Leveraging Indigenous Peoples' foods and botanicals to improve health, social wellbeing, cultural identity and economic self-determination

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For Aboriginal and Torres Strait Islander peoples (hereafter Indigenous Peoples), colonisation and the ongoing impacts of globalisation threaten the viability of Indigenous food systems. The suppression of traditional knowledge, displacement from ancestral lands, destruction of natural resources and the decline in culturally appropriate and locally sourced foods compromise Indigenous Peoples' ability to maintain and access their traditional food systems. This is further exacerbated by biodiversity loss, landscape degradation and exploitative and profit-driven markets. These issues are compounded by increasing land scarcity associated with population growth, urbanisation and the ongoing impacts of climate change. Collectively, these factors undermine Indigenous food security and food sovereignty while also contributing to the prevalence of non-communicable disease in Indigenous communities, as highlighted by Maudrie et al.[1] As a result, communities are calling for increased access to traditional foods and greater control over their food systems. While efforts to address these challengers are underway, empowering Indigenous Peoples to control their food systems and to utilise traditional practices in resource management is critical for protecting biodiversity, increasing climate resilience , alleviating poverty and strengthening global food security, as discussed by Antonelli.[2]

Connection to traditional food systems is a sovereign right of Indigenous Peoples, indistinguishable to cultural identity and rooted in Indigenous Peoples' connection to the land, waters and sky. The revitalisation of Indigenous food systems allows Indigenous People to stay on their ancestral homelands and enables the ongoing preservation of cultural practices. Increased connection to culture and the strengthening of cultural identities also enhances the health and wellbeing of future generations, greatly improving social determinates that hinder many Indigenous communities.[3] The utilisation of traditional food systems in a modern context also creates a platform for knowledge transfer, where Elders can pass down their expertise to younger generations, keeping ancient knowledge systems alive and empowering the next generation.[4,5] Furthermore, given that Indigenous foods and botanicals often contain desirable characteristics, such as superior nutrition and functional attributes, unique sensory qualities and cultural provenance, Indigenous foods often demand a premium in modern markets and therefore, present an opportunity to empower economic development and economic independence within Indigenous communities. For example, a 2020 industry report that looked at 13 native Australian plant species (all of which have been used traditionally) valued the

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native food market at approximately $80 million, with projections that this would double by 2025.[6]

The commercialisation of Indigenous foods and the development of Indigenous-led native food industries offer a significant opportunity for Indigenous Peoples and their communities to benefit economically from the commercialisation of their resources. However, a 2022 report found that Indigenous-owned businesses generated only 1% of the industry's $80 million output and that Indigenous stakeholders were vastly under-represented across the supply chain, making up less than 1% of growers, farm managers and exporters, as reported by the ILSC.[7] Given that Indigenous foods can be found in every region of Australia and that Australia is known as one of the world's megadiverse countries, there is a strong opportunity for Indigenous knowledge holders to contribute to novel food and agricultural practices that can improve current food and agricultural practices.

As the world addresses food insecurity and adapts to changing environmental conditions, it has been suggested that Indigenous Peoples globally possess the knowledge needed for sustainable food systems .[2] With the right protection in place and supported leadership, there is an opportunity for Indigenous Peoples to benefit economically from the use of their knowledge systems while also actively leading the global movement in climate adaptation and reconnecting the whole of society with these traditional food systems. Supporting industry development and economic growth under Indigenous leadership also presents an opportunity for communities to begin building capacity for self-governance and food security and to improve social outcomes.

Achieving social and economic self-determination: supporting economic prosperity

It is crucial to recognise that Indigenous communities vary significantly in their capacity and resources to leverage opportunities for economic development, especially those already feeling the impacts of climate change. For example, many remote communities face ongoing challenges such as inadequate access to housing, employment, food and health care due to ongoing systemic racism and disenfranchising government policy.[8–10] Addressing these fundamental human rights requires shared power, collaborative decision-making, sustainable and flexible resourcing and a marrying of both Indigenous and Western knowledge systems. This will strengthen the foundational capacity of communities, which is a necessary precursor to creating sustainable wealth-generating industries that are culturally and socially appropriate, such as those that can be developed around Indigenous foods and botanicals.

