



## *Science Panel for the Amazon (SPA)*

### *WG 12: Power of Amazon Peoples*

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#### **Boosting the relations between the Amazon Forest and globalizing cities**

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## **ACRONYMS AND ABBREVIATIONS**

COICA: Coordinadora de las Organizaciones Indígenas de la Coica Amazônica

COVID-19: Coronavirus 2019 disease

FILAC: Fund for the Development of Indigenous Peoples of Latin America and the Caribbean

INPA: Brazil's National Institute for Amazon Research

UFAM: Federal University of Amazonas, Brazil

WHO: World Health Organization

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1 **KEY MESSAGES:**

- 2           • The myths of civility vs. savagery and of the inexhaustibility of Amazon natural  
3 resources, as well as the flattening of increasingly globalized cultures all cause  
4 physical and cultural dis- or misconnections between urban and rural  
5 environments in the Amazon.
- 6           • Physical dis- or misconnections, such as those related to local economies, food  
7 security, healthcare, schooling and green urban infrastructure could all be  
8 ameliorated with well-planned participatory actions beneficial to both rural and  
9 urban dwellers. Some of these actions are: effectively involving rural  
10 populations in an regionally-developed bioeconomy, fostering small-scale food  
11 production in peri-urban areas, subsidizing the fixation of healthcare  
12 professionals and infrastructure in small cities, the establishment of education  
13 hubs strategically localized in rural areas, increasing urban green infrastructure,  
14 and operationalizing the concept of “smart cities—smart forests”.
- 15           • A cultural (re)connection or urban-dwellers with the forest and its people should  
16 be fostered with concerted interventions in various sectors such as tourism,  
17 sports and visual arts, as a way to win people’s hearts and minds about the forest  
18 and its ways, securing its long-term existence. Existing well-succeeded rural-  
19 urban bonds such as food habits and traditional festivities can serve as good  
20 starting points to bring this cultural relation to a higher level. This refoundation  
21 of the Amazon culture in the context of urbanized populations is a stake not only  
22 for policy makers or traditional populations, but to society in general, including  
23 urban- and forest-dwellers.

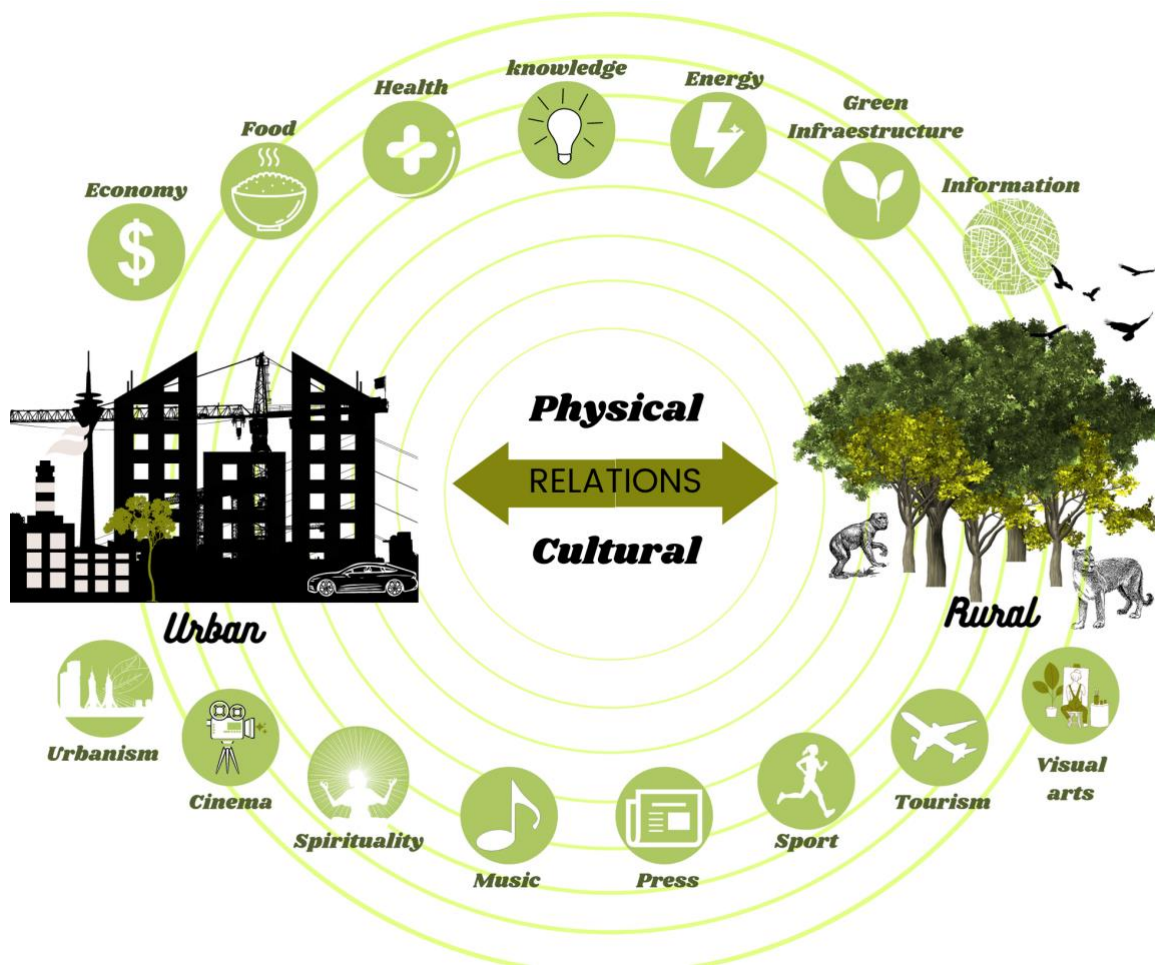
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1 **ABSTRACT**

2 Several factors, like the myth of civility vs. savagery and the flattening of increasingly  
3 globalized urban cultures, have historically contributed to what is generally a  
4 misconnection between cities and rural (forest) areas in the Amazon region. Since their  
5 formation process, Amazonian cities – where more than 75% of the region’s population is  
6 located – are placed majorly as trading posts of global commodities, which favors a poor  
7 physical and cultural relation of cities with their surrounding forests. While urban  
8 populations suffer permanently with widespread poor healthcare, education and sanitation  
9 conditions, indigenous people, that generally inhabit the outskirts of large cities, can face  
10 this urban-rural flux in a more fluid way, using both environments more efficiently.  
11 Although the rural-urban connections are stronger and better established in small cities (e.g.  
12 Brazil nut harvest in Pando, Bolivia), these relations are not always beneficial (e.g. many  
13 small municipalities are responsible for the highest deforestation rates in the region).  
14 Notwithstanding, much beyond physical barriers or misconnections between urban and  
15 rural forested areas, there are key cultural barriers to be overcome, especially by urban-  
16 dwellers. By providing a brief and non-authoritative review of the physical and cultural  
17 relations between rural (forest) and urban areas in the Amazon, we identify several points  
18 for improvement such as subsidizing the fixation of healthcare professionals in the  
19 countryside, implementing peri-urban agricultural/extractive belts for food security in  
20 cities, increase the permeation of forest and green spaces into Amazon urban landscapes,  
21 investing in innovation around the “smart cities-smart forests” concept and, perhaps most  
22 important, mobilizing human, financial and institutional resources to foster a  
23 re-signification or re-foundation of the cultural, spiritual and affective bonds of urban  
24 inhabitants with the forest, supported, of course, by the forest people and their ways. In this  
25 regard we present a compendium of testimonials from distinguished culture practitioners  
26 from different cultural sectors on how they think their work can collaborate to win people’s  
27 hearts and minds the ways, beauty, benefits, good influences and respect of/for the world’s  
28 largest tropical forest.

29 *Keywords:* rural-urban fluxes, infrastructure, health, smart cities-smart forests, Amazon art,  
30 cultural movement

1 GRAPHICAL ABSTRACT



2

3

4

## 1 1. INTRODUCTION

2 The historical occupation and urbanization in the Amazon followed models produced in a  
3 complex, multifaceted and crossed way, with contradictions and paradoxes (see chapter  
4 14). From the point of view of social, demographic and economic forms of use and  
5 occupation, the relationship between “rural” and “urban” has been increasingly distancing  
6 itself from the idea of “agricultural frontier” (Côrtes and Silva Júnior 2021), as a very  
7 limitable and detectable process between the supposed two worlds. The concepts of  
8 “urbanized forest” (Becker 2013) or “rural cities” (Padoch *et al.* 2008) are two  
9 interconnected examples of this recognition.

10 Nevertheless, there is a widespread recognition that, even with this set of established  
11 interactions, city life and values occur in a relationship of disconnection and emotional and  
12 ethical detachment from the Amazon rural and forest world (Adams *et al.* 2006) such that  
13 its problems are seen as not interconnected with each other (Brondizio 2017). Among the  
14 various consequences of such a disconnection are: the exclusion of rural populations from  
15 the effective exercise of citizenship of participation in the decisions that affect them and the  
16 exclusivity of the decision making by a few of them who inhabit or transit through urban  
17 centers (Le Tourneau and Bursztyn 2010); the difficulty of urban social groups in  
18 identifying and recognizing the impacts of their livelihoods on issues related to  
19 deforestation and biodiversity loss (Diegues *et al.* 1997); and, finally, the weak social  
20 engagement in processes and actions to address environmental problems directly related to  
21 rural and forested areas (Mansur *et al.* 2016).

22 We can recognize, in a broad sense, three factors that support the understanding of this  
23 ethical-evaluative disconnections between urban vs rural at the Brazilian Amazon: two of  
24 them are based on a historical occupation process of the region, and the third one is linked,  
25 more recently, to the processes of techno-scientific modernization and insertion of  
26 Amazonian cities into globalization movements: (1) The relationship between “settlement”  
27 and “*sertão*” (hinterland) in the processes of European colonization (Farage and others  
28 1986; Raminelli 1994; Oliveira 1998); (2) The myth of the inexhaustibility of Amazonian  
29 natural resources (Sevcenko 1996; Gadelha 2002) (Pádua, 2019); (3) The difficulties



1 related to the construction of subjectivity in the complex social dynamics of the globalized  
2 (Simmel 1997; Sheller and Urry 2016).

3 The historical colonization process that led to the disorganization of millennial-long  
4 indigenous configurations in this macro-region was conducted, as we know, at the expense  
5 of colonial processes. It produced images, symbologies and meanings that last and  
6 contribute significantly to the usual predatory economic and social models, as well as to the  
7 processes of urbanization that takes the forest, indigenous socio-cultural diversity and  
8 hydrological strength as riches to be consumed and, at the same time, “wild” spaces whose  
9 civilizing impetus should be responsible for civilizing them (Farage and others 1986;  
10 Farage 1991; Raminelli 1994; Sevchenko 1996; Oliveira 1998); see also SPA Chapters 13  
11 and 14].

12 Paradoxically to the widely accepted idea of civilizational and wild desert, the forests have  
13 also become a gigantic sphere of abundance and affluence to be explored in an unlimited  
14 way. Since the first approximations between newly formed European nations and the vast  
15 territories of South America, the image of an endless nature, impossible to be exhausted by  
16 human capacities, has solidified. The difficulties inherent to the historical process of  
17 interiorization of colonization processes, carried out without planning, with limited human  
18 resources, through incursions such as those of *bandeirismo*, and the foundation of the  
19 already mentioned settlements in the middle of the “*sertão*” have fixed this image over the  
20 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> centuries (de Lima 2012; Cesco and de Lima 2018). In the 20<sup>th</sup> century,  
21 both modern military incursions, particularly in the Brazilian Amazon, such as Marshal  
22 Rondon's expeditions, and the plans for occupation and “defense” of the Amazon,  
23 undertaken by military governments, insisted on the image of an inexhaustible nature to be  
24 intensively explored (Bolle *et al.* 2010).

