# Chances for Socially Sustainable Development in Guam as One of the Remaining Colonies

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**Abstract**

While colonialism might have some positive effects on the economy in the short term, it definitely impedes socially and ecologically sustainable development. Based on expert interviews with representatives of various NGOs and university professors, the paper discusses the chances of socially sustainable development in Guam as one of the colonies left today. The results show that colonialism today is having no less negative impacts on sustainable development than in the past. The economic conditions may have improved for some people, but socioeconomic inequalities have hardly decreased. Within former communities as well as among newcomers, many families are disrupted, addiction and suicide have spread particularly among youths and the number of homeless people is increasing. It becomes very clear that colonial and postcolonial conditions have to be overcome as a precondition to sustainable development.

*Keywords: Colonialism, social and ecological sustainability, Pacific islands*

## 1. Introduction

        Originally, the term "sustainability" was created about 300 years ago with regard to economically sustainable forestry. In 1987, the Brundtland commission brought the ecological dimension of sustainability to public awareness, stating: "Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland 1987: No27). Since then, the term "sustainability" has come to be frequently used in economics as well as in ecology and life sciences. However, the concept of "social sustainability" still seems ambiguous and obscure (e.g. Kohon 2018, Tamara et al. 2018). Since the UN has been undertaking a number of steps towards defining "sustainable development", starting with the Johannesburg Declaration on Sustainable Development in 2002 and finally setting up 17 "sustainable development goals" in the Agenda for Sustainable Development in 2015, at least the dimensions to be considered in political planning have become clarified. Against this background, the paper will discuss the current situation of the Pacific Island of Guam and the problems it is facing relating to social sustainability. The research is based on expert interviews with representatives of various NGOs and professors at the public University of Guam.
Adjacent to this introduction, definitions of the term "social sustainability" will be discussed, followed by a description of Guam, its history and social conditions at present. The forth chapter presents the field work of the author, its research design and an analysis of the interviews, the results further being discussed in the concluding chapter.

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## 2. Defining "Social Sustainability"

According to Vallance et al., initially the concept of sustainable development "included a clear social mandate", but this came to be neglected for two decades, the concept of "sustainability" focusing on bio-physical environmental issues or on "development" and "economic growth" (Vallance et al., 2011). Eizenberg & Jabareen (2017) point to the "lack of theoretical and empirical studies regarding social sustainability" and of "[…] a coherent, clear and utilizable definition. […] The dissociation between the social and the ecological and economic leaves the social undefined, inapplicable and utopian, thus impossible to fulfill, control and facilitate […]". Kohon (2018) as well as Tamara et al (2018) criticize the lack of information about possibilities for assessment and operationalization of the concept.

From his studies on the development of the concept, Klarin (2018) draws the conclusion that, although not clearly defined, social sustainability is striving to ensure values like "human rights and equality, preservation of cultural identity, respect for cultural diversity, race and religion". Focusing on the social dimensions in developing sustainable communities, Kohon (2018) stresses the importance of inclusion and feelings of belonging, while Montalbán-Domingo et al. (2018) conclude from their comparison of 10 countries that notions of "health" and "safety" are the predominant factors. Apart from that, country specific differences also turned out remarkable.

Regarding "risk", especially the risks resulting from climate change, as the "ontological foundation of social sustainability framework" (2017:5), Eizenberg & Jabareen consider "safety", "equity", "eco-prosumption" and "sustainable urban forms" the "major social issues to cope with risks of climate change and environmental hazards". Discussing child-wellbeing from the perspective of Amartya Sen's capability approach, Naidoo and Muthukrishna (2016) show that risk-focused methods, asset-focused and process-focused approaches can be very important but are not sufficient if they are not values-driven and systematically imbedded in a network of support. Taking into account that protective factors (just as well as risk factors) can have a cumulative effect, they emphasize the significance of "human agency in the creation of sustainable social organizations that are critical to the protection of the well-being of children" and of supporting values and networks in order to bring about lasting changes. They refer to Castillo et al.'s (2007) deliberate and practically useful definition of social sustainability as "ensuring the well-being of current and future generations, by recognizing every person's right to belong to and participate as a valued member of his or her community".

Yet, even today, in UN-related organizations as well as in scientific literature, social sustainability is often reduced to the economic dimension. An example for this can be seen in the following statement made by Karbassi, a chief of the organization "UN Global Compact": "Social sustainability is about identifying and managing business impacts, both positive and negative, on people. […] a lack of social development, including poverty, inequality and weak rule of law, can hamper business operations and growth." From an economic perspective, social factors in the production process seem to be considered relevant only in relation to the economic outcome (which might be influenced by regulatory pressure), a firm's legitimacy to stakeholders and its impact on the reputation of buyers (Mani & Gunasekaran 2017). Hale et al. (2018) demonstrate by

means of impressive case studies how social sustainability indicators, rather than indicating what they are supposed to represent, can be, and actually are used to influence an intended audience.

