

Indigenous Peoples' food systems, nutrition and gender: conceptual and methodological considerations

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“Integrating Western [...] approaches with an Indigenous, place-based, relationship-driven framework may be an effective approach to fundamentally altering our patterns of consumption [...] this approach has the potential to transform the physical [...] and spiritual quality of our lives.” (Kealiikanakaoleohaililani and Giardina 2016:65)

Abstract (250 words)

Indigenous Peoples, especially women and children, are affected disproportionately by malnutrition and diet-related health problems. Addressing this requires an investigation of the structural conditions that underlie unequal access to resources and loss of traditional lifestyles, and necessitates inclusive approaches that shed light onto these issues and provide strategies to leverage change.

Indigenous Peoples' food systems are inextricably connected to land, which in turn is interwoven with issues of self-determination, livelihoods, health, cultural and spiritual heritage, and gender. Ongoing loss of land and the dominant agri-food model further threaten Indigenous Peoples' food systems. Continuing gender-based discrimination undermines the self-determination and rights of women, and negatively impacts on their health, nutritional status, and overall wellbeing, as well as on the wellbeing of households and communities. We suggest that feminist political ecology and modern matriarchal studies provide holistic interlinking frameworks for investigating underlying issues of power and inequality. We further argue that a focus on the principles of respect, responsibility, and

relationships, and an openness to different worldviews, can facilitate a bridging of Indigenous and Western approaches in research and community action conducted in partnership with Indigenous Peoples. This can contribute to creating new ways of knowing regarding Indigenous Peoples' food systems, equally valuing both knowledge systems.

Indigenous Peoples' rights, right to food, and food sovereignty are frames that, despite some tensions, have the common goal of self-determination. Through their ability to inform, empower, and mobilize, they provide tools for social movements and communities to challenge existing structural inequalities and leverage social change.

Keywords:

Indigenous Peoples, food systems, food and nutrition security, bridging Indigenous and Western approaches, structural conditions, gender

1 Introduction

2 For thousands of years, the wellbeing of Indigenous Peoples¹ has been sustained by their
3 food systems and their balanced relationship with the natural environment. It is troubling that
4 Indigenous Peoples are now disproportionately affected by hunger and malnutrition, with
5 women and girls suffering the greatest burden. The causes are rooted in structural
6 inequalities, characterised by lack of access to land and other resources, and threats to
7 Indigenous Peoples' food systems and nutrition which undermine the resilience of individuals
8 and communities, including environmental degradation, loss of biodiversity, competing
9 demands for land for production of food or fuel, unsustainable and unhealthy consumption
10 patterns and lifestyles, and centralization of power in market structures.

11 In order to understand food and nutrition disparities, and to design appropriate and holistic
12 programs that can address food security and nutrition in a sustainable manner, there is a
13 need to analyze these underlying structural inequalities. Food systems, and the social
14 relations that shape them, provide an entry point for exploring structural issues such as
15 access to land and other resources needed to grow, collect, or hunt food; the traditions and
16 cultural practices of growing, preparing, and eating food; and the relationships and power
17 dynamics between various actors and institutions involved in the production, processing, and
18 consumption of food. Food also plays an important role in wellbeing, in Indigenous, non-
19 Indigenous, and urban contexts, and as such there is renewed attention on revitalizing local
20 food systems, alternative agricultural practices and local, traditional, and Indigenous
21 knowledge systems.

22 The aim of this paper is three-fold. First, we provide insights into the structural conditions that
23 result in social injustice and inequality, and show how these threaten Indigenous Peoples'
24 food systems and diets. This includes an analysis of gender-based discrimination as a key

¹ The term Indigenous Peoples emerged in the 1970s out of the American Indian Movement and the Canadian Indian Brotherhood. Among other meanings it has been "an umbrella enabling communities and peoples to come together, transcending their own colonised contexts and experiences, in order to learn, share, plan, organise and struggle collectively for self-determination on the global and local stages" (Smith 2012:7).

25 structural determinant of inequality, and critical reflection on how the concepts of gender and
26 gender equality are being understood among Indigenous Peoples. We further reflect on the
27 concept of matriarchy, and present the interlinking frameworks of feminist political ecology
28 and modern matriarchal studies, as they offer holistic and differentiated approaches for
29 analyzing underlying structural issues of power and inequality.

30 Second, we explore methodological considerations for research, and share different
31 perspectives on ways of coming to know, analyze, and understand the underlying structural
32 issues relating to Indigenous Peoples' food systems and nutrition. We provide an overview of
33 alternative ways of knowledge production in the context of Indigenous Peoples' food
34 systems, and discuss what they mean for engagement and partnership with Indigenous
35 Peoples and Indigenous researchers in support of these systems. It is our intent to describe
36 how research can be guided to meaningfully study Indigenous Peoples' food systems,
37 nutrition, and gender and to lead community action to improve food security and wellbeing
38 within communities of Indigenous Peoples.

39 Third, we outline some recent initiatives that promote sustainable and just food systems,
40 namely Indigenous Peoples' rights, the right to food, and food sovereignty.

41

42 **Indigenous Peoples' food systems, nutrition and gender: underlying structural** 43 **conditions**

44 **Food insecurity and malnutrition: a result of loss of land and traditional ways of life**

45 Globally, we observe increasing and overlapping levels of malnutrition, including under- and
46 overnutrition, and related non-communicable diseases (NCDs). Worldwide, 795 million
47 people are not able to meet their minimum dietary energy needs (FAO 2015a), 2 billion
48 people lack essential minerals and vitamins (FAO 2013), and over 2 billion people are
49 overweight or obese (WHO 2015). Indigenous Peoples are affected disproportionately by
50 these trends, and experience significant health disparities compared to non-Indigenous

51 peoples with regard to undernutrition (stunting and wasting) and overweight (obesity and
52 related chronic diseases) (Anderson *et al.* 2016; Kuhnlein *et al.* 2013:285), diabetes (World
53 Diabetes Foundation 2012) and other NCDs.