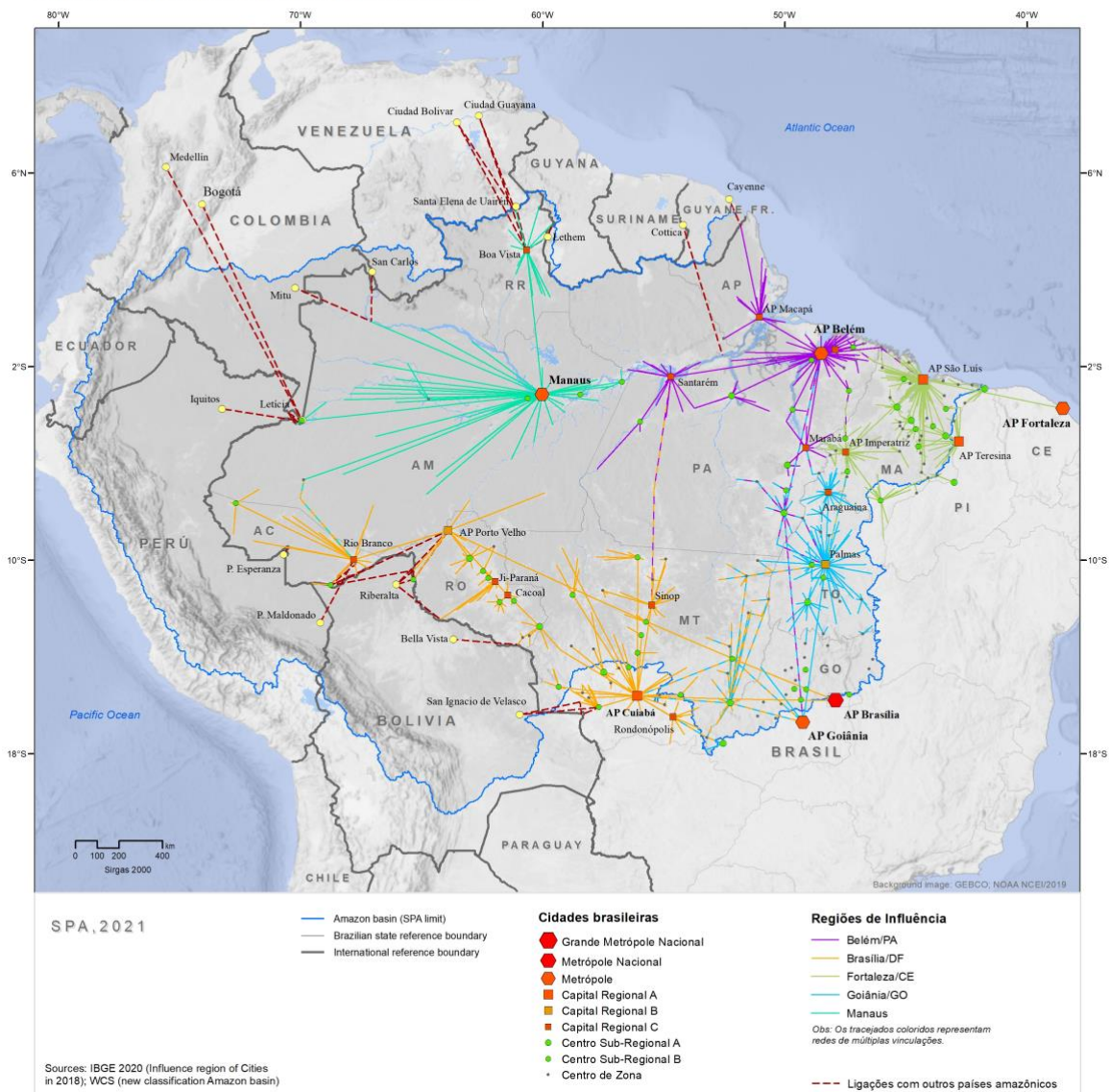
### 25 ***1.1. Rural-urban (dis)connection today***

26 The opposition between occupation/*sertão*, as a reflection of the civility/savagery  
27 relationship, and the myth of the inexhaustible resources persist to the present day and are  
28 reflected in the development policies devoted to the region and in the economic and cultural  
29 forces present in the region Amazonian universe. Consequently, this antagonistic

1 relationship contributes to the development of a distancing and an opposition relationship  
2 between “rural area” and “city”, becoming fundamental valuation components that  
3 prevented the spread of a culture based on caring for forests and their inhabitants. In regard  
4 to the third fundamental component for this culture of non-connection between “city” and  
5 “countryside” - the poor construction of subjectivity in a globalized world -, it is linked to  
6 the fundamental characteristics of contemporary society, endowed with high mobility and  
7 located within the scope of globalized cities (Sassen and others 2002).

8 The concept of globalized cities, or globalized urbanization, reviewed by (Brenner and Keil  
9 2014), is meant here as “(...) *the planetary “fabric” or “web” of urbanized spaces*  
10 (Lefebvre 2003) (...), *with well-defined urban hierarchies conditioned by supranational*  
11 *forces (...), through which corporations coordinate their production and investment*  
12 *activities.”* But not only that. It is also viewed “(...) *as an arena of contestation in which*  
13 *competing social forces and interests, from transnational firms, developers and corporate*  
14 *elites to workers, residents and social movements – struggle over issues of urban design,*  
15 *land use and public space.”* Which is nowadays far from being restricted only to the  
16 economic flows but “(...) *engages with a broad range of globalized or globalizing vectors –*  
17 *including not only economic flows, but the crystallization of new social, cultural, political,*  
18 *ecological, media and diasporic networks as well.”* In that sense it can also affect people’s  
19 subjectivity through the flattening of local cultures to comply with a supposedly global,  
20 permanently networked, set of communal standards. We understand that all the subtleties in  
21 these definitions are applicable to the cities in the Amazon region (Fig. 1).

### INFLUENCE REGION OF BRAZILIAN AMAZON CITIES



1

2 **Figure 1.** Spatial influence of large and medium-sized cities of the Brazilian Amazon. Notice  
 3 the huge area of influence of Manaus over a large fraction of the west Amazon,  
 4 even towards foreign cities. Both the majorly urban population of the region and  
 5 the dominant direction of social, cultural, economic and political influence from the  
 6 cities to the rural or forested areas have led to the coining of the term “urbanized  
 7 forest” for the Amazon region.

8 “Classic” and “contemporary” authors have insisted on the idea that the urban life, as the  
 9 existential experience of the modern world, gives to the individuals exposed to the intense  
 10 dynamics of a hyper-technological world a kind of “desensitization” process (Simmel  
 11 2005)(Sennett, 2005; Urry, 2008) to the point of urban-dwellers not perceiving the far-

1 ranging - up to 1,000-km radius - impacts of urbanization on its surrounding forests and  
2 rivers (e.g. fish stocks are sensibly reduced around Manaus). Tregidgo *et al.* (2017)  
3 explained that “Fishers nearer Manaus reported catching tambaqui half the size of those  
4 caught 1,000 km from the city (...). The tambaqui catch rate also doubled with increasing  
5 distance along the Manaus travel-distance gradient”.

6 In other words, experiencing a world of intensification of flows and processes of  
7 artificialization, individuals become increasingly insensitive to situations, activities and  
8 elements that are not linked to their direct daily experience. In that sense, both the content  
9 related to less evident environmental problems (such as the effects of climate and  
10 environmental changes) and the conditions for building an emotional bond with natural  
11 landscapes are seriously compromised. In the specific case of the Amazon and its most  
12 significant urban configurations, the presence of these three sets of values (the rural as a  
13 wild space, the inexhaustibility of wealth and the desensitization of the urban individual)  
14 contributes decisively to the development of this culture of disconnection.

15 The perception of urban areas tends to be different for forest-dwellers and indigenous  
16 people of the region. Indigenous urbanization in Amazonia has been examined as sets of  
17 multi-directional processes that are “often highly contingent and situational not as a simple  
18 or permanent migration to a city, but rather as part of an ongoing circulation of people that  
19 connects different communities, towns and multiple-sited dwellings” (Peluso and Alexiades  
20 2005; Padoch *et al.* 2008; Alexiades and Peluso 2015, 2016; Peluso 2015). “Urbanization”  
21 for indigenous people is often opportunistic and inspired by a range of drivers, the most  
22 common being labor opportunities, schooling, political work and escaping village conflicts.  
23 Research has described how urban areas become villages and how villages become urban  
24 (Padoch *et al.* 2008), but most importantly how these processes ultimately begin in people’s  
25 minds long before they physically take place, and hence the idea that “urbanization begins  
26 at home” (Peluso, 2004). In other words, for Indigenous Peoples, movement back and forth  
27 tends to be flexible and reflect strong social, political and economic relationships amidst the  
28 rural and the urban landscape (Andrello 2006; Alexiades 2009)

29 ***1.2. The urban forest (should turn into forest cities?)***

1 The Brazilian Amazon forest, the major portion of the biome, is urban, by excellence,  
2 considering that >75% of its population is located in cities, which encouraged the Brazilian  
3 geographer Bertha Becker to denominate the Amazon region as an “urbanized forest”.  
4 However the concept is not restricted to demographical characteristics, “*expressing a*  
5 *tendency on the expansion and growth of cities in the region and, namely, of a lifestyle that*  
6 *is not restricted to the small towns and cities, but which defines social and economic*  
7 *reproduction in the region; process already named by Lefebvre (2003) as ‘diffusion of the*  
8 *urban society’ ” (Becker 2013; da Trindade 2013). As such, the concept of “urban forest”*

9 used for the Amazon region is key for understanding the dominant direction of social,  
10 cultural, economic and political influences in the region: from the cities to the rural or  
11 forested landscapes (Fig. 1).

12 After the 1960s, as the region became a target of interest for expanding globalized markets,  
13 policies were brought together and made cities, on the agricultural frontier, subject to  
14 regional policies (Becker 1991). In Brazil, this process was more intense and produced new  
15 cities, such as agrovillages and company towns (e.g. Sinop), which grew influenced by  
16 industrial production and agribusiness, and several other urban areas influenced by the  
17 production and flow of goods: riverside cities, highway cities, industrial cities. Today such  
18 cities are a factor of change, in which migrants learn occupations and trades, and, at the  
19 same time, in which peasantry and its relation to labor is conserved and diluted (Bertha  
20 1985). The region’s historical migratory process from within and outside the region into  
21 cities has reflected in an intense urban growth, not accompanied by investments in basic  
22 infrastructure.

23 As a result the Amazonian cities, which exert such an influence over the rural and forested  
24 areas, are generally devoid of proper access to infrastructure, such as sewage systems and  
25 water treatment, which, associated with adequate energy services and garbage collection,  
26 are essential public services to guarantee urban well-being (Brondizio 2016). About 86% of  
27 its municipalities do not have an institutionalized sewage treatment service, and only 12%  
28 of the urban population is served with a sewage treatment system (Fig. 2) (ANA 2017).  
29 This situation becomes more complex when we consider that more than 80% of the

1 Amazonian cities are small, with less than 20 thousand inhabitants, with a fragile economy  
2 and inability to improve investments in basic infrastructure.



3  
4 **Figure 2.** Infrastructure deficit in the city of Afuá, Pará, Brazil (Source: Laboratório de Estudo  
5 das Cidades Collection/UNIVAP) .

6 Apart from the cultural and physical links (or lack of links) of people with these rural-urban  
7 exchanges in the Amazon region, there are intrinsic dependence relations, or  
8 “misrelations”, when it comes to the trade of food and manufactured goods. The city is now  
9 seen more as spaces for the flux of goods that inevitably connects to the region's trading  
10 hubs such as Manaus, Iquitos or Belém and from there to global markets (Becker, 2013).  
11 Manaus is an example of an Amazonian metropolis where the tension between urban and  
12 rural areas is explicit (Fig 3). While focusing on the control of the territory and the flow of  
13 goods, there has been historically little concern regarding social justice, guaranteeing local  
14 food production and provision, health care, education and other important elements in  
15 forest areas. Inverting or equilibrating the weight of influence from the rural or forested  
16 regions to the cities could help improve well-being and other conditions for both forest- and  
17 city-dwellers in the region. The possibilities for such process are analyzed in depth next.



1

2 **Figure 3.** The metropolitan area of Manaus: an example of tensions between urban and  
3 rural contexts in the Amazon. Source: AmazonFACE/Nitro/J.M.Rosa

#### 4 ***1.3.Addressing the (dis)connections***

5 The social construct concept [i.e. the meaning, notion, or connotation placed on an object or  
6 event by a society, and adopted by its inhabitants, which influence how they view or deal  
7 with the object or event (Burr 2015) is an important pact for the conservation and  
8 sustainable use of the Amazon and requires broad recognition of its importance by/for its  
9 urban population. In this sense, this chapter presents a brief overview this evaluative  
10 (dis)connection between cities and rural areas in the Amazon, pointing out its negative  
11 consequences for the sustainable development of the region, and providing some guidelines  
12 for building a culture of connection, affection and ethics between urban and rural  
13 environments in the Amazon that can benefit its conservation and the sustainable use of its  
14 natural resources.

