

REPUBLIC OF SOUTH AFRICA

200TH AFRICA

*Strengthening indigenous governance,
benefit sharing and capacity building
for traditional phytomedicines*





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SETTING THE SCENE

South Africa is widely regarded as the third most biologically diverse country in the world, after Indonesia and Brazil, with many endemic species. While the country represents around 2% of the world's landmass, it is home to 10% of the world's plants, 7% of the world's reptiles, birds and animals, 15% of known coastal and marine species and an entire floral kingdom within its borders, namely fynbos. This richness in biodiversity represents a variety of opportunities in the form of marine, freshwater and terrestrial animals, plants and micro-organisms that may be used for scientific research or commercial exploitation.

South Africa's rich biodiversity is an economic sector that can be tapped to contribute to job creation and rural development. Through a number of initiatives, this economic sector has shown a constant annual growth of 6% in recent years. The development of the country's biodiversity economy takes place within the context of a National Development Plan adopted in 2012, the National Biodiversity Economy Strategy (NBES) and Action Plan adopted in 2015, the National Strategy for Sustainable Development and international obligations emanating from the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES), the United Nations Convention on Biological Diversity (CBD), including the Nagoya Protocol on Access and Benefit Sharing, as well as the Aichi targets and the implementation of the CBD Strategic Plan.

The NBES is the country's blueprint for sustaining the growth of the wildlife and bioprospecting industries. Its aim is to provide a basis for addressing constraints for growth in the sector; outline stakeholder responsibilities and monitor progress with regard to transformative enabling interventions. The NBES provides the opportunity to develop the rural economy of the country while addressing environmental imperatives



of government, and includes the establishment of a Bio-Products Advancement Network South Africa (BIOPANZA) to enhance development in the natural products sector.

Collaboration is required at local, regional and international levels to respond meaningfully to the challenges posed by market forces. Therefore, we need to intensify our investments in research and innovation in order to strengthen our capabilities for value addition or benefit innovation from plants in the agro-processing sector and improving the quality of local products.

Among the species presently being sustainably utilized by local communities is *Sceletium tortuosum*, also known as kanna. This is a climbing or creeping plant with white to pale yellow, pale salmon or pale pink flowers. It belongs to the ice plant family (Aizoaceae) prevalent in the karroid areas of Western, Eastern and Northern Cape Provinces of South Africa. Kanna is also commonly referred to as *kougoed* (an Afrikaans word derived from the old Dutch word *Kauwgoed* meaning "chewing stuff"). It is a kind of low-growing, succulent shrubby species containing mesembrine which is known for its effects on the central nervous system. To this day *kougoed* is held in great esteem by indigenous people as a versatile masticatory, tea, health tonic and herbal extract.





Biodiscovery case

A bioprospecting permit was awarded to HG&H Pharmaceuticals (Pty) Ltd by the South African Department of Environmental Affairs allowing it to commercialize the medicinal properties of kanna. The company acknowledges the fundamental role indigenous knowledge plays as a departure point for new product discovery and innovation. It is an acknowledgement that was formalized through a landmark benefit sharing agreement with the San Raad van Suid Afrika (San Council of South Africa) jointly with the Paulshoek and the Nourivier communities. This agreement marked Africa's first prior informed consent and benefit sharing agreement with an indigenous community for the commercialization of an indigenous medicinal plant.

HG&H Pharmaceuticals (Pty) Ltd is a local innovative pharmaceutical and natural ingredients company that focuses on the discovery, research and development of evidence-based natural medicines and dietary ingredients for common mental health and wellness conditions. The company conducted research and development on kanna and developed a quality-based extract called Zembrin®, which has mood-enhancing, anxiety-reducing and cognitive-function-enhancing activities, all of which can be of benefit to healthy people suffering from stress. The unique signature of Zembrin® is 'alert serenity'. Zembrin® is currently being marketed across the world including South Africa, USA, Canada, Brazil, Malaysia and Japan. In Canada, Zembrin® has been approved for sale to "support cognitive function in adults".

The benefit sharing agreement concluded with the South African San Communities is based on unconditional monetary benefits. Since 2010, HG&H Pharmaceuticals (Pty) Ltd has shared more than 10 million rand (i.e.,

US\$660 000) in financial benefits with the community. In terms of the agreement, the company shares 6% of all income from Zembrin® with the South African San Communities, which, in turn, allocate 50% of their share with the villagers of Paulshoek and Nourivier in the Namaqualand region of the Northern Cape Province. It is in these communities that the ethnobotanical research was conducted. As a result, Zembrin® is the only *Sceletium* product to carry the logo of its indigenous beneficiaries, the San Raad van Suid Afrika.



Further, HG&H Pharmaceuticals (Pty) Ltd, through its partnership, has established massive cultivation and processing plants in the Mpumalanga and Limpopo provinces. This project has created employment opportunities across the value chain. During the annual cultivation and handling of this crop, approximately 30 people are employed in the process, the majority of whom are women.