54 Evidence from around the world paints a devastating picture. Some First Nations peoples in
55 Canada suffer from extreme deprivation and Aboriginal people are more likely to be food
56 insecure (Elliott *et al.* 2012; Riches & Tarasuk 2014:44-45). The Maori in New Zealand are
57 disproportionately affected by poverty and widening income gaps, and low-income
58 households are more likely to buy less nutritious, highly processed, poor quality, and calorie-
59 dense food because it is cheaper and more filling, resulting in inadequate and inconsistent
60 diets that contribute to higher rates of obesity and risk of nutrition-related diseases (O'Brien
61 2014:106-107). In Guatemala, stunting figures are almost twice as high among Indigenous
62 children under five years of age (65.9%) compared to non-Indigenous children (36.2%)
63 (Fukuda-Parr 2016:86). In Australia, compared with the general population, five times as
64 many Indigenous Australians ran out of food in the previous twelve months (Booth 2014:17,
65 citing the Aboriginal and Torres Strait Islander Health Performance Framework 2008 report).
66 In the USA, food insecurity among Native Americans is two to three times higher than for
67 non-Native American households (Poppendieck 2014:180, citing Gundersen 2008).

68 Widening income gaps and persistent and growing poverty, changing livelihoods, and the
69 impact of climate change and degradation of natural resources disproportionately affect
70 Indigenous populations (Silvasti & Riches 2014:195; O'Brien 2014:103), as do barriers to
71 education and health care (World Diabetes Forum 2012). Access to traditional foods is
72 limited, with the resulting nutrition transition, prevalence of food deserts, and high food prices
73 in rural and remote communities compromising food security even further (Silvasti & Riches
74 2014:195).

75 The reasons for these stark disparities are multifold and are embedded in histories of
76 colonization and land dispossession that have disconnected Indigenous Peoples from their
77 land and systems of knowledge transmitted through generations. The livelihoods, food and

78 nutrition security, health, and cultural and spiritual heritage of many Indigenous Peoples are
79 tied to their relationship with land. Access to land and other natural resources therefore has
80 been, and is, *the* central issue for Indigenous Peoples, yet interference by state and
81 corporate actors continues to dispossess Indigenous Peoples of their lands and self-
82 determination, violating their right to adequate food and nutrition (Bellows & Jenderedjian
83 2016:129; see also Damman *et al.* 2013:267ff). An example that received broader public
84 attention is the case of the Indigenous Guarani-Kaiowá of Mato Grosso do Sul (MS) in Brazil,
85 comprising approximately 30,000 people who have been deprived of their ancestral lands
86 since the 1970s when soy and sugarcane monocultures were planted. An agreement was
87 signed between the Federal Public Ministry (MPF) and FUNAI (the National Foundation for
88 the Support of the Indigenous Peoples) in 2007, with the Government committing to
89 demarcate 36 lands of the Guarani-Kaiowá by 2009. However, this was not put into action
90 yet, and the Guarani-Kaiowá continue to be threatened with eviction, and their rights -
91 including health, food and nutrition, access to water, education, safety, equality, and social
92 security - are violated (FIAN International 2016).

93 We illustrate three common misperceptions and related violations of rights with regard to
94 development, land use, and women in agriculture.

95 a) Loss of land is often concealed under the veil of “development”

96 The New Alliance for Food Security and Nutrition in Africa (NAFSN) is a large public-private
97 partnership (PPP) launched in 2012, aimed at leveraging private investment in agriculture to
98 improve food security and nutrition in Sub-Saharan Africa. One of the key activities
99 supported under NAFSN is land titling. However, this often does not lead to tenure security
100 for local communities. Instead it puts small-scale food producers and Indigenous Peoples,
101 especially women, at even greater risk of vulnerability and insecurity, since these groups
102 often lack legal recognition over their land rights. Placing the focus on land titling (or
103 certification of land) to address tenure rights, without taking into account customary or
104 communal tenure systems, results in “inadequate land deals, expropriation without consent

105 or lack of fair compensation, especially in the context of poor governance and incomplete
106 land reform” (European Parliament 2016:22).

107 b) Ownership of land is male-biased

108 Gender rights typically conflict with traditional authority and customary laws that treat women
109 as minors. This results in gender-based disparities in property rights (Quisumbing 2010), with
110 women being less likely to have formal land titles (Deere *et al.* 2013). Land titling programs
111 can therefore decrease women’s tenure security if they fail to acknowledge the different
112 rights of women and men under customary systems (Meinzen-Dick *et al.* 2014, citing
113 Lastarria-Cornhiel 1997 and Mwangi 2007). Furthermore, as Daley & Pallas (2014) argue,
114 securing women’s rights through robust legislation and enforcement is important, but these
115 measures alone will not be sufficient to guarantee that corporations and elites will restrain
116 themselves from violating rights, or from persisting exploitative, environmentally harmful
117 practices. As women lose access to land through land deals, food insecurities of women and
118 their families may worsen, as was shown by Bezner Kerr (2005) in the case of Malawi. This
119 potentially disempowers women, increasing their risk of being exposed to gender-based
120 violence (Bellows and Jenderedjian 2016).