15 Next we present the major challenges and opportunities or alternatives for improving such  
16 (dis)connections between the rural and urban areas in two major categories of relations:

1 physical and cultural relations. In the physical relations (section 4) we briefly discuss the  
2 provision, use and flow of material goods and services in the regions according to up-to-  
3 date scientific literature on the subject, also providing tentative though promising  
4 alternatives for improving the rural-urban connections from the perspective of such  
5 physical relations. In section 5, on the cultural (dis)connections between the rural or  
6 forested areas and cities in the region, we give voice to a number of different culture-  
7 practitioners to provide, in their own view of their specific culture sector, how well- or  
8 badly-established these cultural bonds are today, and how their strengthening is important  
9 to assure the long-term survival of the world's largest tropical forest. We conclude by  
10 summarizing a few recommendations about rural-urban relations in the Amazon, aiming at  
11 a long-term sustainable future for the region.

## 12 **2. PHYSICAL RURAL-URBAN (DIS)CONNECTIONS IN AMAZONIA**

13 Approximately 80% of Amazonian cities have less than 50,000 inhabitants and are formally  
14 considered as small cities. These small cities "despite having a fragile economy, strong  
15 dependence on subsidies offered by the central governments, and low capacity in offering  
16 key services and equipment such as education, health and sanitation, play an important role  
17 in the Amazon urban network" (Costa and Brondizio, 2009). They represent possibilities to  
18 improve life for families that can access urban services and employment opportunities that  
19 are deficient or even non-existent in rural areas. On the other hand, large cities such as  
20 Manaus in Brazil, Iquitos in Peru or Florencia in Colombia function as regional hubs for  
21 the provision of services, commerce, health care and other relations with the urban-rural in  
22 the Amazon. These physical interactions are, however, far from ideal. In this section we  
23 explore some caveats and opportunities for improving the connections between the forest  
24 and rural localities in general with cities in the Amazon and elsewhere from the point of  
25 view of "physical" relations, pertaining the access, trade and utilization of material goods,  
26 services (including ecosystem services), and information.

### 27 ***2.1. Formal and informal Economy***

28 The Amazon is known for its strong cattle and agricultural economies (including large-  
29 scale soya production), timber, forest products, gold, oil and gas, and the cocaine and drug



1 trade (Salisbury and Fagan 2013) all of which have strong informal tendencies and whose  
2 importance and differences vary across regions - e.g. soy-exportation oriented in Itacoatiara  
3 or oil-industry economy in Iquitos (Bunker 2003). The region's informal economic activity,  
4 based on subsistence activities, the extraction of raw materials and casual labor, is rife and  
5 linked to broader formal and international economies (Peluso 2020). As a result, Amazonia  
6 has intersecting informal and formal economic sectors, which exist in a symbiotic  
7 relationship (Peluso 2018).

8 A direct connection between today's Amazon with the global economy is promoted by the  
9 trade markets of such goods, which are unequal in many ways. For example, rich countries  
10 buy primary products with little added value (meat, soy, minerals, etc.), at low prices, and  
11 sell knowledge, technology and products with aggregated values at high prices (unequal  
12 price exchange, *sensu* (Prebisch 1962), Prebisch, 1950). In order to obtain more money for  
13 their exports, the Amazon countries are forced to extract increasingly more resources, to  
14 sell them to developed countries (ecologically unequal exchange, Bunker, 1984, 1985;  
15 Martinez-Alier 2002, 2011). In addition, nutritionally adequate calories are exported at low  
16 prices (unequal calorie exchange (Falconí *et al.* 2017) and expensive calories with low  
17 nutritional content are imported. This has a double impact since the growing trade in  
18 primary products generates social and environmental damage in the places where they are  
19 produced or extracted – generally the rural areas.

20 Some cities have developed forest economy alternatives for escaping such globalization of  
21 local formal and informal economies, generating and diversifying income, and improving  
22 the relation between cities and their surrounding rural areas. For example, cities on the  
23 island of Marajó, in the state of Pará have boosted the city's economy through ecological  
24 tourism (Soure), açaí production (Ponta de Pedras) (Figure 3) and fishing (Afuá). These  
25 income-generating alternatives should be encouraged through state policies, encouraging  
26 the valuation of the forest by this urban population. In that sense a wider-developed  
27 bioeconomy - based on the respect of traditional way of production by local and traditional  
28 communities - would be an excellent alternative for economic development for the Amazon  
29 region as a whole (*sensu* SPA Chapters 27-29) as long as they are enacted sustainably  
30 without degrading the forest environments.



1

2 **Figure 3.** Riverside community of Fortaleza, which congregates producers of açai fruit,  
3 located at the municipality of Ponta de Pedras, Pará, Brazil (Source: Laboratory  
4 of Estudo das Cidades collection/UNIVAP, 2019).

## 5 **2.2. Food security**

6 A large proportion (~80%) of food security in cities of the Brazilian Amazon lies in the  
7 hands of smallholders (settlers) (Alencar *et al.* 2016). By 2015, 3,589 rural settlements  
8 were established in the region, covering an area of 41.8 million hectares (Alencar *et al.*  
9 2016) and within this area, 20 million hectares are still covered by forests that stock  
10 approximately 10 billion of tons of CO<sub>2</sub>, a volume of carbon equivalent to 30% of 2019's  
11 global GHG emission (Friedlingstein *et al.* 2020). Generally these small producers sell their  
12 forest and agroforestry yield at street fairs in the region's small cities (Souza e Alencar  
13 2020). Recent initiatives on sustainable rural development in the Brazilian Amazon  
14 indicated that there is a substantial reduction in deforestation and increased family income  
15 when the six following points are considered: (1) safe land tenure, (2) appropriate technical  
16 assistance, (3) credit lines suitable for your smallholders, (4) minimum infrastructure for  
17 transporting yield products, (5) conditions to sell their products in cities – through  
18 institutional or open markets – provided by the local governments, (6) recognition and  
19 compensation for the ecosystem services provided by keeping forests standing (see also  
20 SPA Chapters 27-29) (Pinto *et al.* 2020; Souza and Alencar 2020)

21 It is remarkable that at least 4 of these points (2, 3, 4 and 5) are dependable on urban  
22 institutions or urban-to-rural infrastructure. Both the provision of appropriate technical  
23 assistance and the provision of appropriate credit lines for smallholders depend on  
24 institutions located in urban areas and a good deal of communication and presence of, for  
25 example, agricultural assistance and bank technicians with farmers and their land.  
26 Infrastructure for securing agricultural and forestry production flow to cities as well as  
27 establishing and maintaining the conditions to sell the yield products in cities depend on the

1 level of connection of rural areas to cities and sociopolitical organization. Therefore, the  
2 physical proximity of food production units in rural areas to Amazonian cities seems to be  
3 key for improving or securing food security in the region. In that sense, food production in  
4 "peri-urban" areas could be a way forward for increasing producers' income, promoting  
5 forest conservation, and providing quality fresh food to urban populations in the Amazon.  
6 Local indigenous and traditional communities should be actively favored for the  
7 establishment, expansion or maintenance of such peri-urban food production belts around  
8 Amazonian cities, given their extensive expertise in staple agriculture in the region  
9 (Irazábal 2009; Schor *et al.* 2018). By promoting the valuation of local or regional food  
10 production in Amazon cities [instead, for example, the nowadays common  
11 commercialization of protein (namely chicken) from outside the Amazon region (Schor *et*  
12 *al.* 2015) these peri-urban food production belts could even foster "organic" (i.e. not top-  
13 down) changes of food consumption habits in the region, which pertain to the cultural  
14 domain (for which alternatives are presented in section 3; see also SPA Chapters 13 and  
15 14).

### 16 ***2.3. Health systems and diseases***

17 Rapid social changes tied to a globalized lifestyle have led to increased sedentization,  
18 changes in diet and nutrition which have led to increases in obesity, diabetes (Gracey and  
19 King 2009; Oliveira *et al.* 2011) and cardio-vascular problems (Liebert *et al.* 2013; de  
20 Souza Filho *et al.* 2018). Alongside sedentization, urbanization-driven soil and water  
21 contamination, as well as deforestation have increased exposure to respiratory and contact  
22 infections, tuberculosis and faeco-orally transmitted diseases (Kroeger 1983; Kroeger and  
23 Barbira-Freedman 1992). The incidence, immunity and risk perception of a number of  
24 transmittable diseases such as malaria and tuberculosis are highly influenced by landscape  
25 characteristics, being amplified among more marginal groups within Amazonian cities and  
26 more controlled among traditional river-dwelling communities (Confalonieri 2005; de  
27 Castro *et al.* 2018). These lifestyle changes have also placed increasing pressure on local  
28 natural resources such as soils, wildlife and timber, leading to feedbacks of environmental  
29 degradation and a concomitant impoverishment of health and nutrition conditions  
30 (Alexiades and Lacaze 1996; Piperata *et al.* 2011). For Indigenous Peoples for example,

1 health conceptually includes social, political and spiritual, as well as physical well-being,  
2 not only of the individual but of the community, and the ecosystem (Alexiades 1999). Such  
3 positions mean that urban healthcare approaches are seen to ignore the underlying causes of  
4 illness in rural areas and are often only utilized by forest-dwellers as a last resort when  
5 health has already deteriorated.

6 The urban-rural framing typically depicts a scenario in which rural resources serve the  
7 needs of city folk and these populations might often be seen to be in competition with each  
8 other (Brondízio *et al.* 2016). Indeed, healthcare professionals often view work in rural  
9 areas as a mere stepping stone to city employment where hospitals and well-equipped  
10 clinics are located and they are thus often absent or disengaged in their temporary outpost  
11 medical care positions. This often leaves a void of western healthcare in rural areas and has  
12 spurred a series of initiatives on how to best serve these populations (Peluso 2021): in fact  
13 the density of physicians in interior Amazonia (i.e. outside capitals) is amongst the lowest  
14 in entire Latin America, reaching values as low as 0.2 physicians per thousand inhabitants,  
15 while 4 is the minimum recommended by the World Health Organization (Silveira and  
16 Pinheiro 2014). Apart from statewide vaccination campaigns, there have been a variety of  
17 approaches such as the WHO in the 1970's to train local health care promoters community-  
18 based approaches (Alexiades and Lacaze 1996) health care boats such as the Amazon Hope  
19 project, the Abaré hospital-boat in Pará, and the building of outposts in rural communities.  
20 Nevertheless, the lack of health personnel and adequate infrastructure such as hospital and  
21 first care centers is acute, and the advent of sudden large-scale emergencies such as  
22 COVID-19 further increases pressure on the region's deficient healthcare system. For  
23 example, widespread forest fires aggravate the health risks of COVID-19 through the  
24 augmented concentration of fine air particulates that can worsen and increase the spread of  
25 respiratory (Alves 2020; Pinto *et al.* 2020; de Oliveira *et al.* 2020) and COVID-19  
26 infections (Brancalion *et al.* 2020). On the other hand, the social distancing demanded  
27 during the COVID-19 has driven a surge in formal telemedicine practices, which is  
28 particularly relevant and desired for the Amazonian context of continental dimensions and  
29 isolated populations.

1 Therefore, apart from the aforementioned itinerant healthcare initiatives and strengthening  
2 of telemedicine, it would be extremely important to have more subsidies and incentive  
3 programs for the long-term fixation of healthcare professionals in the region's small cities  
4 and rural settlements. This is tied to the improvement of other living and well-being  
5 conditions in these countryside places that can make them, in addition to state incentives,  
6 more attractive to healthcare professionals. One of these conditions is, of course, the simple  
7 presence or improvement of healthcare infrastructure, including specialized equipment and  
8 installations to decentralize medical services from the major capitals to the countryside.  
9 Last but not least, positive strategy for prioritizing healthcare in Amazonia is one that  
10 allows all local populations - whether rural or urban - to nurture, maintain and rely upon  
11 resources that are readily accessible to them. An example of such approach is that of  
12 SachaWarmi (<https://www.sachawarmi.org/>) in Ecuador who facilitated videos that  
13 explained medicinal plant use in practical terms.

#### 14 ***2.4. Knowledge infrastructure and human capital***

15 Ao tratar de Educação na Amazônia, é de uma Amazônia profunda que queremos falar, lá  
16 onde as políticas públicas ainda estão por chegar, em que a educação formal básica e suas  
17 três grandes etapas, : educação infantil, ensino fundamental e ensino médio, chegam de  
18 forma bem limitada e com graves problemas que passam pela escassez e precariedade de  
19 espaços físicos. Além disso, cursos profissionalizantes e de nível superior são sonhos ainda  
20 distantes. No Estado do Amazonas, Brasil, uma solução encontrada pela Secretaria de  
21 Estado da Educação e Desporto (SEDUC) para ampliar a oferta de educação nas  
22 modalidades de Ensino Fundamental, é o ensino presencial mediado por tecnologia.  
23 Implantado em 2007, o Centro de Mídias de Educação do Amazonas (CEMEAM) é uma  
24 política de estado pioneira no país.