EYEWITNESS STATEMENT

Melvin Cloete, Chairperson of the Paulshoek Raad (Council) describes Paulshoek as a very laid-back community. This is one of the poorest communities in the Northern Cape and is managed by the Kamiesberg municipality. He believes the collaboration between HG&H Pharmaceuticals (Pty) Ltd and the community is important, particularly since the annual benefits received from the supply of kanna benefits everyone, not just a few individuals.

"I love the peacefulness and way of life. Given that we are the poorest community, we live off nature. This is a real highlight for me about this place. Before we use the money, we have a community meeting. One of the main activities is to take primary school kids to the veld (fields) and teach them about the different plantations and medicinal properties/values. Due to the recent drought, anything that we get from the company is put back into the veld. One of the things that we did was to dig boreholes to ensure water conservation. The aim is to ensure that the money is not spent on luxuries, but on essential community expenditures".

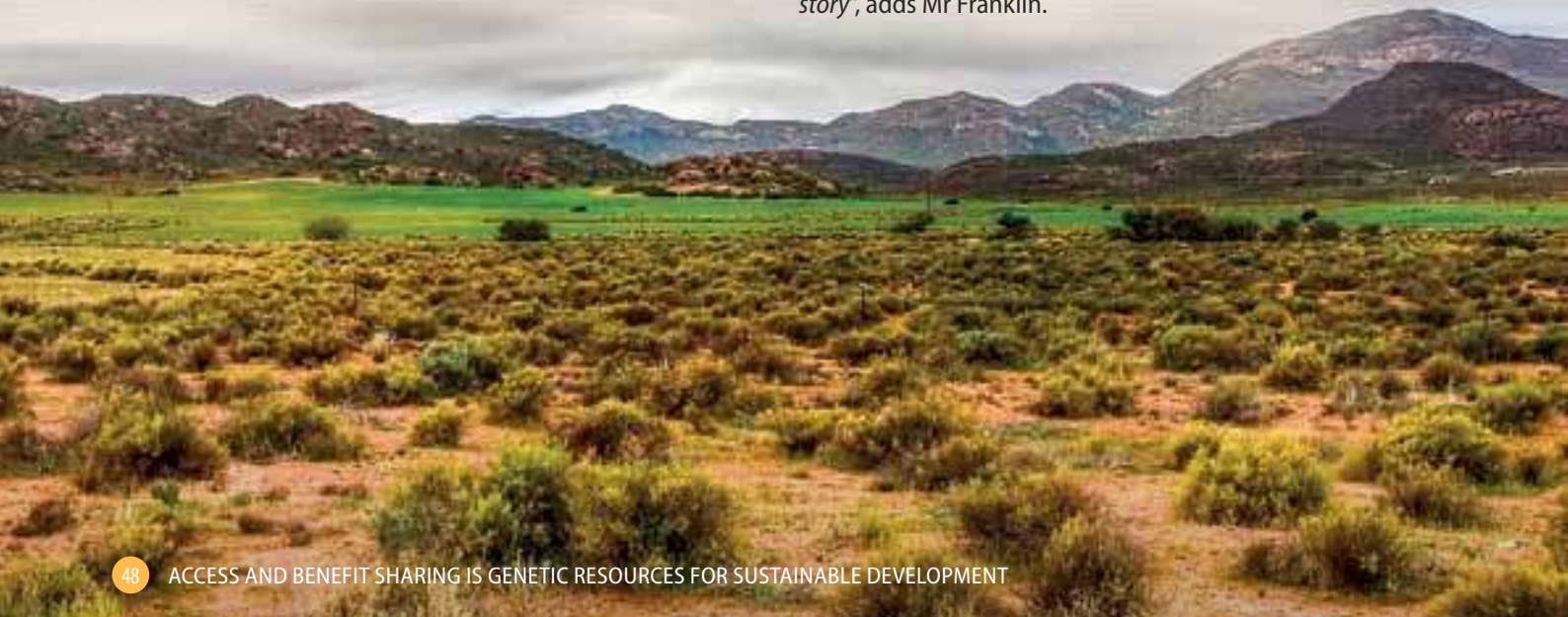
MELVIN CLOETE, Chairperson of the Paulshoek Raad

Committee and board member elections are some of the challenges faced by Paulshoek and Nourivier communities. Confirming Mr Cloete's sentiments, Mr Collin Louw of the San Raad said that is where the relationship with the Council is valuable, because it helps resolve some of these challenges.

Reflecting on the use of Kougoed in Paulshoek, Melvin giggles: *"The older generation still uses kougoed and people on the farm still use it. It is like a bubble gum that you put in your mouth, or you boil it for flu or other minor ailments as a remedy. The younger ones do not use it. All they are interested in is DSTV [the main satellite TV service provider in South Africa], but some of them do use it",* he says.