121 c) So-called “underutilized” land serves investors’ interests

122 Investors and local elites seeking to legitimize large-scale land grabs for industrial agriculture
123 or biofuel production ignore or conceal the use of land by Indigenous Peoples, pastoralists,
124 or small-scale farmers for purposes that are often highly productive and promote a variety of
125 crops, plants, animals, insects, and birds (African Biodiversity Network & The Gaia
126 Foundation, 2015:19). Women in particular depend on land seen as “marginal” for alternative
127 and supplementary livelihood activities, such as growing or gathering food, or collecting
128 firewood or building material (Doss *et al.* 2014). As Tsikata & Yaro (2014) show in research
129 on land deals in Northern Ghana, women were not compensated for loss of access to land
130 they had used for farming, fuel wood, shea and other trees, exacerbating gender inequalities

131 in land tenure and agrarian production systems, with severe impacts on households and the
132 local economy.

133 Land is thus an often-unrecognized resource issue that has a gendered dimension,
134 underpinning food, environmental, and migration-related insecurities (De Schutter 2011). In
135 the following sections, we outline gender-based discrimination in the context of food and
136 nutrition insecurity, and link it to the discourse on gender, emerging feminist approaches, and
137 matriarchal studies.

138

139 **Gender inequality: a key structural determinant of food and nutrition insecurity**

140 Globally women are disproportionately affected by hunger, representing 60% of those who are
141 undernourished (ECOSOC 2007, para. 14) and 70% of those living in poverty (World
142 Bank/FAO/IFAD 2009). The reasons are rooted in structural conditions. Women have less
143 access than men to resources such as land, agricultural inputs, credit, education, extension,
144 and other services. They are largely responsible for the gender-determined labor- and time-
145 intensive chores of collecting water, firewood or other fuels, cooking, and taking care of
146 children and sick people, and they increasingly carry the workload of agricultural tasks with
147 men migrating for work (FAO 2016:xii). These structural conditions refer to two types of
148 discrimination or violence: *structural violence*, a process aligned with social injustice that “is
149 built into [social] structure and shows up as unequal power and consequently as unequal life
150 chances” (Galtung 1969:171), and *cultural violence*, defined by those aspects of structural or
151 direct violence that are legitimized under the terms of cultural practice, tradition and
152 institution (Galtung 1990:291).

153 Gender inequality intersects with ethnic and geographical divides (Fukuda-Parr 2016), and
154 Indigenous women in diverse rural and urban contexts are often exposed to one or more
155 types of violence or discrimination. According to Goettner-Abendroth (2012:xxii), “patriarchal
156 colonisation of indigenous peoples has ignored and made invisible the significance of
157 indigenous women in general”. Kuhnlein *et al.* (2013) provide evidence from case studies on

158 Indigenous Peoples' food systems and wellbeing showing that Indigenous women are
159 disproportionately affected by health disparities. Fukuda-Parr (2016:86) reports that
160 Indigenous women in Guatemala are three times more likely to die during pregnancy and
161 childbirth than non-Indigenous women, and only 14% of Indigenous girls in rural areas
162 complete primary school compared to 36% of non-Indigenous girls. This negatively affects
163 both the women and the wider community, and impacts food and nutrition security, health,
164 income, and livelihood outcomes in general, in a process of "horizontal oppression" (Grey
165 2004:13, citing Martin-Hill, 2003:108), or "trickle-down patriarchy" (Grey 2004:13, citing
166 Jaimes Guerrero, 2003:58). Women's nutritional health is closely linked "to the health of the
167 social collectivities around them, both through the biology of reproduction and lactation and
168 through their sociocultural-based labours on behalf of the food and nutritional well-being of
169 families and communities" (Bellows & Jenderedjian 2016:128).

170 These structural conditions severely compromise women's self-determination and human
171 rights. While it is crucial that women achieve equal participation at all levels, it should be
172 recognized that this often comes at the cost of overburdening women, adding to their already
173 high workloads. Women might further face violence and discrimination from their partner,
174 families and social communities, a fact that is often hidden, hardly acknowledged, or
175 adequately planned for in programs geared at women's empowerment (Bellows &
176 Jenderedjian 2016). Women's empowerment requires the empowerment of men as well, with
177 conceptualizations of gender still being biased towards "being about women". Failing to
178 address issues of masculinity and changing male roles will perpetuate gender stereotypes
179 (Lemke & Bellows 2016). We further caution not to romanticize Indigenous and traditional
180 societies, as this perpetuates existing injustices and human rights violations being justified as
181 part of "culture" or "tradition".

182 The following section will address different understandings of concepts such as gender
183 equality, in the context of past and emerging feminist approaches and modern matriarchal
184 studies.

185

186 **Analyzing power and inequality: feminist approaches and matriarchal studies**

187 Among Indigenous Peoples gender terminology is controversial. Grey (2004) affirms that the
188 concept of “gender harmony” (p. 13) is being used instead of gender equality to mean gender
189 balance and a complementarity between men and women who engage in mutual
190 partnerships. Feminist approaches have been criticized by Indigenous Peoples for
191 generalizing that all women share universal characteristics, and that all women everywhere
192 and in all times have been oppressed (Carlassare 1994; Smith 2012:168) despite evidence
193 that Indigenous societies were not “oppressively patriarchal prior to the experience of
194 colonialism” (Grey 2004:11). As feminism originated and continued largely in the
195 predominantly white feminists’ movement, Indigenous women have expressed that this
196 feminism does not represent them or their struggles and histories of colonialism. It is striking,
197 as Grey (2004:16) notes, that issues such as “Native sovereignty, land rights and reparations
198 [...] for massive dispossessions; displacements; and acts of violence, abuse and ethnocide”
199 have been missing on the feminist agenda. Monture-Okanee (1992) cautions against the full
200 acceptance of mainstream feminism or analysis because it raises barriers to the “scope of
201 social change that is defined as desirable” (p.253) to Aboriginal women, meaning the self-
202 determination and empowerment they experienced within their intact societies prior to
203 colonization.