25 Diferentemente da educação à distância, essa possui presencialidade dos estudantes às  
26 aulas, recursos de interatividade em tempo real e mídias estrategicamente planejadas para o  
27 desenvolvimento das aulas síncronas e assíncronas, fazendo uso de um sistema via satélite  
28 de videoconferência com interação de áudio e vídeo. As aulas são produzidas por  
29 professores especialistas e transformadas em peças televisivas em uma central de produção

1 educativa para TV, com o uso de diversos recursos midiáticos e ferramentas de  
2 comunicação e transmitidas ao vivo, diariamente, para todas as salas de aula  
3 simultaneamente, em horário regular. Cada sala de aula conta com um kit tecnológico e  
4 com um professor presencial para mediar o processo de aprendizagem. O programa atinge  
5 xxxxx, estudantes, de xxxx comunidade e está presente em todos os 62 municípios do  
6 estado. (<https://www.centrodemidias.am.gov.br/>).

7 Em 2010, a Fundação Amazônia Sustentável (FAS) iniciou a construção de nove Núcleos  
8 de Conservação e Sustentabilidade (NCS), localizados nas Unidades de Conservação onde  
9 a instituição atua. Os NCS são formados por salas de aula, refeitório, cozinha, biblioteca,  
10 alojamentos para alunos e professores, base operacional e laboratórios de informática.  
11 Criados com o objetivo de oferecer educação para áreas remotas, além de apoiar o poder  
12 público e levar soluções em educação e saúde, adaptadas às realidades das comunidades  
13 ribeirinhas do Amazonas. Os núcleos também oferecem ensino formal dentro das  
14 modalidades de ensino fundamental, médio, Educação de Jovens e Adultos (EJA), curso  
15 superior, técnico pós-médio e cursos livres profissionalizantes. São nesses núcleos, por  
16 meio de parcerias, que se desenvolvem projetos complementares que incentivam os jovens  
17 na construção de planos de vida, de formação e vivências práticas. Tudo isso possibilita  
18 experiências como as da iniciativa “Repórteres da Floresta”, que trabalha para a formação  
19 de um olhar sensível e sincero sobre a realidade local por meio de oficinas de  
20 educomunicação e criação de produtos de comunicação. Os estudantes também  
21 desenvolvem soluções inovadoras para a geração de renda e o empreendedorismo  
22 aprendem técnicas de liderança para assumir importantes papéis dentro da comunidade;  
23 valorizando um forte elemento dentro da cultura e modo de vida das comunidades, são  
24 trabalhadas técnicas de agroecologia, unindo o conhecimento tradicional com técnicas  
25 modernas. Os estudantes também experienciam a leitura em suas múltiplas possibilidades,  
26 contando e recontando histórias; e exploram o campo das artes cênicas, por meio da  
27 produção de espetáculos teatrais.

28 A FAS também tem um olhar direcionada à valorização dos professores, investindo na  
29 formação por meio do desenvolvimento de materiais e metodologias com temáticas  
30 contextualizadas e foco na sustentabilidade e meio ambiente para os que atuam com salas

1 multiseriada, uma realidade das comunidades. Outra iniciativa nesse sentido é o Curso de  
2 Pedagogia do Campo que busca formar professores caboclos, marcada pela parceria entre  
3 diversas instituições, os estudantes realizam o sonho de um curso superior dentro de uma  
4 Unidade de Conservação que possibilita uma formação diferenciada, onde as árvores, os  
5 rios, os peixes, os bichos, as histórias e os modos de vida se transformam em conteúdo e o  
6 espaço da sala de aula se amplia e se ressignifica.

7 Dessa forma duas recomendações são propostas em relação à interação floresta-cidade em  
8 relação à educação na Amazônia: (1) estabelecimento de hubs físicos de educação  
9 presencial em localidades remotas, auxiliados por tecnologias de ensino remoto, e (2)  
10 programas de formação e estímulo à fixação de professores, de preferência advindos das  
11 próprias comunidades interioranas, uma vez que estes já conheçam as realidades  
12 vivenciadas por essas populações fora dos grandes centros urbanos na região.

### 13 ***2.5.Green infrastructure for nature-based solutions***

14 Green infrastructure is an increasingly employed concept for the planning of urban and  
15 rural landscapes and can be understood as “the connected network of multifunctional,  
16 predominantly unbuilt, spaces that supports both ecological and social activities and  
17 processes” (Kambites and Owen 2006). While green infrastructure is sometimes treated  
18 majorly as a planning issue (Pauleit *et al.* 2011), in practical terms it can be seen as the  
19 physical green spaces, planted trees and the corridors that connect them which provide  
20 multiple ecosystem goods and services either of direct or diffuse use (Tzoulas *et al.* 2007).

21 Apart from a few isolated cases and neighborhoods, such as the Acariquara neighborhood  
22 in Manaus (Fig. X), the forest does not permeate urban spaces in Amazonian cities. In fact  
23 Brazilian Amazon capitals like Manaus and Belém are amongst the country cities with the  
24 smallest green coverage (IBGE 2012). There is vast scholarly evidence on the benefits of  
25 greening urban spaces, including contributions to the physical and mental health and well-  
26 being of urban-dwellers and lowering of air and surface temperature maxima and variation  
27 (Figure. 4) (e.g. Norton *et al.* 2015; Amato-Lourenço *et al.* 2016). In fact several other  
28 urban issues could be mitigated with a stronger permeation of the Amazon forest green into  
29 the region’s city landscapes such as (nature-based solutions for) flash floods, landslides,

1 water security, air pollution (especially of particulate material), noise pollution, usage of  
2 indoors air conditioning, greenhouse gas emission balance and even the generation of  
3 “green” job posts (Raymond *et al.* 2017; Nagabhatla *et al.* 2018), as demonstrated for the  
4 peri-urban areas of the Amazonian city of Puyo in Ecuador (Huera-Lucero *et al.* 2020).

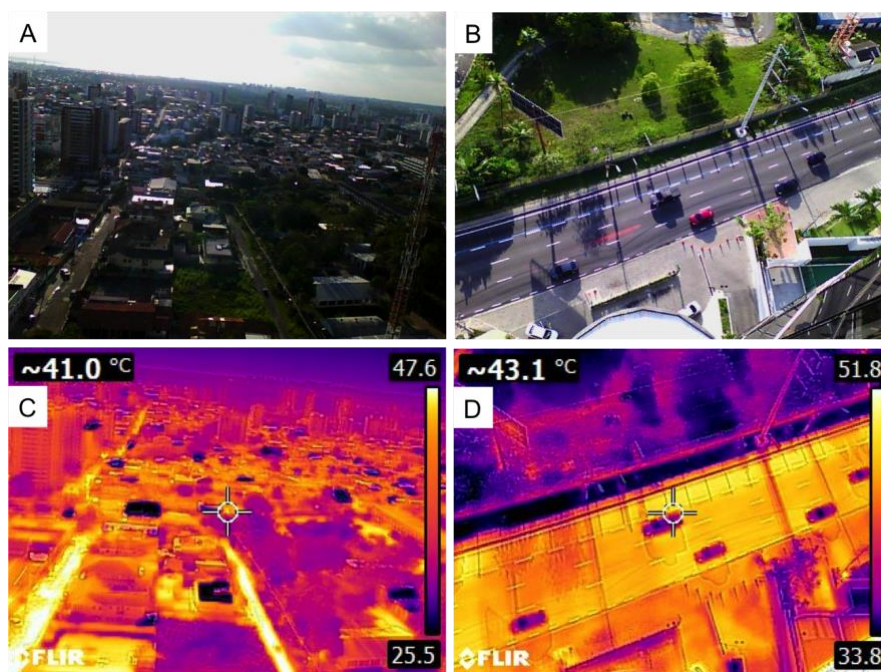
5 An increased occurrence of green infrastructure in three large Amazonian capitals (Manaus,  
6 Belém and Porto Velho) has been preliminarily estimated as costing altogether US\$ 70  
7 million per year, or USD \$15.00 per inhabitant per year (Lapola *et al.* 2018), a feasible  
8 cost, especially if one considers the incurred monetary benefits such as the consequent  
9 energy-savings related to air-conditioning. Another study in 29 cities of the Brazilian  
10 Amazon, including small and medium-sized cities, revealed a lower cost of USD \$7.00 per  
11 inhabitant per year, with a considerable variation among cities (Vieira and Panagopoulos  
12 2020). However, this latter study also found that, despite the hyperdiversity of about  
13 15,000 trees species of the Amazon ecoregion (ter Steege *et al.* 2020), the majority of trees  
14 in urban areas of the Brazilian Amazon is exotic, with 42% of all surveyed trees in these 29  
15 cities belonging to three exotic species such as *Ficus benjamina*, native to Malaysia.

16 There are, however, practical barriers for greening Amazonian cities to the level at which  
17 these benefits are perceptible. The first of them refers to the lack of tax incentives for  
18 properties with trees and adaptation of city-level services to cope with such a high tree  
19 coverage - again a cost that is probably smaller than the energy spent on cooling interiors or  
20 dealing with health impacts of extreme high temperatures. A strong greening in these cities  
21 (as the example given in Fig. X) would also demand burying down at least a large fraction  
22 of the urban electric wire network. But most of all, there is a cultural barrier to be overcome  
23 when it comes to keeping street trees and green spaces in Amazonian cities: for example,  
24 many inhabitants of Manaus do not want trees on their streets or backyards given that they  
25 associate the presence of trees with dirt, forest people and, therefore, with poor  
26 development (Lapola *et al.* 2019). Moreover, the permanently constrained budgets of city  
27 governments force them to abide to continuous gentrification and allotment of urban spaces  
28 that, if better planned, could have a well-equilibrated presence of green infrastructure.  
29 While it is reasonable to assume the small and medium-sized Amazon cities have the same  
30 demands as large cities in terms of the presence of green infrastructure, these small and



1 medium-sized cities generally operate in a lower revenue and skill basis (Pickett *et al.*  
2 2013). In that sense state- or federal-level coordination for the provision of financial and  
3 technical conditions for increasing green infrastructure in small and medium cities is key.  
4 Moreover, we also suggest that clearly demonstrating the financial and well-being net  
5 benefits of urban green infrastructure, in a participatory way, might be another way out to  
6 increase the presence of green infrastructure and green spaces in Amazonian cities, which  
7 could ultimately turn more fluid the transition between urban and rural areas in the region.

8



9

10 **Figure 4.** Visible (A, B) and thermal infrared (C, D) pictures taken from  
11 locations in Manaus city in October 2016 as examples of poor  
12 insulation and (air-conditioning) energy conservation in buildings (A,  
13 C) and cars (B, D) and the importance of vegetation to ameliorate  
14 urban temperatures. The top left number denotes the temperature at the  
15 target in the center of the image. Source: Lapola *et al.* (2018)

## 16 **2.6.Information (smart cities, smart forests)**

17 The popularization of the internet has undeniably improved communication between small  
18 settlements and large urban centers in the Amazon, from entertainment purposes (Colferai  
19 2013) to optimization of agricultural yields (Furtado *et al.* 2020) and even telemedicine

1 (Machado *et al.* 2010). The Amazon is however one of the regions in Latin America where  
2 the digital divide is strongest, especially considering the differences between urban and  
3 rural areas. While 72% of households in the Brazilian Amazon make use of the internet, this  
4 percentage is way higher in urban areas (83%) compared to the percentage of rural  
5 households that somehow access the internet (33%), representing the highest urban-to-rural  
6 difference regarding the use of internet in Brazil (IBGE 2020). The main reason for such a  
7 digital divide is the lack of internet services in the region. Communication via the internet  
8 with rural or forested areas is highly dependent on wireless networks, namely via radio  
9 networks. And also in this matter what happens in the forest/rural areas also affects cities:  
10 for example, forest fires in rural areas seem to affect the internet signal in large cities such  
11 as Manaus (Medeiros 2020).

