprise is shy to venture, the Authority can initiate and carry through schemes, which when proved to be a viable proposition, can be handed over to private enterprise. Here, development costing £2½ million has been particularly dramatic. Work was started on 10th January, 1966, and by May of the same year 2,400 acres of virgin bush had been cleared, canals constructed, a 26-mile power line erected and a crop of winter wheat planted.

In the 1968 season, 10,000 acres at Mkwasi had yielded over 15,000 tons of wheat—compared with a national crop of just over 2,000 tons four years ago. The scheme when fully developed will cover 18,000 acres.

Across the Sabi, Rhodesia's largest internal river, on the rich black-basalt soils of the Chisumbanje Tribal Trust Land, the Authority, through another scheme, is introducing African farmers to the world of modern irrigated agriculture. In 1967, 1,200 acres were planted with winter wheat which was flood-irrigated from the Sabi River. Despite the ravages of a plague of rats, a final yield of 1.7 tons to the acre was achieved.



At Hippo Valley (above), one of the large private estates, and on 42 smaller individual farms, over 28,000 acres of sugar are under irrigation, the contour-hugging canals forming a pattern amongst the cane which is visible only from the air. The Chiredzi Mill, seen here, is one of three mills in the Lowveld, and has a production capacity of over 600 tons of raw sugar per day.



Smaller, outlying estates are linked to the railway line, which serves the larger estates direct, by road transport (left). Here bagged wheat is being loaded at Mkwasi. As the crops increase bulk handling will be introduced.



Top left: At three Government and two private research stations constant experiments with new varieties of tropical and subtropical fruits and vegetables and mixed field crops are in progress. *Top right:* Part of Chiredzi, the administrative and commercial centre of the Lowveld. *Centre:* A baobab, symbol of the old Lowveld, stands in an Mkwase wheat field. Self-sufficiency in this vital foodstuff is possible with further development. *Bottom left:* At Hippo Valley, with its 1,500 acres of citrus, there are packing facilities for fresh fruit, a juice extractor and concentrator plant and a canning factory for fruit segments and fruit juice. *Bottom right:* Buffalo Range airport is situated in the heart of the developed Lowveld and provides daily connections with the Rhodesian and international air networks.



Planters' Inn, Chiredzi (above), is an ideal base for visitors to the Lowveld. After visiting the estates and witnessing the transformation of bushveld into rich, productive, agricultural land, many visit Chipinda Pools, 30 miles to the south, where schools of hippo (left) can be seen in the shallows. The more intrepid visit the Gona-ré-Zhou ("Place of the Elephants") Game Reserve, where, in addition to fine game-viewing, there are the beautiful Clarendon Cliffs (below) along the Lundi River. Access to the reserve is by 4-wheel-drive vehicles only.



One Government Minister has described the Authority as being "in the water business in a big way". Broadly speaking this is true, for the Authority plans to build the dams, supply the water and encourage private enterprise to invest the capital necessary to use the water and process the products of the irrigation schemes.

Within its sphere of influence are most of the dam sites on the major rivers; and plans are already drafted for the exploitation of the Sabi, Nuanetsi, Tokwe and Lundi rivers, with the irrigable areas which would be supplied by water from these rivers earmarked for development.

The basic infrastructure for much of the Lowveld's future expansion is already in existence. Tarrd roads have been built connecting the region with the rest of the country, and a railway line cuts through the present areas of development linking them with the Rhodesia Railways system and the East Coast port of Lourenco Marques. Plans are in hand for the Lowveld to be connected to the national electricity grid in 1970, power being supplied at the present time by local generators.

Chiredzi, the present administrative centre, provides all the necessary facilities for the present Lowveld population of 2,000 Europeans, 24,000 employed Africans, and their dependants, a total of 100,000 people, and has been planned for rapid growth. An airport has been built, with full immigration and customs facilities, which is linked by regular, scheduled flights to the Rhodesian and international air networks.

Tremendous advances have been made in the transformation of the Lowveld, but it is in the forecasts made, not by stary-eyed enthusiasts but by sober economists, that the truly enormous potential of this great area is realised.

They claim that the utilisation of nearly a million acres of irrigable land will create employment for 30,000 Europeans and 400,000 Africans, who will support a population of nearly two million. With the secondary industries and services needed to process the primary products and serve the large population, they are confident that Rhodesia's growing population—perhaps the most pressing problem in developing countries—can be maintained in productive employment.

As is already happening with wheat, where the Lowveld already supplies 20% of the country's needs, the production of large amounts of food-stuffs and industrial crops, which were previously imported, will aid the country's balance-of-payments position, and is expected to add over £100 million annually to Rhodesia's foreign currency earnings.

As the Lowveld waited for centuries for the provision of water to reveal its riches, the need now is for that modern catalyst—finance. To realise its full potential over the 25-year programme the Authority has set itself, the immense sum of over £250 million is required. Already £12 million has been provided by Government for roads, railways, dams, etc., and £26 million has been invested by private companies.

The knowledge and expertise are available, as is the land and labour, and the achievements to date reveal the promise to be a profitable one.