204 A more nuanced perspective is offered by the analytical frame of intersectionality that
205 originates from feminist sociological theory and was first established by Crenshaw (1989).
206 Intersectionality illuminates intersecting relations of power and inequality and pays attention
207 to diverse and interlocking processes of differentiation such as race, class, and gender, as
208 well as other axes of difference and social hierarchy such as sexual orientation, age, and
209 socioeconomic status. These diverse forms of oppression are part of an overarching *matrix*
210 *of domination*, a term coined by Black feminist scholar Collins (2000). Collins further claimed
211 that Black women’s experiences of multiple overlapping or intersecting systems of

212 oppression provide insights also for other social groups and individuals. However,
213 intersectionality has been criticized for not paying enough attention to the ways gender
214 intersects with race, with calls for “a *postcolonial intersectional* approach that situates
215 patriarchy and racialization as entangled in postcolonial genealogies of nation building and
216 development” (Sundberg 2016, citing Mollett & Faria, 2013, no page).

217 A subfield that has emerged from and advanced earlier feminist approaches is feminist
218 political ecology (FPE), a discipline that draws on intersectionality as a primary method. FPE
219 integrates feminist analysis with ecological issues, arguing that they must be understood and
220 analyzed in relation to the political economy (Sundberg 2016). Rocheleau *et al.* (1996)
221 proposed FPE as an integrative conceptual framework that avoids essentialist (i.e., one-
222 dimensional and universalizing) constructions of women found in some ecofeminist work.
223 While FPE focuses on everyday experiences and practices of women as actors whose labor
224 takes place in social spheres that historically have been excluded from analysis, revealing
225 gendered environmental risks, rights, and responsibilities, FPE also connects with other
226 levels such as the nation or global political economy (Sundberg 2016). FPE endeavors to
227 overcome the limitations of previous feminist approaches, as it expands the perspective to
228 include a political economy approach, which is crucial if one wants to get to the root causes
229 of inequality and uncover power relations.

230 A framework that overlaps with feminist approaches, and that developed in the 1970s within
231 a Western feminist context, is modern matriarchal studies (Goettner-Abendroth 2012:33).
232 Goettner-Abendroth holds that modern matriarchal studies provide “a change of perspective
233 so radical that research on matriarchy [...] could be labelled a new socio-cultural science, one
234 which includes a new paradigm” (2012:34). It was hampered by poor methodological
235 approaches that led to many misperceptions about matriarchy that still exist today.
236 Matriarchy is not the converse of patriarchy, where men control and hold the power. Quite
237 differently, according to Goettner-Abendroth (2012:xv), “[m]atriarchies are true gender-
238 egalitarian societies; this applies to the social contribution of both sexes - and even though
239 women are at the centre, this principle governs the social functioning and freedom of both

240 sexes.” This conceptualization of gender resonates with Indigenous interpretations (Grey
241 2004).

242 Goettner-Abendroth provides the following definition of matriarchal societies, differentiating
243 four structural levels (2012:xxv):

244 1) *economic*: balanced economy; women distribute goods; economic mutuality; similar
245 characteristics to a gift economy (*societies of economic mutuality, based on the*
246 *circulation of gifts*);

247 2) *social*: matrilinear kinship; characteristics are matrilinearity and matrilocality within a
248 framework of gender equality (*non-hierarchical, horizontal societies of matrilineal*
249 *kinship*);

250 3) *political*: based on consensus; the clan house is the basis of decision-making locally
251 and regionally; represented by an (often) male delegate; strict consensus process
252 gives rise to gender equality and equality in the entire society (*egalitarian societies of*
253 *consensus*); and

254 4) *spiritual and cultural*: based on an all-permeating spiritual attitude that regards the
255 whole world as divine, originating in the Feminine Divine (*sacred societies and*
256 *cultures of the Feminine Divine*).

257 As Goettner-Abendroth confirms, matriarchal societies have gone through many changes
258 and “these cultures are threatened with disappearance in our times” (2012:xxii). It therefore
259 has to be explored carefully whether the inherent principles of matriarchal societies still exist
260 in specific contexts, and how they might have changed due to political, economic, social,
261 cultural and environmental transitions. Goettner-Abendroth lays out the following vision:
262 “[M]odern Matriarchal Studies [...] form a critical and liberating research process with a
263 respectful, healing and educational potential [and this could] empower feminist women and
264 alternative men in western societies, as well as indigenous peoples on every continent, to

265 engage fully in effective political alliances against local and global patriarchal domination”
266 (2012:xxiii).

267 The above elaborations show that the interlinking frameworks of feminist political ecology
268 and modern matriarchal studies provide a differentiated and holistic perspective that takes
269 into account and reveals complex and interconnected economic, social, cultural,
270 environmental, and political processes and relations, and the underlying issues of power and
271 inequality within these societal structures.

272 In the following section, we offer a reflection on methodological approaches that enable us to
273 analyze, understand and challenge the structural inequalities that were laid out here. We
274 draw on examples that bridge different worldviews and diverse research approaches,
275 illustrating engagement and partnership with Indigenous Peoples and Indigenous
276 researchers in support of their food systems and to promote their wellbeing.

277

278 **Methodological considerations for research on Indigenous Peoples’ food** 279 **systems**

280 **Challenging power structures and mainstream scientific knowledge production**

281 From an Indigenous perspective, research has historically brought few if any benefits to
282 Indigenous Peoples but has subjected them to multiple harms. This is reflected in the
283 frequently quoted statement by Smith (2012, p.1), “[t]he word itself, ‘research’, is probably
284 one of the dirtiest words in the indigenous vocabulary. When mentioned in many indigenous
285 contexts, it stirs up silence, it conjures up bad memories, it raises a smile that is knowing and
286 distrustful.”