12 Improving the digital divides in the region is highly relevant for an effective and useful  
13 exchange of different sorts of information between rural and urban areas. Using the concept  
14 of “smart cities” [highly participative exchange of information through sensors and devices  
15 for better management of resources and services (Cunha *et al.* 2016)] for boosting rural-  
16 urban relations could bring about benefits much beyond the improvement of  
17 communication in Amazonia and elsewhere. In that sense it is pertinent to introduce and  
18 popularize the concept of “smart forests” (or “internet of trees”) in the region: highly  
19 technologized forest sites aiming at data collection, processing and analysis, not only for  
20 anticipating fires but also for managing other environmental changes, the sustainable use of  
21 forest resources and the own understanding and involvement of urban people with the  
22 forest (Gabrys 2020). One clear example of this is the use of smart forest technology to  
23 alert authorities about deforestation, logging, poaching and smuggling activities done by  
24 the Rainforest Connection initiative (<https://www.rfcx.org/>), which uses second-hand  
25 cellphones to monitor the sound in remote rainforest locations and generate alerts when the  
26 sound of chainsaws, motorcycles or trucks are captured. The system is currently employed  
27 experimentally in the Temb  Indigenous Reserve in central Par , Brazil. Other examples of  
28 usage of this smart city-forest approach would be the remote sensing, for example with  
29 cameras, of the production of forest fruits, the *ex-situ* monitoring of forest flammability,  
30 industrial scale tree planting for reforestation or creation of green infrastructure in cities,  
31 and the building of cultural connections by sharing touristic information with urban

1 population, such as the reproduction season of river turtles. The area, however, is still wide  
2 open for innovation and many other examples of such relation between urban and rural  
3 areas in the Amazon in regard to the exchange of information are expected in the next years  
4 or decades.

### 5 **3. CONNECTING CULTURALLY WITH THE FOREST**

6 One of the major challenges facing humanity today stems from the fact that we have lost  
7 the vital connection with the living world that sustains us (Beck 1998)(Beck, 1998). This is  
8 as true in the Amazon—whose human population is increasingly urban and subject to a  
9 globalized, flattened culture— as it is on the rest of the planet. It is of paramount  
10 importance for the wellbeing of our planet and for the survival of humanity as we know it  
11 that we stop their relentless destruction. Preserving the forest is not only central to  
12 maintaining biological and carbon assets, but also from a cultural point of view. And it is  
13 crucial as well in regard to the rights of nature (now constitutionally and/or legally  
14 recognized by at least three Amazonian countries: Ecuador, Bolivia, and Colombia) and the  
15 rights of indigenous peoples (recognized nationally as well as internationally, by the United  
16 Nations and the Inter-American Commission on Human Rights). But it is also important  
17 because the people who live intimately with the forest have a vision of a good life or *buen*  
18 *vivir* (variously understood as *sumak kawsay*, and other terms in indigenous languages),  
19 that, if heeded, can help put a break on the modern idea that the forest is an inanimate  
20 resource to be exploited for the sole benefit of humans.

21 A central tenet of this vision, shared by virtually all Amazonian peoples (e.g the Sarayaku  
22 indigenous people in Ecuador) is that the world of the forest, the world that is often referred  
23 to as nature, is in fact peopled by a diversity of selves —persons, or spirits— who live in  
24 constant communication with each other, and with us as well, if we could but hear them.  
25 Forest dwellers, thus, do not recognize a sharp division between human Culture and  
26 nonhuman Nature. Nor do they think of Nature as an inanimate resource that can simply be  
27 exploited for human benefit. Rather, we all form part of a vast “ecology of selves.” What  
28 we share with these other selves is a fundamental interiority, a selfhood, a spirit, a soul.  
29 This understanding has been well documented in the ethnographic literature (Descola  
30 2013). Only recently, however, has this come to be understood as more true to the

1 biological world even by scientists (Kohn 2013). In that sense the Catholic church is also  
2 playing an important role in the Amazon: once, a religion bent on extricating idolatry and  
3 converting natives, it today, under the guidance of Pope Francis, is heeding Amazonians  
4 and beginning to see the forest as a source of spiritual guidance (Pope 2020). The Sapara  
5 Nation in Ecuador/Peru (<https://www.naku.com.ec/declaration>), accordingly developed a  
6 unique communal initiative to take people to the forest to allow them to experience first-  
7 hand, what it means for each and every one of us to live with a living forest. Heeding the  
8 Saparas, we realize the way in which listening to the forest can be a profound spiritual and  
9 ethical practice that can remake our lives and the ways we view and treat “nature.”

10 Notwithstanding, there is no straight and simple recipe to make the non-forest people, the  
11 urban-dwellers, genuinely feel and recognize themselves as being culturally, spiritually and  
12 affectionately closer to the world’s largest tropical forest. While practicing a more rational  
13 economic use of the forest - e.g. through a standing-forest based bioeconomy - is certainly a  
14 way worth pursuing for the future of the Amazon (see SPA Chapters 27-29), the long-term  
15 existence of the forest will be better secured by winning people’s (namely urban-dwellers’)  
16 hearts and minds regarding the importance of the forest and its role in their daily lives.

### 17 *3.1. Are Amazonian cities culturally (dis)connected to the surrounding forest?*

18 Obviously the forest culture does not go unnoticed in the Amazon metropolis and many  
19 other cities of the region, for example through food consumption habits (consumption of  
20 local forest fruits and native fish), traditional festivities (for example the Parintins “Boi”  
21 Festival) and even through the use of plant with psychoactive compounds for religious  
22 purposes in the urban context (e.g. the ayahuasca brew). These unique Amazonian products  
23 and cultural assets are indeed part of everyday life in the region’s cities and already  
24 represent good connections between the urban and the rural forested Amazon. Although  
25 these examples of good connections between the Amazon forest and cities can be important  
26 instruments to help in such rura-urban (re)connection, they did not suffice so far to secure  
27 deep relations of the far majority of the local urbanized society with the forest aiming at its  
28 long-term existence.

1 Let us take the example of the Amazon metropolis, Manaus, which has nearly 2 million  
2 inhabitants but a only minor fraction of them see the surrounding forest as part of their  
3 living and cultural space (Higuchi and Silva 2013). In small cities (i.e. <50,000 inhabitants)  
4 the relation between the forest nature and urban citizens is more intimate and more solidly  
5 established, but not always in a synergistic way. On the one hand we have positive  
6 examples like the *castaña* (Brazil nut) harvest that intimately drives seasonal socio-cultural  
7 cycles in small towns of Bolivia's Pando department (Cronkleton *et al.* 2010). On the other  
8 hand many small cities in the Amazon are, for example, responsible for the highest  
9 deforestation rates in the region - one of them is Lábrea in Brazil, which has only about  
10 38,000 inhabitants but is among the top-ten deforestation municipalities in Brazil, with a  
11 rate of 390 km<sup>2</sup> in 2019 (PRODES, 2020). The improvement of this connection between  
12 urban-dwellers and a culture of and for the forest should be accomplished by (re-  
13 )touching/instilling people's innermost values, feelings and beliefs with a forest-based  
14 culture.

### 15 **3.2. *Witnessing on the reconnection***

16 Amazonians who live with the forest, understand the world “like a forest” and are  
17 mobilizing politically and through media showing us how they think with and like a forest  
18 (e.g. Kopenawa and Albert 2013). Compared to forest-dwellers and traditional population,  
19 Amazonians who live in cities, especially in medium and large urban centers, have a  
20 distinct mindset of values and inherited culture, and as such, one should not simply foster  
21 their appropriation of indigenous and traditional people culture, but rather a re-signification  
22 or re-foundation of the cultural bonds of urban inhabitants with the forest, supported, of  
23 course, by the forest people and their ways. “In the end, we will conserve only what we  
24 love; we will love only what we understand and we will understand only what we are  
25 taught.” (Dioum 1968). And this is not an endeavor for scientists alone or forest people  
26 themselves but for people from both the forest and city cultures to suggest how this  
27 transformation could be carried out.

28 Therefore, next a compendium of testimonials from culture practitioners from ten different  
29 cultural sectors are presented: architecture and urbanism, cinema, education, health and  
30 healing, music, press and communication, spirituality, sports, tourism and visual arts.

1 Preference was given to non-academic distinguished culture practitioners based on the  
2 Amazon region, trying to secure a reasonable gender and geographic balance. The selected  
3 culture practitioners were suggested to record a video of about 5 minutes of duration, the  
4 contents of which are transcribed next, or, in some cases, to provide their testimonial in the  
5 most casual and useful way. They have used their expertise in the specific cultural sector  
6 they work at to let the world know how their culture field can help build up this new  
7 cultural, spiritual and affective vision of the Amazon forest. How can the given cultural  
8 sector collaborate to embed in peoples' hearts and minds the ways, beauty, benefits, good  
9 influences and respect of/for the forest? Their target audience is urban-dwellers in the  
10 Amazon and elsewhere.

11 At first glance these ten testimonials are as diverse as can be, not only in terms of the  
12 cultural sectors dealt – from urbanism to spirituality – but also in terms of the personal  
13 background of the culture practitioner. However, on the other hand, they all make praise  
14 about establishing a culture of connection or reconnection of people with the forest, through  
15 different, but interconnected ways. Laurent Troost talks about an “encounter of people with  
16 nature” inside through better urban planning, whereas Zienhe Castro uses the terms  
17 “conections” and “exchange” which cinema can promote. Markus Zangas talks about  
18 providing “opportunities to be in nature” for our children, and the great “pajé” Mapulu  
19 Kamayurá an invitation that “you come to the forest to help” secure the existence of what  
20 she sees as the “pharmacy of the world” for the current and next generations. Nadino  
21 Calapucha, talks about a “walk in unison” through the power that music has for establishing  
22 or strengthening our relation with the forest, and Sônia Bridi suggests that showing the  
23 “infinite beauty of our planet” on television, the Amazon included, is key for restablishing  
24 what she calls “the lost connection” with the forest. Manari Unishigua, the akameno  
25 (authority) of his nationality, urge for a look at the forest from the “spiritual world”  
26 perspective, where life is suitable, with no diseases, doubts or complications.  
27 Complementary to that spiritual vision, James Junior and Pedro Nassar, advocate that  
28 felling, working out and placing our physical body inside the forest, either for sports or  
29 tourism, boosts this “affectional bond” with the forest and its people. Denilson Baniwa  
30 brilliantly concludes the argument by saying that in fact “everything is people” in the forest  
31 which take us to the conclusion that we are in fact the forest.

1 Rather than being an authoritative statement on how the bonds between urban populations  
2 and the Amazon forest can be better fostered, it provides an first-order broad initiation of  
3 this relevant discussion (considering that many other cultural sectors, such as food habits,  
4 fashion, literature, photography and social movements are not covered here). We  
5 understand this exercise as key for the transference of the scientific messages of this report  
6 to non-academic societal spheres.

7

#### 1    **4. RECOMMENDATIONS: PAVING THE WAY FOR TRANSFORMATION**

2    In this chapter we made an attempt to systematize the underlying causes of the rural-urban  
3    relations in the Amazon region, their current status and possibilities for improvements, both  
4    from the physical and cultural perspectives. While different sectors of such physical and  
5    cultural connections were analyzed separately, it is reasonable and desirable that the  
6    alternatives for boosting these relations in each sector are done in conjunction with each  
7    other. For example, there cannot be a stronger link between rural and urbanized areas  
8    regarding food production and urban green infrastructure without a new culture of urban  
9    planning in the Amazon. Or, it can prove an easier task to promote a culture of sustainable  
10    tourism and sports within the forest if it is connected with an improved healthcare  
11    assistance to forest- and river-dwellers.

12    Overall the recommendations that can be drawn from the analysis done in this chapter are:

- 13    • Considering that the influence of cities over rural areas (regarding the flux of goods and  
14    services) is way stronger than the opposite in the Amazon, a stronger influence of rural  
15    areas over cities should be sought, with punctual actions related to local economies,  
16    food provision, knowledge and education, healthcare, green infrastructure and the flow  
17    of information. Some of these actions are: effectively involving rural populations in an  
18    regionally-developed bioeconomy, fostering small-scale food production in peri-urban  
19    areas, subsidizing the fixation of healthcare professionals and infrastructure in small  
20    cities, the establishment of education hubs strategically localized in rural areas,  
21    increasing urban green infrastructure, and operationalizing the concept of “smart  
22    cities—smart forests”.
- 23    • The cultural gaps between the Amazon forest and its people with the population  
24    inhabiting the increasingly globalized cities should be drastically narrowed through  
25    concerted interventions in different cultural sectors such as cinema, sports and visual  
26    arts. Existing well-succeeded rural-urban bonds such as food habits and traditional  
27    festivities can serve as good starting points to bring this cultural relation to another  
28    level.