Globally, Indigenous entrepreneurs in the food and agribusiness sectors, whether in primary production or manufacturing, face similar obstacles in achieving economic self-determination. Major reoccurring challenges include the lack of access to arable land and the capital required to establish operations.[11] Due to historical and ongoing marginalisation, Indigenous People often do not have the privilege of benefitting from intergenerational wealth transfer, business networks or the business acumen needed to succeed in a post-colonial setting.[12] Furthermore, Indigenous entrepreneurs are often motivated by the values of reciprocity (e.g. to give back to the community), relationality (e.g. having a deep connection and purpose with your work), respect (e.g. work within culturally boundaries and not exploit cultural knowledge), responsibility (e.g. trade fairly and equitably) and collectivism (e.g. inclusive, empowering and representative decision-making). This way of operating does not fit the capitalist values that underpin modern business operations and therefore, results in limited access to information and education on business operations that are relevant to Indigenous entrepreneurs wanting to operate within these worldviews and values systems.[13] As a result, while opportunities in the Indigenous foods and botanicals sector could be transformative for Indigenous communities, significant funding, access to land and waterways and appropriate support are required to help Indigenous entrepreneurs rise above the impacts of colonisation and the constraints that have been imposed by neoliberalism.

To support Indigenous leadership and enhance industry coordination, national industry bodies should be established to address the systemic challenges faced by Indigenous Peoples. These bodies should collaborate with government agencies, coordinate and facilitate funding opportunities, advocate for international treaty implementation (such as protections for Indigenous cultural intellectual property and the Nagoya Protocol on access and benefit-sharing) and lobby for policies aligned with the United Nations Declaration on the Rights of Indigenous Peoples. Importantly, these Indigenous-run national bodies could form a global network to connect Indigenous communities worldwide, as exemplified by existing initiatives such as the Indigenous Peoples' Food Systems Coalition, the International Indian Treaty Council's Food Sovereignty Program and the Asia Indigenous Peoples Pact, which already link Indigenous food, biodiversity and rights movements across regions. Such global coordination could further strengthen and advance Indigenous leadership in food systems transformation and cultural economy development.

For an Indigenous-led national body to succeed in Australia, it must have secured funding from its inception to cover operational costs. This funding would enable the employment of independent professional staff without financial or business ties to the food and botanicals industry and thereby reduce conflicts of interest. Importantly, funding must be directed towards Indigenous Peoples and not be solely developed by government departments, consultancy firms or opportunists. Once operational and with established terms of reference, the national body can then work towards sustaining itself through membership fees and additional funding sources.

While a national body would advocate for systemic change, there is also a need for regional bodies that can advocate at a local level. For example, in Australia, there are over 150 individual Indigenous groups with unique cultural identities, languages, and customs. As such, there is a need to develop independent representative bodies or working groups that can advocate to drive Indigenous interests at a local level. These bodies will most likely consist of Indigenous entrepreneurs and leaders who want to see Indigenous foods and botanicals developed on their land and for their people. It is important that these regional bodies are funded without being tethered to outsider-influenced agendas or mandates, thus allowing for targeted delivery, oversight of projects and strategic planning that fits the local context. Ideally, these regional bodies would report to the national body, promoting effective systemic change rather than pursuing top-down, one-size-fits-all policy models that rarely

work, as previosuly discussed by Ngampromwongse and Gall.[14] Achieving this would support individual Indigenous groups to assert self-governance.

Even with strong governance structures in place at the national and regional levels, the fundamental issue of land access remains a critical barrier. In Australia, where 58% of Australia's land is under some form of Indigenous tenure, the vast majority cannot be leveraged for economic purposes.[15] Whether rights have been afforded or not, Indigenous land rights are easily overridden by government acting on behalf of corporate interests, such as the recent extinguishment of Wangan and Jagalingou Native Title for the Adani coal mine in Central Queensland, Australia. Such limitations severely affect both the health of the land (Country) and the economic wellbeing of communities.

In cases where land is available and Indigenous communities are engaged in the development of food systems, a major barrier to scaling up and creating an Indigenous-led industry is the inability to attract investment due to an inconsistent supply of goods. The absence of basic infrastructure in rural and remote regions, such as sterile kitchens, freezers, packaging equipment, storage facilities and transportation, undermines industry growth and confidence. Moreover, a lack of training, industry insight and expectations in food safety and quality control exacerbates these issues.[16] Establishing regional centres with the necessary production and processing facilities to support food businesses and offering training programs could help address these challenges. However, such centres, which could be facilitated by regional governance bodies, would require sustainable funding to ensure the success and safety of Indigenous-led businesses.