287 In order to address the role research has played in past and present injustices, a growing
288 body of literature on decolonizing and Indigenous methodologies has emerged, challenging
289 existing power structures and ways of knowledge production. Decolonizing methodologies
290 focus on building the self-determination of communities, involving research that values

291 Indigenous knowledge and methodologies. Tuck & Yang (2012:1) emphasize that
292 decolonization means “repatriation of Indigenous land and life; it is not a metaphor for other
293 things we want to do to improve our societies and schools”. They further caution that
294 decolonization cannot be easily added onto or adopted by other frameworks, “even if they
295 are critical [...] anti-racist [...] justice frameworks” (p.3), but decolonization “offers a different
296 perspective to human and civil rights based approaches to justice, an unsettling one, rather
297 than a complementary one” (Tuck & Yang, 2012:36).

298 Calls to challenge and transform the dominant knowledge system in academia - one based
299 on a positivist worldview, framed as independent and neutral, but largely excluding those
300 who are marginalized - are not new. Participatory action research (PAR), having emerged
301 from the 1970s onwards mainly in Latin America, Africa, and Asia, has been based on the
302 Freirean theme (Freire 1970; Freire 1974) that “poor and exploited people can and should be
303 enabled to analyze their own reality” and seek to induce social and economic change
304 (Chambers 1997:106). Chambers (1997:205) cautions that while Indigenous knowledge has
305 been undervalued and neglected and should therefore be privileged and empowered this
306 “should not lead to an opposite neglect of scientific knowledge [...]. The key is to know
307 whether, where and how the two knowledges can be combined, with modern science as
308 servant not master, and serving not those who are central, rich and powerful, but those who
309 are peripheral, poor and weak, so that all gain.”

310 More recently, Pimbert (2006:16-17) has called for transforming knowledge and ways of
311 knowing: “[w]e must actively develop more autonomous and participatory ways of knowing to
312 produce knowledge that is ecologically literate, socially just and relevant to context. The
313 whole process should lead to the democratization of research, diverse forms of co-inquiry
314 based on specialist and non-specialist knowledge, an expansion of horizontal networks for
315 autonomous learning and action, and more transparent oversight.” The landmark
316 International Assessment of Agricultural Knowledge, Science and Technology for
317 Development report (2009) clearly stated that a paradigm shift is needed, not only with

318 regard to our current conventional model of agricultural production that fails to address
319 hunger and food insecurity, but also with regard to current research approaches that focus
320 mainly on technological solutions, calling for more participatory research approaches and for
321 more strongly integrating local and Indigenous knowledges.

322 However, despite calls for this paradigm shift, there are obstacles in the path. Anderson &
323 McLachlan (2015) acknowledge that building and strengthening “the transformative research
324 paradigm through power-equalizing knowledge mobilization processes that give voice to
325 actors typically marginalized in knowledge transfer processes” remains a huge challenge
326 (2015:2). It requires critical reflection about “the way we might be [...] complicit and
327 subversive of these hierarchies [and further requires us] to act collectively and politically to
328 challenge the institutions and discourses that limit the potential for social transformation”
329 (19). Here Anderson and McLachlan are referring among other issues to current academic
330 practices of impact evaluation, and its link to resource allocation, funding, and promotion.
331 Similarly, Bellows & Lemke (2016) remark that the collaboration with communities and social
332 movement actors necessitates that academia reconsider its role in the production of
333 knowledge, and they ask: “Who actually has knowledge? Who needs funds for the research
334 programme? How should the knowledge be interpreted? How should it be used for social
335 justice? Where should it be disseminated? Who should share in the credit and royalties of
336 publication?” (28). Or, as Sundberg (2016:no page) states, we should “undertake research
337 [...] from a position of *affinity* as opposed to *identity* [which entails] situating ourselves and
338 research participants in webs of power and identifying research questions on the basis of
339 issues of shared concern, such as neoliberalization, environmental degradation, and
340 imaginative geographies of distance and difference [...] towards research that is accountable
341 to the many ways in which scholars are entangled in and complicit with the very webs of
342 power, privilege, and oppression they seek to analyze.”

343

344 **Bridging Indigenous and Western approaches in food, health, and sustainability**
345 **research**

346 There are examples of good practice in bridging Indigenous and Western approaches in
347 research on food systems, nutrition, and health. This good practice has been documented in
348 previous research conducted by members of this IUNS Task Force on Traditional,
349 Indigenous, and Cultural Food and Nutrition (Kuhnlein *et al.* 2013:286), and is evident from
350 the case studies presented in this Special Issue, which show how knowledge sharing and
351 collaborative decision-making can be achieved in participatory processes with Indigenous
352 communities and academic staff. In all research carried out by this Task Force, guidelines on
353 conducting research with Indigenous Peoples in a collaborative and ethically appropriate
354 manner were applied, and key principles for participatory research management adopted
355 (Sims & Kuhnlein 2003; see also Council of Canadian Academies 2014:xx-xxi).

356 Fundamental to respectful research are relationships. As Fyre Jean Graveline states
357 (1998:52, quoted by Kovach, 2009:14), “we learn in relationship to others”, and “knowing is a
358 process of self-in-relation”. We offer the principles of respect, responsibility, and relationships
359 to guide Indigenous and Western researchers in food studies and nutrition. These values are
360 emphasised by Kovach (2009:129): “[...] we have to find a way back to core values of what is
361 responsible, respectful and kind [...]”. Although this statement is situated in the context of
362 Indigenous Inquiry and “tribal knowledges”, it equally applies to Western “knowledge
363 seekers” who engage with their research partners driven by a greater vision to achieve
364 wellbeing for all and social justice.

365 We highlight two Indigenous theoretical concepts that have emerged in recent years: “two-
366 eyed seeing” and “ethical space”. These have the following key characteristics: (a) they are
367 based on the core principles of respect, responsibility and relationships; and (b) they provide
368 a progressive way forward and a vision to overcome divides between different worldviews,
369 enabling the building of relationships among researchers and Indigenous Peoples for the
370 benefit of all.