1 Promoting these changes is a stake not only for policy makers, but to society in general,  
2 from urban- to forest-dwellers, bearing in mind that the sustainability in the Amazon region  
3 is and will be shaped by its evolving urban network and its interaction with the rural and  
4 forest people and landscapes.

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## 1   **6. CORE GLOSSARY**

2    **Buen vivir** (*Sumac Kawsay*): "good living", rooted in the *cosmovisión* (or worldview) of the  
3    Quechua peoples of the Andes, describes a way of life that is community-centric,  
4    ecologically-balanced and culturally-sensitive.

5    **Cultural connections** (*between rural and urban areas*): cultural, spiritual and affective  
6    bonds of urban inhabitants with the forest and its people, involving distinct sectors such as  
7    (but not restricted to) cinema, photography, the press, spirituality, sports and tourism.

8    **Digital divide**: the gulf between those who have ready access to computers and the  
9    internet, and those who do not.

10   **Ecology of selves**: concept in which selfhood does not solely belong to humans, but any  
11   entity which communicates through the use of signs can be considered a self, leading to a  
12   complex 'ecology of selves' of which humans and nonhumans are both a part (Kohn 2013).

13   **Globalized cities** (*or globalized urbanization*): The planetary “fabric” or “web” of  
14   urbanized spaces [based on Lefebvre (2003)], with well-defined urban hierarchies  
15   conditioned by supranational forces, through which corporations coordinate their  
16   production and investment activities. It is also viewed as an arena of contestation in which  
17   competing social forces and interests, from transnational firms, developers and corporate  
18   elites to workers, residents and social movements – struggle over issues of urban design,  
19   land use and public space. Which is nowadays far from being restricted only to the  
20   economic flows but engages with a broad range of globalized or globalizing vectors –  
21   including not only economic flows, but the crystallization of new social, cultural, political,  
22   ecological, media and diasporic networks as well (Brenner and Keil 2014).

23   **Green infrastructure**: the connected network of multifunctional, predominantly unbuilt,  
24   spaces that supports both ecological and social activities and processes. In practical terms is  
25   can be seen as the physical green spaces, planted trees and the corridors that connect them  
26   which provide multiple ecosystem goods and services either of direct or diffuse use.

- 1 **Human capital:** the stock of habits, knowledge, social and personality attributes (including  
2 creativity) embodied in the ability to perform labour so as to produce economic value.
- 3 **Kaji:** a leader who leads his people from his understanding of well-being for all
- 4 **Knowledge infrastructure:** physical structures (buildings) related to the transference, flux  
5 and management of knowledge, such as schools and e-learning hardware.
- 6 **Makihawnu:** the way to connect with the spiritual world where answers and knowledge  
7 can be found.
- 8 **Nature-based solutions:** the sustainable management and use of nature for tackling socio-  
9 environmental challenges. The challenges include issues such as climate change, water  
10 security, water pollution, food security, human health, biodiversity loss and disaster risk  
11 management.
- 12 **Pajé:** shaman, spiritual and healing leader of indigenous communities in South America.
- 13 **Physical connections** (*between rural and urban areas*): fluxes of goods and services  
14 between rural and urban areas, involving different economic activities, food security issues,  
15 education, energy production and use, transport, green infrastructure and infrastructure  
16 dedicated to the flow of information.
- 17 **Raizeiro:** person within indigenous and traditional communities in Brazil knowledgeable  
18 on the identification, harvesting and medicinal use of forest plants.
- 19 **Smart cities:** urban area that makes use of highly participative exchange of information  
20 through sensors and devices for better management of resources and services. This includes  
21 data collected from citizens, devices, buildings and assets that is then processed and  
22 analyzed to monitor and manage traffic and transportation systems, power plants, utilities,  
23 water supply networks, waste, crime detection, information systems, schools, libraries,  
24 hospitals, and other community services.
- 25 **Smart forests** (*or internet of trees*): highly technologized forest sites aiming at data  
26 collection, processing and analysis, not only for managing environmental changes, the

1 sustainable use of forest resources and the own understanding and involvement of urban  
2 people with the forest.

3 **Social construct:** the meaning, notion, or connotation placed on an object or event by a  
4 society, and adopted by its inhabitants, which influence how they view or deal with the  
5 object or event (concept derived from the social constructivism theory in sociology).

6 **Spirituality:** subjective experience of an individual, related to the deepest values and  
7 meanings by which people live, incorporating personal growth or transformation, and not  
8 necessarily linked to a formal religion belief.

9 **Telemedicine:** the distribution of health-related services and information via electronic  
10 information and telecommunication technologies, including long-distance patient and  
11 clinician contact, care, advice, reminders, education, intervention, monitoring, and remote  
12 admissions.

13 **Transit-oriented development:** a type of urban development that maximizes the amount  
14 of residential, business and leisure space within walking distance of public transport. It  
15 promotes a symbiotic relationship between dense, compact urban form and public transport  
16 use. In doing so, TOD aims to increase public transport ridership by reducing the use of  
17 private cars and by promoting sustainable urban growth.

18 **Urban forest** (*or urbanized forest*): concept coined by the late Brazilian geographer Bertha  
19 Becker to refer to the Amazon region, due to the prevailing (>75%) urban population in  
20 basin, expressing a tendency on the expansion and growth of cities in the region and,  
21 namely, of a lifestyle that is not restricted to the small towns and cities, but which defines  
22 social and economic reproduction in the region.

## 1 7. BOXES

### 7.1. Architecture and urbanism

#### Laurent Troost

Hi, my name is Laurent Troost. I am an architect, Belgian, living in Manaus since 2008. I have worked for the last eight years as director of urban planning in the city of Manaus.

I would like to make a few points for this very important project, in two chapters: the first is related to the architecture and professional practice of my colleagues, and the second to urban planning and urban strategies to improve the cities in which we live in the Amazon.

Regarding architecture, I would like to say that it seems to me that the most important thing - and this is also what I practice in my day to day - is to work with nature, with this idea of integration, but more than that, it is about preservation and confrontation with nature. Why do I say confrontation? Because today there is a cultural prejudice that perceives vegetation in a negative way in Amazonian cities. So, today we must confront, provoke the encounter of nature with the users of this city, so that little by little they realize the benefits that it can bring to them.

[In regard to] The matter of preservation, obviously, nature can be treated as the replanting in the city and is often done this way, but more than that, it seems important to preserve any type of Biotope or biological system, even if they are a lake, water, what may seem like a poor quality vegetation in the eyes of the first passerby, but sometimes it has much more value than that. (...)

What would be the purpose of this? It seems to me that it is important to reverse the commercial logic of many Amazonian cities' master plans, that, as in the case of Manaus, for example, [which] has reversed, has abolished, the question of the mandatory permeability share of land [tracts], something that seems absurd to me, but there are forces that fight for this, in order to allow a wider occupation of the land. It may seem like a small detail, but which totally transforms the urban landscape.

Another front line (...) is to fight against the spread and in favor of the densification of

cities. This may seem controversial to the preservation within the city, to densify more, to build more, but in fact this will be much better for the forest (...) or for some spaces within the city, because they will have a higher value (...). Regarding density, the city itself is denser, right, it's not because the small one cannot incorporate vegetation and preserve biological systems. So we have to, from this perspective, look very carefully at neighborhoods like here in Manaus, I would say the INPA [Brazil's National Institute for Amazon Research], UFAM [Federal University of Amazonas], and Acariquara, which are neighborhoods where the vegetation is extremely well integrated. However, if the whole city were like that, the city could be extremely widespread (...). So we have to think about a model that is more efficient than those that I just mentioned.

Another point that political action could guarantee is the mandatory preservation of tree species. There are a number of cases of upper class gated communities, large size enterprises, in which it would be much more interesting if a mandatory tax existed about the preservation of native vegetation instead of the land occupancy tax that does not guarantee does not guarantee anything. (...)

Another [point] is to work politically, legally, to compel cities to recover environmentally, [and integrate] urbanistically, the countless watercourses that are either invaded or degraded. Today smart cities make use of mapping tool [for such water courses and invasions that took place after the Forest Code law]. Thus, there is a legal jurisprudence, which would allow to remove the people who invaded. Of course, it is not done simply like that, one have to go discuss it with the invaders, but without the determination of justice, the city halls never see this as a priority, because, first, there is a lack of money [at the municipality budget] and, second, there are [always] other more important priorities. The needs are great in Amazonas.

To finalize this contribution, I would like to put a dream, the ideal that, just as in recent years literature and urban practices are highlighting the Transit-Oriented Development (TOD) as a way of restructuring the city, from a mobility perspective, it doesn't see mobility just as a component, [but] it can be a component that adds quality and requalifies [city] streets. (...) we could imagine, a dream would be a society that restructures its cities,

using E-TOD: the Environment and transit-oriented development; to use the transformations, like the one I just mentioned of a watercourse recovery, to not only solve an environmental problem, but to restructure the city [turning it] more equitable, sustainable and [providing a] better quality [of life].

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## **7.2. Cinema**

### **Zienhe Castro**

[Zienhe Castro é paraense, cineasta, produtora e roteirista na produtora ZFilmes. Atua como produtora cultural há 30 anos. Desde 2009 é responsável pela fundação, direção geral e curadoria do Festival de Cinema Amazônia Doc – Festival Pan-Amazônico de Cinema, que envolve os nove países amazônicos.]

Eu acredito na arte com essa potência transformadora, com essa potência de impacto em todos nós e eu acho que o cinema é uma ferramenta muito poderosa nesse aspecto, que produz uma reflexão que inquieta, que provoca e que instiga a discutir, debater diversos temas. Tanto [o] cinema da atuação quanto o cinema do real, acho que ambos têm esse papel importante, e não só de entretenimento, mas de provocar a sociedade a refletir.

Nós unimos um grupo há 11 anos atrás em 2009, que eu coordeno, que construiu e produz até hoje, um festival de cinema para criar pontes e construir um diálogo entre as diversas Amazônias, que é o Amazônia-Doc, Festival Pan-Amazônico de Cinema. Porque eu acho que uma das coisas mais importantes que conseguimos foi estabelecer um diálogo entre as diversas Amazônias, e Amazônias que têm pontos em comum e que têm pontos divergentes, mas que se somam e podem se enriquecer. Então acredito que nós Amazônidas, por meio do cinema, nesses últimos dez anos, conseguimos nos conectar por conta das obras cinematográficas, de uma cinematografia que se encontrou nesses rios, nessas águas, nessa floresta, que eu costumo de chamar “A floresta do cinema e o cinema da floresta” para conversar sobre a Amazônia. E isso eu acho que contribui de maneira efetiva para encontrarmos soluções para a floresta, para encontrarmos essa reconexão com a floresta. E eu acredito que o cinema, ele realmente contribui de forma muito poderosa para esses encontros.

É vital promover o fomento e democratizar o acesso a esses filmes. Formar novos cineastas e novas plateias. Promover o debate e aproximar as pessoas em torno das questões e temáticas suscitadas pelas obras cinematográficas. Após mais de uma década como

realizadora e curadora de filmes na Amazônia, acredito na enorme contribuição do cinema como vetor de conexão, de encontro, de troca, de conscientização e de aproximação dos povos que habitam a macrorregião que estende sua floresta por parte dos nove países que integram o território Amazônico.

### **7.3. Education**

#### **Markos Zangas**

Hello, my name is Markos Zangas. I have been working with children and nature for the last twenty years in two capacities: one capacity is of taking children on outdoor adventures, so rafting and kayaking, cycling, hiking, camping – outdoors – and the other one is providing environmental education programs in nature for schools and students. I have also been working for the last 5 years with a Danish organization (Inside-Out Nature organization), training teachers around the world on how they can incorporate nature and forests in the pedagogy, how they can use nature and forests as grounds for a holistic development of children.

I have seen this as a very important thing to offer children these opportunities because the global tendency is that children are gradually disconnecting from nature. And that is seen in small villages, it's seen in big cities, even in big cities like Manaus that are next to the forest. There is this disconnection and it is even more so as the years pass, when a young parent has not had that opportunity as a child to be in nature, and doesn't have that connection, they can't see the value, they don't have those memories to try and offer their own children the chance to be in nature and spend time there. So, this disconnection is becoming much more apparent in the last few decades and there have been studies demonstrating how this has detrimental effects on children, [and that] the fact that our culture no longer incorporates being in nature, how it has affected children's mental health. This could be higher stress levels, it could be early signs of depression, but can also be their physical health – child obesity and poor motor skills.