Protection of Indigenous knowledges

The concept of "intellectual property" as defined in Western legal frameworks does not align with Indigenous worldviews. For Indigenous Peoples, knowledge is often a communal and sacred responsibility rather than an individual commodity that can be owned or controlled. Despite this, Indigenous Peoples are the rightful creators and holders of this knowledge, and the use of it by external parties should require free, prior and informed consent, as outlined in the United Nations Declaration on the Rights of Indigenous Peoples, along with fair and equitable benefit-sharing, as stipulated by the Convention on Biological Diversity and the Nagoya Protocol. This principle is critical to safeguarding Indigenous rights and ensuring that traditional knowledge is used in ways that honours cultural integrity and provides tangible benefits to Indigenous communities.[17]

Existing legal frameworks, which are grounded in concepts of originality, fixation and individual ownership, are ill-suited to address the collective, oral and evolving nature of Indigenous knowledge systems.[18–20] Currently, the protections afforded to Indigenous knowledge are insufficient. For example, in Australia, the implementation of Access and Benefit Sharing laws is fragmented and incomplete.[21] While some of the country's states, such as Queensland and the Northern Territory, have introduced legislation to protect Indigenous traditional knowledge, these laws contain substantial gaps in their coverage.[22] Moreover, for these laws to be effective, there must be robust enforcement mechanisms and structured processes to ensure that partnerships between knowledge holders, researchers, and entrepreneurs are transparent, respectful and mutually beneficial.[20]

Equally concerning is the lack of protections to prevent people and businesses from falsely claiming to be Indigenous. Furthermore, there are many ways people can "imply" Indigenous involvement in their projects, as discussed by Parkin and Pappalardo.[23] This includes the unauthorised use of Indigenous art, language or cultural symbols in the branding of commercial products, which may mislead consumers into believing that Indigenous People are involved in the creation or production of these items. Misleading branding undermines economic self-determination and can cause significant harm to Indigenous cultural identity and rights, as highlighted by Okediji.[18] For instance, claims such as "Indigenous-run" may be used without genuine involvement, further eroding the integrity of the Indigenous communities' contributions.

One of the most effective ways to address this issue is through the introduction of standalone legislation that prohibits misleading branding practices. Within Australia, where there is limited protection of Indigenous rights, the Office for the Arts is currently in the process of designing such legislation.[20] This law should specifically address the unauthorised use of Indigenous cultural expressions and traditional knowledge, as well as provide clear penalties for non-compliance. Additionally, the establishment of a certification mark, one that guarantees genuine Indigenous involvement, would be an important step towards ensuring transparency and authenticity in the marketplace. Such a mark would help consumers identify products and services that are genuinely connected to Indigenous people while also protecting the cultural integrity and economic interests of their communities.

Together, strengthening legal protections for traditional knowledge, ensuring fair benefit-sharing, preventing misleading branding and establishing mechanisms for authentic Indigenous participation are critical to empowering Indigenous Peoples. These actions would support ongoing cultural, economic, and social resilience and allow Indigenous communities to exercise true self-determination in how their knowledge and resources are utilised and shared. It is a matter not just of legal protection but also of respecting Indigenous sovereignty, upholding Indigenous rights and ensuring that Indigenous peoples can thrive on their own terms.[20]

Conclusion

In Australia, the burgeoning Indigenous foods and botanicals industry represents a powerful opportunity for Indigenous Peoples to reclaim control over their cultural, social, and economic futures. By re-establishing greater connection to traditional plants and traditional healing, Indigenous communities can combat the adverse impacts of food insecurity and climate change, generate sustainable economic growth that aligns with Indigenous values of sovereignty and stewardship and improve Indigenous Peoples' health and wellbeing.[17] However, for this potential to be fully realised, Indigenous groups need greater control over their land and resources, so that there can be a multi-faceted, Indigenous-led, strategic approach. It is imperative that support is offered to address the systemic barriers that limit access to land, capital, education and resources while ensuring that Indigenous Peoples have strong governance structures in place that are inclusive and representative of the communities they serve.

The protection of traditional knowledge and Indigenous cultural intellectual property is critical to safeguarding the cultural integrity and economic wellbeing of Indigenous Peoples.[20] Without adequate legal frameworks and protections, the risk of exploitation and misappropriation remains a significant threat. Therefore, concerted efforts to introduce comprehensive and enforceable legislation, alongside the establishment of mechanisms that guarantee genuine Indigenous participation, will help mitigate these risks and foster more equitable and culturally respectful Indigenous industries.

Ultimately, the establishment of Indigenous leadership in industries that use their resources offers the potential for long-term empowerment, social justice and cultural revitalisation. By supporting this vision with adequate funding, infrastructure and legal protections, we can foster sustainable and thriving industries that honour the deep cultural connection of Indigenous Peoples to their land, resources and traditions while contributing to broader global goals of equity and sustainability. The path forward requires collaboration, respect for sovereignty and a commitment to genuine partnership, ensuring that Indigenous Peoples have the tools and support for true self-determination in the contemporary world.

Conflicts of interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Jacob Birch reports a relationship with Yaamarra & Yarral that includes: employment. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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