371 Vukic *et al.* (2012) show how these concepts can shape the conduct of research and enable
372 the co-creation of knowledge, by involving and honoring Western and Indigenous ways of
373 knowing. The concept of two-eyed seeing was introduced by Hatcher, Bartlett, Marshall &
374 Marshall (2009) and Iwama, Marshall, Marshall & Bartlett (2009). It refers to “the ability to
375 see with one eye the strengths of Indigenous ways of knowing and with the other eye the
376 strengths of Euro-Western ways of knowing, and using both of these eyes together” (Vukic *et al.*
377 *et al.* 2012:148), and is grounded in the assumption that there is a need for relationships of trust
378 and respect (149). This concept was co-created by and is based on the experiences of Albert
379 Marshall of the Mi’kmaq Nation, who was forced to spend most of his childhood and youth in
380 an Indian Residential School, an experience that influenced him in his “lifelong quest to
381 connect with and understand both the world he was removed from and the world he was
382 forced into” (Vukic *et al.* 2012:148, referring to Hatcher *et al.* 2009). “Ethical space” is a
383 concept developed by Willie Ermine, a Cree member of the faculty at First Nations University
384 of Canada. Similar to the concept of two-eyed seeing, it means “creating space for dialogue
385 and discussion between people holding different worldviews [...] inclusive of the dominant
386 society and local contextual Indigenous knowledge systems, in order to move forward with
387 actions that promote Aboriginal health and reduce disparities” (Vukic *et al.* 2012:149).

388 In a concrete example, Vukic *et al.* (2012) show in the context of Aboriginal health research
389 in Canada how a two-eyed seeing (TES) approach “acknowledges the entrenched power
390 imbalances” (149) within the dominant health care system, which “has historically
391 suppressed Indigenous worldviews and practice” (149). TES established “relationships
392 based on mutuality and different understandings” (149) between nurse researchers and
393 Indigenous groups with a primary focus on Aboriginal peoples’ priorities regarding health
394 issues in their communities. Vukic *et al.* (2012:148) further illustrate how community-based
395 participatory research and the principles of ownership, control, access, and possession
396 provide methodological approaches that correspond with Indigenous knowledge systems.

397 In research on traditional food access and food security in urban Vancouver, British
398 Columbia, Aboriginal and non-Aboriginal partners engaged in culturally appropriate and
399 respectful collaboration, showing how traditional knowledge and ways of knowing can be
400 bridged into food security research (Elliott *et al.* 2012:2). The authors selected the
401 story/dialogue method stemming from narrative inquiry in qualitative research methods, as it
402 relates closely to practices and ways of knowing in many Aboriginal cultures. This method
403 follows the structure established by Labonte and Feather (1996): 1) participants share a story
404 from their personal experience in a small group; 2) the group then asks and discusses four
405 categories of questions: “what”?, “why”?, “so what”?, “now what”?; 3) key discussion points
406 are captured for each set of questions, and are then organized into categories or themes; 4)
407 a summary statement (“theory note”) is created for each category; and 5) a comprehensive
408 summary statement (“composite theory note”) links all themes. After review by the Advisory
409 Committee the story/dialogue method was adapted to become less structured and academic.
410 Trained facilitators guided the discussion to deeper levels of analysis (Elliott *et al.* 2012:3).
411 The authors conclude that building respectful relationships and creating the space for
412 Aboriginal perspectives in the research design, implementation, and analysis were conditions
413 for the success of the project that brought to the fore the interconnectedness of local and
414 global factors impacting on access to traditional food and food security, and revealed
415 challenges and possible solutions to improve the food security of both Aboriginal and non-
416 Aboriginal peoples. The research led to various concrete initiatives by participants to promote
417 traditional foods (Elliott *et al.* 2012:7-8).

418 Even though Indigenous worldviews and knowledge are gaining recognition, the dominant
419 Eurocentric education system perpetuates oppression (Hart 2010:4-5). As Smith (2012:5)
420 states, “[m]any indigenous researchers have struggled individually to engage with the
421 disconnections that are apparent between the demands of research, on one side, and the
422 realities they encounter amongst their own and other indigenous communities, with whom
423 they share lifelong relationships, on the other side.” Hart (2010:1) reflects on this struggle:
424 “[w]hile at one time, we, as Indigenous peoples, were faced with leaving our indigeneity at

425 the door when we entered the academic world, several of us are now actively working to
426 ensure our research is not only respectful, or 'culturally sensitive', but is also based in
427 approaches and processes that are parts of our cultures.”

428 As Johnson *et al.* (2016:3) write in a recent special issue of *Sustainability Sciences*:
429 “Learning to listen to each other’s concerns and proposals with respect, and openness to
430 change is an important element of the dialogue between sustainability science and
431 Indigenous science.” Reflecting on a workshop with Indigenous academics, community
432 scholars, and non-Indigenous academics entitled “Weaving Indigenous and Sustainability
433 Sciences to Diversify our Methods”, they caution that power differences mean that the
434 “integration” of knowledge systems often results in “mining” Indigenous knowledges for the
435 purpose of Western science, without a deeper understanding of their context and meaning
436 (Johnson *et al.* 2016:6). They suggest using instead the term “bridging” knowledge systems
437 to respect the integrity of each knowledge system, and emphasize that an understanding of
438 both the local context, as well as broader frameworks and theories are important. As Kovach
439 (2009:29) puts it, “how we make room to privilege both, while also bridging the epistemic
440 differences, is not going to be easy”.