Around the world there has been a tendency of including and creating a new culture of using nature not only as something that we have to protect but something that has to be a part of us and a part of education – whether it is the education schools provide or the education that parents provide. When children have these opportunities to be in nature, they have so many benefits and again there have been studies that demonstrate how they benefit children through outdoor play – whether it's their mental health that we mentioned, or their

physical health, they exercise more, they run more, they develop more strength, they develop better immune systems. (...) When you are in an environment that is very hospitable such as a jungle or forest, where you have to adapt to the weather conditions or you have to test yourself on hiking or trying to climb a tree – all these problem-solving skills – you learn more about yourself and become more confident. You learn how to take small risks – so these are all really important skills for children to develop when they are in nature.

It is not hard to reverse this tendency, this disconnection – to offer more opportunities to children is not really something new, it's not some new pedagogy in forest and nature school, it's not new, it's not expensive, it's really returning to the basic roots, this is nature, this is forest, where we have developed as a species. It is really our natural surroundings, our natural biotope. It's not something primitive, it is an essential part of who we are. We need to have these opportunities to be in nature, even if it's once a week or on the weekend. It's quite easy to offer – parents go into parks, head into the forest for the weekend, have camping trips, or maybe through schools that offer it as a weekly or a monthly excursion, heading into the forest and having that opportunity to reconnect and appreciate nature. If we start looking at the forest surrounding our cities like Manaus, Iquitos, Belem, the vision and the culture changes of how we envision forests for our children and we start looking at it as a free theme park, or a school where children can learn about nature and themselves, or as a gym where they can work out. It's all of these things at the same time. (...) I know many parents might fear, might think about the risks of playing outdoors. But really - it's not much riskier than riding a bike in the city or climbing a metal play structure. (...)

There is also another positive outcome from children being outdoors – when children have these experiences in nature, they develop an appreciation for the environment and as they grow up it's much more likely that they develop environmentally-friendly attitudes and habits. (...) So, if we are to create a new culture and a new vision of how we perceive [and interact with] the forest, I think it should definitely also have the perspective of children.

And children, families and schools should look at the forest and the Amazon as a play escape, as a place for education and development of the children because it will benefit the

children but will also benefit the forest.

#### **7.4. Health and healing**

##### **Mapulu Kamayurá**

Good morning, everyone. My name is Mapulu Pajé Kamayurá [shaman and women leader at south Xingu indigenous land].

Look, I am transmitting my concern to you. I am really worried, because as a shaman, I evaluate the forest looking at spiritual animals, that are bleeding a lot. For us the forest is important, for us it is very important. Why am I saying this? The forest is important to us because it is there that we look for medicine, roots... For us the forest is a kind of pharmacy. It is there that we look for medicine, and when you are in pain, you go to the pharmacy. It is the same thing. We keep this forest to store medicine. (...) That is why we protect the forest.

When people get the snake bite, we look in the forest, we look for medicine there. When they get pneumonia, cancer, high blood pressure, we look for medicine in the forest. Pharmacy that we call it; I call it pharmacy. That is why we don't want to lose it, we... we don't want to lose the most important medicine for us. Folks, forests... we search for medicine there, when the child has pneumonia, diarrhea, we go there to take the medicine, then we say to the "raizeiro" [knowledgeable person on the identification, harvesting and medicinal use of forest plants]: "he will get medicine from there, to give to the patient", that's it, the raizeiro deals more with roots.

When a patient comes to me, first I evaluate what he/she has, I heal, I show to the family, I tell them what he/she has, I pass it to the raizeiro and he takes it out [from the patient]. I do not heal pneumonia, high blood pressure, diabetes, these three I do not heal, just the raizeiro. That is why I have a lot of pity about the forest, this is a pharmacy to me.

When "spiritual" attacks a person, then yes, then this is with me, I heal. When he/she has a headache, I heal, the column, this is with me. I heal all of this, when spiritual attacks people. Now, the raizeiro deals with roots. My husband is a great raizeiro, he knows how to

handle it, he has treated many people coming from the city. I see here at the Xingu who has diabetes, high blood pressure, that comes to treat it here in the Xingu. Cancer is treated here... When you need to get treatment, come here to get treated. There is more medicine here as well. People say that there isn't... there was a person who said there was no way to treat it, so he came here, we treated him, my husband healed him. He went back to the city, to São Paulo, we treated him here, I was accompanying him a lot as well.

For us shamans, health... I am a people healer. The life, I heal people. I have treated in the city, Brasília, a boy who was... he was in the ICU for three months, I took the boy, right, he went to... He went out, and they told him that serious illness was incurable. I asked to... His mom asked me to heal him, took him off the hospital, from the ICU, and I treated him. Today the boy is going back to study.

That is why we need support, who want to participate can participate here. (...) When the spiritual does bad things to someone, why is he doing a bad thing to someone? Well, there is no more home, no more home... people here are killing a lot of wood, then that is why I am telling you. I am asking you a favor, that you come here to help me, is that possible? Let's make a kind of a project, let's create a project to raise this forest, right, we do the farming and we don't put down a lot, we put down a little, we hold. People are sick about wood. Why do we get sick of wood? Because it is it what is taking our health, this wood that is taking our health, if we end with the wood, forest, we will be, we will feel weak, we will be... will be... we will not be happy, because we have already killed all of the wood, that is why us, that is why I protect more, right, folks? That is how I pass this to you, I am a shaman, right, and that is why I am telling you this, so you can support me, me, who heals. (...)

Bye, folks. Anything, any questions, you can tell me. (...) Bye to you, take care, let's go, let's fight. I am fighting for my people here, so this disease does not arrive really strong here at the Xingu.

## **7.5. Music**

### **Nadino Calapucha**

I am a Nadino Calapucha of Kichwa nationality of the Ecuadorian Amazon, and I am one of the members and founders of the Kambak group. The group, which emerged in 2013, is aimed at inviting children and youth, through music, to fall in love with, become fond of and empower themselves with their language, their culture, their history and, above all, to join the struggle and protection of our shared Amazon.

In recent years we have made great strides and had great achievements. It has been incredible to see the children singing in the Kichwa language; in many of our concerts, having many experiences that the communities identify with this music has been wonderful! In contrast with this society that has been dominated by Western music and Western culture, we have been moving away from our principles but Kambak's proposal is not that they will only fall in love with our culture, the important thing about this project is that we are inviting them to walk in unison, on one hand with the knowledge and insights of our peoples and in the other, with the knowledge and knowledge of the Western world. Within the framework of interculturality, in fact, we have mestizo members in our group who have joined this initiative from the urban areas, so it also has an intercultural aspect. We want to invite the world to build this potential society within the framework of respect. We have also had an international achievement, by being recognized by the Fund for the Development of Indigenous Peoples of Latin America and the Caribbean (FILAC) in 2019, as one of the innovative youth projects. That was incredible and it has motivated us to keep working diligently.

Going forward we want to continue this, working with children and young people because we consider that it is important to listen to their voices, although it is true that the Amazon and its peoples have until now been considered a myth. Us, indigenous peoples after 528 years of resistance, are still here demanding the fulfillment of our rights, defending our



territories and we want to tell the world that we are still here.

The Amazon region significantly contributes to the gross domestic product of the countries of the Amazon basin. However, we have been the most excluded, the most forgotten and much of the time considered a myth in many of the countries. Together with the Western world, we want to build what's possible in society and we want to defend our Amazon, since we are at a point of no return. We consider music to be a powerful and key tool; when the people are sad, when we feel alone, we perform ceremonies, rituals and we sing, to revive the faith of hope and ignite the fire in our hearts. That is why we have opted for music and we want to continue working with children, to defend everything we have in our Amazon.

## **7.6. Press and communication**

### **Sônia Bridi**

[Sônia Bridi é jornalista, escritora e repórter na televisão brasileira, na Rede Globo de TV]

Um grande desafio que teremos pela frente é fazer uma ligação que começou a ser interrompida há dez mil anos, a nossa ligação com a natureza. Desse que a nossa espécie começou a cultivar o alimento, domesticar plantas e animais, nós começamos a construir um fosso entre nós e o mundo natural; quanto mais nos urbanizamos, desenvolvemos tecnologia, mudamos a paisagem, mais cresce o sentimento de que nós não fazemos parte da natureza e pior, que tendo o poder de destruir e transformar, temos um direito de fazê-lo. Esse conceito é muito recortado culturalmente e por algumas religiões, algumas não todas. Para uns somos a espécie escolhida, para outros o povo escolhido. No fundo é a mesma coisa, uma contradição triste que leva adorar o criador e massacrar as suas criaturas, sejam plantas, fungos, bichos ou os Homos sapiens menos favorecidos.

Como reparar esse diálogo? A comunicação tem um papel importantíssimo, vou começar pela parte da comunicação com a qual eu trabalho, o trabalho do jornalista e documentarista, salvo algumas exceções, nós demoramos a nos dar conta da importância do tema conservação na pauta dos veículos de comunicação. Jornalistas que se dedicaram ao assunto ao longo de muitos anos, em algumas redações eram vistos como profissionais que trabalhavam com temas menores. Sempre houve, e com frequência ainda há, uma pauta mais importante do que a preservação da vida no planeta. Isso está mudando, mas ainda num ritmo muito mais lento do que nós precisamos. Nós jornalistas e documentaristas precisamos nos dar conta da urgência da questão climática e do impacto que a destruição da Amazônia tem na aceleração desse processo, de que nenhum tema, nenhum assunto, pode ser tratado hoje sem levar em conta a emergência climática. Planejamento urbano engenharia de infraestrutura, transporte, educação, uso de recursos no escritório ou na linha de produção. O próprio planejamento de uma reportagem ou de um documentário precisa levar em conta o impacto, a mitigação, a compensação. A emergência Amazônica tem que

estar nos seus vários aspectos, no topo do check list de qualquer atividade humana e nós comunicadores, precisamos deixar isso claro, para o público explicando as causas, consequências e oferecendo informações sobre as soluções disponíveis. “Eu quero ajudar, mas eu não sei como”; esse é o comentário que eu mais ouço do público que se sensibiliza para informação, mas não sabe nem por onde começar a agir, cabe a nós comunicadores apresentar os caminhos que estão sendo trilhados para que as pessoas possam escolher por onde seguir.

Por outro lado, temos o entretenimento, grande vitrine de ideias, conceitos e visões do mundo. A ficção tem o poder de nos transportar para realidades alternativas e pode nos apresentar com uma força que só literatura e o cinema carregam, os mundos que podemos construir. Na total destruição da biodiversidade e das condições que permitem que a nossa civilização resista como é. Ou um mundo restaurado mais inclusivo, no qual podemos desfrutar de todas as coisas incríveis que esse planeta nos oferecem. Somos os privilegiados do universo conhecido, lembrar que essa maravilhosa biodiversidade surgiu aqui e só aqui até onde nós sabemos, pode ter um impacto brutal. Pare, olhe para o céu e pense, aqui estamos nós cercados de cor, de água, de plantas, de pássaros voando no céu e, o resto do universo conhecido é monotonia monocromática, das manchas secas, totalmente desprovidas de vida. Nós não podemos fazer de Marte, um planeta como a terra, então porque transformar à terra em mais uma rocha infértil no universo?

Por fim, acredito que o maior desafio de todos os comunicadores, de qualquer área é restabelecer aquela conexão partida. Como? Mostrando a Beleza Infinita deste planeta, a complexidade incrível da evolução das espécies, a co-evolução que faz com que uma depende da outra e nós de todas elas, precisamos voltar a amar o mundo natural e a gente só ama o que a gente conhece. Só isso pode reverter a grande contradição do Homo sapiens.

Somos definidos pelo conhecimento, estamos destruindo o que nem conhecemos, negando conhecimento que nos aponta causas e soluções, escolhendo a ignorância sobre o saber. Sabemos que é um componente de negação muito grande provocado pelo medo, mas disseminar informação é também combater o medo, porque não há nada mais assustador que o desconhecido. E é para o mundo desconhecido cheio de perigos que vamos caminhar

se perdemos essa batalha da informação, Amazônia é a última grande biblioteca da vida que ainda não foi lida.

## **7.7. Spirituality**

### **Manari Ushigua**

[Manari Ushigua is a traditional healer and leader of the Sápara Nation in the Ecuadorian Amazon, of which there are less than 500 people remaining.]