Mr Richard Franklin, Managing Director of HG&H Pharmaceuticals (Pty) Ltd, appreciates the three-way partnership between the San Raad van Suid Afrika, HG&H Pharmaceuticals (Pty) Ltd and the Government of South Africa, particularly the Department of Environmental Affairs. *"It was very useful to engage with a recognized organization that represented the indigenous community. Whilst they might have recognized traditional leaders in the community, it is often difficult to engage, and even more complicated when there is a need to enter into a legal agreement. This is where the San Raad van Suid Afrika really came through and made things easier than they would have been. The government provided very good assistance by providing guidance regarding the requirements and aspects of the regulation that we did not understand."*

It is the sentiment of HG&H Pharmaceuticals (Pty) Ltd that it is amazing that modern science is now being applied to validate traditional medicine that goes back to more than 300 years of use in the community. It is a very different world that we live in, but the same plant is allowing the people from the modern day to cope the same as those in the ancient times. *"It is great for us to see how the international community has reacted to this story",* adds Mr Franklin.





In fine focus: SDGs implemented by the biodiscovery case

The cultivation of *Sceletium tortuosum* happens away from its natural habitat because during research and work with the original traditional healers “We discovered that there are different chemical properties of the same plant that occur in the wild and we were interested in the one specific chemical property that certain plants have. We have isolated those plants and we try and grow them outside of their natural habitat, preventing cross-contamination with any natural plants that might change the chemical properties”, says Mr Franklin.

The cultivation and processing plants are located in the Mpumalanga and Limpopo provinces. This project has created employment opportunities across the value chain. During the annual cultivation and handling of this crop, approximately 30 people are employed in the process, the majority of which are women, thereby contributing to SDG 5 on gender equality. The project also directly contributes to SDG 8 by promoting sustained, inclusive and sustainable economic growth, and full and productive employment and decent work for all.

Due to the recent drought in the Northern Cape, the community of Paulshoek has used some of its proceeds from this project to install a borehole for the benefit of all members of the community. Their knowledge exchange programme and the effort to plough back into the bush to conserve nature is a clear illustration of SDG 17, partnership for the goals, (climate action) in action.

Zembrin® is currently being marketed across the world including South Africa, USA, Canada, Brazil, Malaysia and Japan. It is the world’s first patented, standardized and clinically studied extract of an elite selection of *Sceletium tortuosum*. This contributes to building the South African economy and puts South Africa on the map.



Legal and political enabling environment for ABS and the Nagoya Protocol

In 2011 and 2013, respectively, South Africa signed and then ratified the Nagoya Protocol on ABS, symbolising the importance of this legal instrument. The country has made remarkable progress since it became a contracting party to the CBD in 1995. This has included taking policy and legislative steps towards promoting conservation, sustainable utilization of indigenous biological and genetic resources and associated traditional knowledge, while promoting the fair and equitable sharing of benefits arising from their utilization. The relevant legislation is the National Environmental Management: Biodiversity Act (NEMBA), 2004 (Act No. 10 of 2004)

and the Bioprospecting, Access and Benefit Sharing (BABS) amended Regulations, 2015 – both introduced and implemented before the adoption of the Nagoya Protocol on ABS.

HG&H Pharmaceuticals (Pty) Ltd is the first company to be issued with a bioprospecting permit in South Africa after the BABS Regulations of 2008 came into effect. These regulations, which regulate bioprospecting activities through a permit system, were developed in terms of NEMBA, which establishes rules for ABS in South Africa.





MESSAGE FROM AN SDG ADVOCATE



“These are encouraging initiatives that demonstrate the value of new kinds of partnerships to kickstart local economic development, and to provide an inspiring platform for jobs and entrepreneurship, innovation and social upliftment, particularly among women. South Africa is among the first countries in the world to regulate the protection and use of indigenous biological resources and associated traditional knowledge. South Africa was also among the earliest signatories of the Nagoya Protocol, in fact it was the 12th country to ratify it, in January 2013. This highlights the full inclusivity of communities and the private sector; and it emphasizes the need to aim for donor and public, technical, and financial harmonization within the overall sphere of implementing the Nagoya Protocol in a coordinate and purposeful way. UNDP South Africa will continue to bring knowledge, lessons learnt and experiences from other countries to South Africa, and as well as catalytic financial assistance so that the country can leap ahead and learn from mistakes and successes elsewhere without going through inefficiencies of misdirected effort. The UNDP South Africa Country Office is extremely proud that for the last 24 years, we have been able to mobilize funds and to support the development priorities of the South African Government.”

DR JANICE GOLDING, UNDP South Africa Environmental Focal Point



*“South Africa believes that meaningful partnership and collaboration between the traditional knowledge holders and scientific community or research institution is critical for ABS success. Bioprospecting and Biotrade activities have supported local livelihoods through the sustainable utilization of indigenous biological resources as informed by the associated local traditional knowledge. Since then, we have seen a steady growth of the bioprospecting industry in the country, driven by the increased demand of indigenous plants by various industries. The Department of Environmental Affairs recognizes the contribution of this bioprospecting project to conservation and sustainable use efforts through cultivation of *Sceletium tortuosum* in order to reduce pressures on the wild species. The cultivation site and processing facility for the high-quality raw material for this project are in rural farming areas, where there is a high level of unemployment, hence this project is also contributing in terms of creating the necessary jobs for those local communities.”*

THE HONOURABLE EDNA MOLEWA, Minister of Environmental Affairs