441 With regard to potential future alliances in possible strategic partnerships between non-
442 Indigenous and Indigenous women, and a possible bridge across the divide of the two
443 emancipatory political movements, namely feminism and decolonization, Grey (2004:19)
444 concludes that this “will depend on whether or not non-Native feminists are truly prepared to
445 equally value Native perspectives, prioritize Indigenous issues and work in these areas [...] It
446 will also depend on an ongoing evaluation of the applicability of feminist theory and practice
447 in the service of Aboriginal goals”.

448 **Initiatives advocating social change: indigenous peoples’ rights, right to food,**
449 **food sovereignty**

450 In the face of incredible challenges, Indigenous Peoples are resilient and finding ways to
451 adapt to changing conditions, and to ensure the vitality of their food systems and the health

452 of future generations. Many Indigenous Peoples are engaged in work to revitalize food
453 sovereignty in their traditional territories. In recent years, several global initiatives were
454 started and reports produced, in collaboration across sectors and disciplines, engaging in
455 wide-ranging consultations with governments, academia, civil society and other actors (see
456 for example IAASTD 2009; HRC 2010; HRC 2011; *2030 Agenda for Sustainable*
457 *Development*, IPES-Food 2016). Most of these reports highlight the importance of local and
458 Indigenous knowledge, agroecology, and women's contributions for the necessary shift in
459 direction of our agriculture and food systems, toward more environmentally sustainable and
460 socially just modes of production and consumption. There is further a call for stronger
461 governance and human rights in programming and policy at both national and international
462 levels.

463 Human rights law is an important tool for work on Indigenous People's food systems. The
464 right to food is recognized in international human rights law, as enshrined in the 1966
465 International Covenant on Economic, Social and Cultural Rights (ICESCR 1966), and the
466 General Comment 12 to the ICESCR (CESCR 1999). The right to food entails that (a) food is
467 available at national and regional level; (b) individuals have sufficient access to food,
468 meaning that they have the means and resources to either produce or buy their own food, or,
469 in cases of illness, conflict, natural disaster or other forces that prevent people from feeding
470 themselves, that the State provides food through social assistance; and (c) food is adequate,
471 which means that it has to entail all nutrients required for a healthy and active life at all
472 stages of the life cycle; that it is safe for human consumption and free from adverse
473 substances; and culturally appropriate (CESCR 1999).

474 For Indigenous Peoples, the human right to food is inextricably linked to access to land.
475 Damman *et al.* (2013) provide a comprehensive overview of human rights implications of
476 Indigenous Peoples' food systems in the previous volume published by this IUNS Task
477 Force, with Indigenous Peoples' collective rights being reflected in the United Nations
478 Declaration on the Rights of Indigenous Peoples (UNDRIP, 2007), ILO 169 (1989) on
479 Indigenous and Tribal People, and the International Covenant on Civil and Political Rights

480 (ICCPR 1966) article 27 and its General Comment 23 (OHCHR, 1994). These rights include
481 the collective right to own and use their land, territories and resources, their right to self-
482 determination on their land and territories, and their right to prior consultation and to free,
483 prior and informed consent in matters that may affect them. The right to food is
484 contextualized within Indigenous Peoples' relationship to land, and is further formulated as a
485 collective instead of an individual right. If access to land is denied and therefore to the food
486 from that land, Indigenous Peoples' culture will dissolve (Damman *et al.* 2013:263). This is
487 articulated in the preamble of the Declaration of Atilán (IITC, 2002):

488 “In agreement that the content of the Right to Food of Indigenous Peoples is a
489 collective right based on our special spiritual relationship with Mother Earth, our lands
490 and territories, environment, and natural resources that provide our traditional
491 nutrition; underscoring that the means of subsistence of Indigenous Peoples
492 nourishes our cultures, languages, social life, worldview, and especially our
493 relationship with Mother Earth; emphasizing that the denial of the Right to Food for
494 Indigenous Peoples not only denies us our social organization, our cultures,
495 traditions, languages, spirituality, sovereignty, and total identity; it is a denial of our
496 collective indigenous existence...”

497 The food sovereignty movement promotes the right of peoples to healthy and culturally
498 appropriate food produced through ecologically sound and sustainable methods, and their
499 right to define their own food and agriculture systems (Forum for Food Sovereignty 2007).
500 However, as Desmarais & Whittman (2014) point out, current interpretations of food
501 sovereignty that largely focus on agriculture-based local food systems as an alternative to
502 globalised industrial agriculture are being questioned by Indigenous food sovereignty
503 activists, as these interpretations are rooted in a Western context and do not fully
504 encapsulate the perspective of Indigenous Peoples. Faced with the ongoing pressures of
505 colonization, and the resulting huge and disproportionate challenges with regard to food
506 insecurity and diet-related health issues among Indigenous Peoples, special attention has to
507 be placed on their traditional food practices, including fishing, hunting and gathering, and

508 networks, and these have to be honored, valued and protected (Desmarais & Whittman
509 2014:1165; see also Grey & Patel 2015). Further, tensions arose between proponents of the
510 right to food sovereignty and the right to food among actors who are often engaged together
511 in the global food movement, questioning current political, economic and social structures,
512 challenging the politics and power structures of the dominant agri-food model, and
513 foregrounding self-determination (Claeys 2015:89-90), a core concept of Indigenous
514 Peoples' rights, the right to food sovereignty, and the right to food. The main reason for these
515 tensions is the critique by the food sovereignty movement of a top-down approach ("from
516 above master frame") seen in the right to food movement, as opposed to a bottom-up
517 approach ("from below master frame"). Claeys terms the latter "reclaiming control",
518 resembling core values of Indigenous Peoples, such as grounding food production and
519 consumption in the local, social, cultural, and historical context; autonomy of production and
520 consumption; and control over land and territories and natural resources (Claeys 2015:87).