I want to explain to you, the tropical forest has a way of making people understand and live their relationship with the tropical forest, because the tropical forest helps us dream and have clear visions to understand how we want to live, for those of us who live in the tropical forest. Facing this reality, the Amazonian city is situated on one path, as it is recognized. And those outside say that these provinces are developing and, therefore, they begin to destroy nature and there is a lot of livestock and the city itself suggests that this is the path of a development model that is not aimed at caring for nature; that is the difference that exists at the moment.

That said, we call ourselves Naku, the tropical forest, which has a way of teaching and a way of welcoming not only the indigenous people who live in the tropical forest but anyone who visits has also experienced it; they feel that change. So, what the tropical forest gives us is a direction and a vision of life that the natural functioning, how they connect with each other and their life with the birds, right now among the trees.

That relationship and the relationship with the people who live there create an exact balance so that the people who sleep there and have a dream that we call Marquiyauma, have an answer to any concern that we may have, so that with this answer we can live the material world. As such, for us the tropical forest is a space that we recognize as a sanctuary of knowledge, to be able to transmit from the tropical forest any question, any doubt that exists in the world, to give a positive answer, where people will understand where the future of humanity is heading.

So, the vision, for the people who live in the tropical forest, we do not only work from this reality, where it can be seen, from where it can be taken, from where it can be felt and that

life is connected with the spiritual world. Whether through Marquiyauma or not through dreams, we begin to project and understand what is being felt and lived. But seen from the spiritual world, we see our failures and it becomes aligned so that life is suitable, without diseases, without doubts, without complications, but rather its path is on the right track. That is what the tropical forest offers us, the Naku; for us there is only one world, or Kaji.

## **7.8. Sports**

### **James Júnior**

Hello, my name is James, I am an administrator and entrepreneur in the area of organizing sport events. (...)

Sports; we can split it into two feelings: the sport itself and the organization of sport events. Despite being connected, they have distinct moments, in which the event is a specific date, sometimes the goal to be achieved on this day and use the sport to be prepared on that day. And the sport itself, the practice, which is the daily activity, in which you practice, in which you execute, they move an enormous [market] chain, from companies that produce sports materials, in the food sector, also in the area of healthcare, such as physiotherapy, medicine, sports psychology, the production of materials such as sneakers, clothing, equipment, watches, compass, bicycles, etc.

All of this, to exist, needs that the nature environment is preserved, taken care of. And people when they practice sports, they start to create this feeling, you know, this bond of caring, this bond of investing, of wanting that that environment in which he/she participated is preserved so that he/she can participate again, so that he/she can have somewhere to practice, and that it is always in preserved conditions. And this preservation is not only to not devastate, but to not let it get dirt, to not let it get polluted and, mainly, understand the environment. It is the interactivity of understanding what can be extracted from there and how it works, how is the dynamics of its functionality, from the people who live in that environment, with all the animals, with all the plants that are there together. And sport helps to understand all of this, to create this relationship.

So, imagine that there is a distant community, already with few residents. What will make people reach this locality? Given that the concentration in the urban area is so high, it is the sport. Because there, the person will practice sports, so he/she will travel to this place, the person will know the place, the person will create feelings, and will invite new people to

participate. That is, in his ever growing relationship network, so that more people are together in this process of practicing sports. The person is swimming in the river, and he/she will want the river in swimming conditions, that is, the least polluted as possible, or even unpolluted. The person wants the environment where he/she will ride a bike, where he/she will run the trail, if the person will walk, or will practice any type of sport, abseiling or zipline, or adventure race that involves various types of sport, they are all together with nature. It helps the person to understand, to inform, to seek, to defend even after that experience, the maintenance of that environment.

So, I believe that sports, through sporting events, can be one of the main items to bring people back to nature, to make people have this relationship, this affectional bond, this care, this desire to know, this desire to be close to nature, to the forest, to care, to preserve, to understand the people who live in that place, and to encourage them to stay and, even, the remuneration for that.



## **7.9. Tourism**

### **Pedro M. Nassar**

Olá pessoal, eu sou o Pedro Nassar, eu sou biólogo, eu sou mestre em Gestão de Áreas Protegidas na Amazônia e trabalho com turismo há cerca de 15 anos. Estou na Amazônia mais ou menos 12 anos também e atualmente eu trabalho no Instituto de Desenvolvimento Sustentável Mamirauá como coordenador do programa de turismo de base Comunitário

Outro dia eu estava lendo um livro de naturalista francês que passou pelo Brasil em meados do século 19; esse livro especificamente falava um pouco sobre o estado de São Paulo a ele contava sobre vegetação, sobre o clima, sobre os costumes e dava um panorama também sobre a história do Brasil naquela época e na cidade de São Paulo, ele também falou um pouco sobre os rios como era a cidade naquela época a vegetação, da fauna, contando um pouquinho sobre tudo.

Eu fiquei pensando como a era diferente São Paulo daquela época e do que é hoje não é verdade? E, também isso me fez fazer uma viagem até os dias atuais até a Amazônia e pensar também, nas mudanças que ocorrem na Amazônia. O que é feito no passado empata diretamente o futuro, empata os dias de hoje e o que a gente vive hoje é fruto muito das coisas que foram feitas anos atrás. O que a gente vai fazer hoje, o que está fazendo hoje, vai com certeza mudar o destino da das próximas gerações, às vezes gerações que nem nasceram ainda, que ainda estão por vir.

Quando a Amazônia está sendo desmatada, a agricultura está tomando espaço da Amazônia, a pecuária está tomando espaço da Amazônia, o garimpo está derrubando a floresta e o concreto também está. Isso vai fazendo com que aumente o distanciamento entre a cidade entre as áreas naturais e as pessoas vão ficando cada vez mais longe, vão tendo menos contato com a natureza e esse distanciamento acaba levando a (...) pessoas que passam a não ligar muito, não se importar muito com a natureza. Porque que a gente tende a se preocupar mais, a cuidar mais do que está próximo, já que tem afinidade do que está ali

no nosso dia-a-dia.

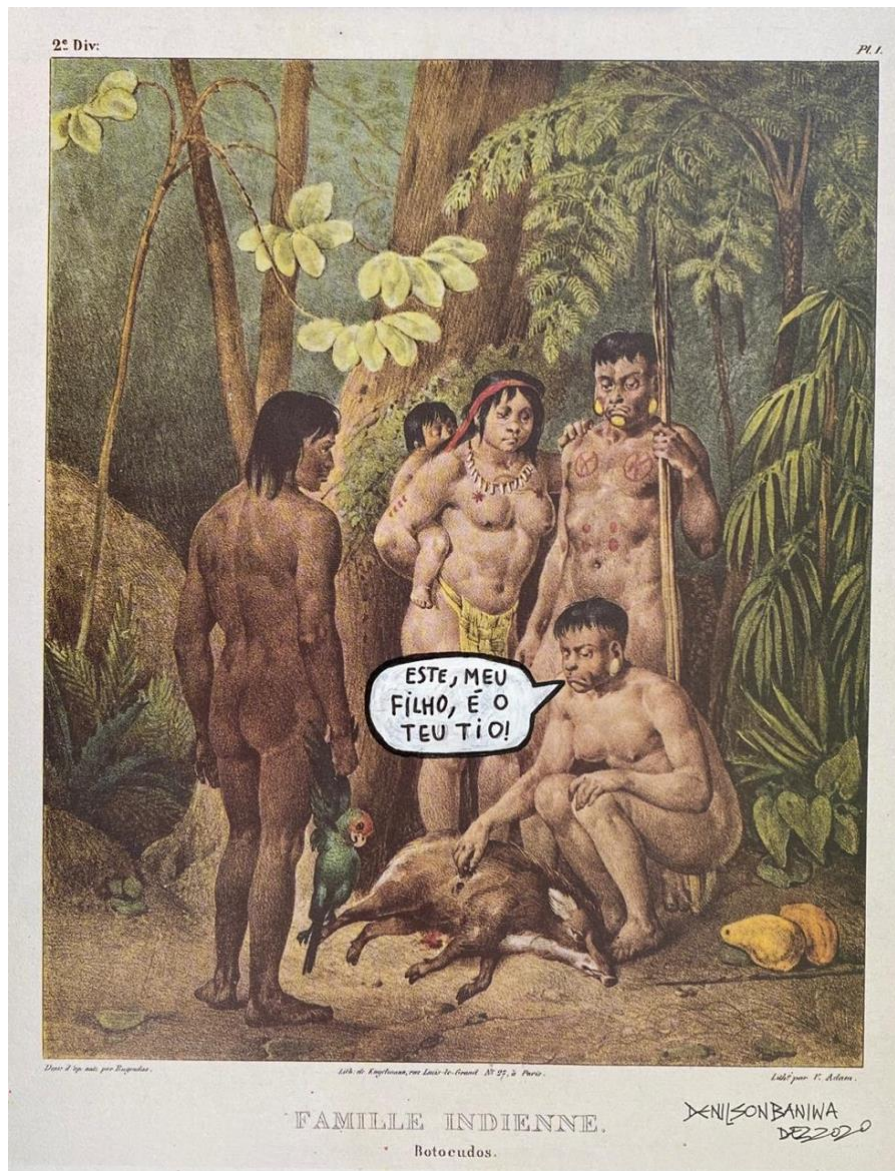
É preciso fazer uma mudança, não é? Eu acredito que é possível e, um dos meios e uma ferramenta muito interessante para tentar mudar, para tentar reconectar um pouco o urbano com o rural, reconectar as pessoas à natureza, fazer elas se sentirem como parte da natureza também, é o turismo. Mas não um turismo qualquer. É o turismo tem que ser feito de maneira responsável. Você sabe o que é turismo responsável? Turismo responsável ele preconiza algumas coisas: Em primeiro lugar é um turismo em que o lugar onde as pessoas vivem devem ser o melhor possível, é pensar no turismo primeiro desde ponto de vista de quem mora lá, então tem que ser um lugar agradável, tem que ser um lugar bom, para as pessoas viverem. Depois, é um lugar bom, um lugar interessante, para quem vai visitar.

E o turismo responsável assim como outros conceitos de turismo sustentável e turismo rural, deve ter como protagonista as pessoas que moram no lugar, população local. E elas devem ser as principais beneficiárias de geração de benefícios socioeconômicos, benefícios ambientais. Quem visita apoia e multiplica essa ideia para seus lugares de origem, para pessoas como seus amigos, como seus familiares. Deu para ver como turismo sustentável ou turismo responsável tem tudo a ver com a Amazônia; vamos colocar essa ideia na cabeça de todo mundo? Quem para embarcar nessa viagem?

## 7.10. Visual arts

### Denilson Baniwa

[Denilson Baniwa é um artista brasileiro, curador, designer, ilustrador, comunicador e ativista dos direitos indígenas.]



**Figura 5.** “Tudo é gente”; Denilson Baniwa; acrílica sobre impressão fotográfica;

32x24cm; Dez 2020.

*Dizem meus avós, que antigamente*

*Antes de mim, você ou qualquer outro homo sapiens dominar o planeta  
Tudo era gente: floresta, humanos e não humanos eram gente.  
Havia a gente-onça, gente-papagaio, gente-árvore, gente-pedra; e a gente-gente  
Todos inclusive, falávamos a mesma língua. Nos entendíamos.  
O tempo também era outro, não havia relógios nem despertadores  
O trabalho não era uma função acumuladora, mas de coletividade  
Mas isto foi de um tempo que nem meus avós, nem nós vivemos  
É do tempo antes do tempo  
Hoje desconhecemos a língua dos pássaros e plantas  
Das rochas, riachos e montanhas nem lembramos mais  
Não nos entendemos nem com nossos vizinhos e moradores do mesmo planeta*

*Sei bem que aquele tempo, não podemos ter de volta  
Mas podemos hoje, aprender a comunicação perdida  
Quando começamos a pensar que existe um meio ambiente  
Diferente de nós, humanos  
Nestes tempos, enquanto não existe uma máquina do tempo  
Que nos joguem de volta ao tempos do mundo-ancestral  
Podemos voltar a entender que somos parte do planeta e não dominantes dele*

*A arte, indígena ou não pode servir como um mecanismo metafísico de tradução  
Traduções das vozes da floresta, das pedras, da água e de todos os seres vivos  
A arte indígena, pode ser aliada no entendimento de mundos  
Pois ela mesmo, transita entre o ancestral e a plasticidade do mundo moderno*

*Artistas indígenas podem ser arte-xamãs que compartilham  
Conhecimentos trazidos de todas as vozes  
Inclusive daqueles que nem lembramos mais que existem*

*A arte é o que nos une  
É a conexão entre o mundo ancestral e o mundo que queremos a partir de agora.*