521 While it is useful to apply a human rights framework to Indigenous Peoples' food systems,
522 there are conceptual limitations. Human rights instruments are social constructs and
523 therefore reflect social conflicts, including the use and abuse of power, and this prevents
524 them fully addressing the structural root causes of hunger and malnutrition, resulting in
525 reductionist solutions that only address symptoms (Valente, Suárez-Franco & Córdova
526 Montes 2016:344). We join Valente, Suárez-Franco & Córdova Montes in calling for an
527 expanded concept of the human right to food and nutrition, which, in order to be understood
528 and fully utilized, must be connected to other human rights, such as the right to health and
529 the right to access to natural resources (2016:356), and must pay specific attention to groups
530 (e.g., women, children, and Indigenous Peoples) that face discrimination that compromises
531 their universal human rights. Similarly, in the context of gender equality and sustainable
532 development Leach *et al.* (2015:7) argue that achieving gender equality will require the
533 realization of all human rights, and this further requires challenging dominant institutions and
534 forms of knowledge, wherein social mobilization and collective action play a crucial role.

535 Recent developments at legal and political levels have led to more direct participation of civil
536 society actors in global food debates. The Committee on World Food Security (CFS) aims to
537 be the “most inclusive international and intergovernmental platform for all stakeholders to
538 work together in a coordinated way to ensure food security and nutrition for all” (CFS, n.d.).
539 As Lambek & Claeys (2016:783-784) note, the valuable contributions from civil society during
540 the FAO-facilitated drafting of the Voluntary Guidelines for the progressive realization of the
541 right to adequate food in the context of national food security contributed to the reform of the
542 CFS in 2009. Additionally, it led to greater civil society participation and inclusion of other
543 stakeholders, through the Civil Society Mechanism (CSM) representing eleven
544 constituencies: smallholder family farmers; artisanal fisherfolk; herders and pastoralists;
545 landless people; urban poor; agricultural and food workers; women; youth; Indigenous
546 Peoples; consumers; and NGOs. An initiative that is indirectly linked to these broader
547 developments was a meeting hosted by FAO in 2015 with representatives of Indigenous
548 Peoples on “Indigenous food systems, agroecology and the Voluntary Guidelines on tenure”,
549 as part of FAO’s recently adopted strategy toward approaches that include key stakeholders
550 from academia, civil society, cooperatives and the private sector. Among the outcomes was
551 the agreement to pursue the joint implementation of the *Voluntary Guidelines on the*
552 *Responsible Governance of Tenure of Land, Fisheries, and Forests in the Context of*
553 *National Food Security*; to create an FAO working group on Indigenous food systems that
554 includes Indigenous Peoples; and to pursue joint development and application of indicators
555 relevant to Indigenous Peoples (FAO 2015b:7).

556 These recent developments provide hope. As Valente and Córdova Montes (2016:10) state:
557 “The human rights framework clearly provides a set of tools for social movements and
558 communities to hold governments to account on their human rights obligations and the need
559 for these to be translated into a coherent set of public policies and programs. However, it is
560 only through the continued demands and struggles by the people and their movements and
561 organizations that this will happen”.

562

563 **Conclusion**

564 Research on Indigenous Peoples' food systems requires an analysis of the root causes of
565 disparities experienced by Indigenous Peoples, through in-depth explorations of the
566 respective historical, political, social, cultural, economic, and environmental contexts, and
567 based on methodologically sound research and systematic definitions. Further, we have to
568 critically reflect on our own interpretations of female and male roles within communities, as,
569 according to Goettner-Abendroth (2012:xxix), we might see and judge them through the lens
570 of patriarchy, which can easily lead to misinterpretations. It is therefore critical to understand
571 how Indigenous Peoples themselves define their societies and the gender relations within
572 them. The interlinking frameworks of feminist political ecology and modern matriarchal
573 studies are of high relevance in research concerning Indigenous Peoples' food systems, as
574 they offer a perspective that sheds light on underlying structural causes of inequality and
575 power relations. Bridging Indigenous and Western research approaches, and collaboration
576 between Indigenous and non-Indigenous researchers, can create new ways of knowing to
577 address the challenges posed to our food systems, and can guide Indigenous and Western
578 researchers in food studies and nutrition.

579 Where do we move from here, in our attempt to bridge disciplinary and sectoral boundaries,
580 to stay engaged in research and ask the "right" questions, and to work toward a greater
581 vision of wellbeing for all? We return to the concepts of respect, responsibility, and
582 relationship. Research has to value and respect the rights, worldviews, and everyday
583 realities of our research partners. Research has to be responsible, first and foremost having
584 meaning and purpose for the people we engage with in research. Research is built on
585 relationships of trust, which can only be established over time. We as researchers should
586 reveal our worldviews and motives for research, while acknowledging that part of the
587 requirement and pressure of academic life is to generate funds and ultimately publish
588 research. We should therefore prioritize the co-creation of knowledge and collaborative
589 publication with our research partners. Keeping to these principles, and daring to be

590 challenged, we might be able to move forward and, in a humble way, contribute to
591 transforming ways of knowing. Whether it is possible to bridge Indigenous and Western
592 knowledge systems will always depend on individuals and their willingness to embrace this
593 new trajectory.

Key messages (98 words)

- Meaningful research and community action for Indigenous Peoples' food systems and wellbeing must be based on an understanding of both the broader historical, political, social, economic, cultural, and environmental conditions, and the local context.
- Respect, responsibility, and relationships are core values that should apply to all research and collaborations between Indigenous and Western researchers.
- Indigenous methodologies should receive equal weight in research. This requires critical reflection on conventional scientific knowledge production.
- Indigenous Peoples' rights, right to food, and food sovereignty are progressive global frames that enable mobilization for more sustainable and just food systems.

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