Almost the same might hold true for the concept of social sustainability itself. "Some work conducted under the rubric of social sustainability is clearly focused on meeting basic needs and addressing 'underdevelopment', whilst others are equally concerned about changing the deleterious behavior of the world's affluent and the promotion of stronger environmental ethics." (Vallance et al 2011:342). The authors themselves proposed a threefold schema of "development sustainability", "bridge sustainability" and "maintenance stability". Although they explain "development sustainability" as "addressing basic needs, the creation of social capital, justice, equity and so on" (ibid.), when discussing social sustainability in the context of colonialism, the following point made by Klarin (2018) should be kept in mind: "The notion of development is related to the past western concept of imperialism and colonialism, and in that period it implied infrastructure development, political power, and economic policy, serving imperialists as an excellent tool for marginalization and diminishing the power of certain countries" (Klarin 2018:68).

## 3. Guam

Guam is the largest and Southernmost island of the Marianas, located 13° 30' N, 144° 48' E in the Pacific Ocean, about 1,500 miles distant from Manila and Tokyo and more than 3000 miles away from Sidney and Honolulu. Its first inhabitants are supposed to have been of Indo-Malay descent, the ancestors of the Chamorro people who immigrated from Southeast Asia around 2000 B.C. The first Europeans having contact with any people in the Pacific Islands are said to have been the crew of the Portuguese explorer Ferdinand Magellan sailing for King Charles I of Spain in 1521. In 1565, Spain officially claimed the island, but actually, it was not colonized before the second half of the 17th century. The Spanish introduced their language and European culture, especially the Catholic religion, and used Guam as a port of call for the Spanish galleons on their way from Mexico to the Philippines until the Mexican independence in 1815. During the Spanish administration, the local Chamorro population shrank to less than half due to a low birth rate and diseases, while Chamorro from other islands were moved from their homelands to Guam.

In the Spanish-American War the United States seized Guam. President McKinley successfully established US Navy control over the island, although, conforming to the Treaty of Paris, the island should have been under the authority of the US Congress. Until the passage of the Organic Act in 1950, "the US naval governors of Guam exercised absolute authority over all executive, legislative, and judicial functions […] as a military dictatorship with no guarantees of either civil or political rights for the island's residents." (Hattori 2014:14). What Perez (2005:572) calls "the political obscurity of Guam's status […]", Hattori goes on to explain: "An American government that lacked democratic characteristics, including no protections of civil and political rights for those over which it governed, did not sit well with the Chamorro people who attempted on numerous occasions to address the subject of their abject political status." (Hattori

2014:15) Chamorro people wrote their first petition to US Congress as early as in 1901, complaining that they had been deprived even of property rights and of liberty under the US dominion, turning out to be even worse than the Spanish occupation. Yet, this as well as all other petitions they wrote did not cause any reaction on the side of the rulers.

The United States were interested in the island for strategic reasons, eager to extend their military power in the Pacific and their economic influence in Asia, but they were not interested in the people – except for using them as servants, either directly or as farmers or fishermen to feed their soldiers. McKinley called for "benevolent assimilation" of the Chamorro because this would be advantageous for the Navy. Governor Dyer 1904 commented in his report: "It is therefore incumbent on us for our self-protection and efficiency to give the natives such care as they are unable to get for themselves, to see that they are kept healthy and free from contagion [...] These people must be taught, at once, to help themselves in ways to make themselves useful to us." (cited from Hattori 2014:16) The commanders made themselves and (as far as possible) everybody else believe that US colonization of Guam was "an act of charity" for the natives who would not have been able to survive without the paternalistic assistance of the US Navy (Hattori 2014:17). Simultaneously, they forced the Chamorro to obey extremely strict and quibbling rules, to learn English, to give up their festivities and culture, and even to enter the cash economy. The US representatives tried to change the gender relations of the matrilineal Chamorro culture oppressively, undermining "the active engagement of women in social, political and economic spheres" (Hattori 2014:19).

On Dec. 8th 1941, only a couple of hours after the attack on Pearl Harbor, the Japanese landed on Guam and, after a short battle, took over the island. The reign of the Japanese military was cruel and seemingly arbitrary. Most people did not understand what the Japanese deemed good or bad, since nobody dared to ask. Considering the Chamorro racially superior to all the other "natives", the Japanese military used Chamorro men from other islands as interpreters and police assistants, forcing these interpreters into collaboration and thereby generating intra-cultural conflicts and damaging family and kinship bonds permanently (Camacho 2008).

Having experienced a horrifying atmosphere of mistrust and fear under the Japanese military in wartime, the Chamorro felt released upon the "liberation" by the US. They pushed for U.S. citizenship and a civilian government, seeking to limit military control. The US military, on the other hand, converted Guam into a huge forward operations base for the Navy and Air Force, constructing airfields and expanding the naval stations while attempting to resume their pre-war predominance. This lead to mounting resentment on the side of the Chamorro, who increased their pressure for a change in the political status of Guam towards greater autonomy. In 1950, with the Guam Organic Act the island became an "unincorporated organized territory of the United States", led by a civilian governor. Two years later "all persons born in the island of Guam on or after April 11, 1899" were granted US citizenship. It was not before 1962, however, that the US Navy had to give up its wartime authority to refuse entry and departure to civilians for security reasons. In 1968, for the first time since the arrival of the Spanish, the people of Guam were allowed to elect their own governor and lieutenant governor. Four years later, the "Guam-Virgin Islands Delegate" Act granted Guam the right to send one delegate to the U.S. House of Representatives, but without a voting right.

The Northern Marianas received Commonwealth status in the 1970s and President Ford favored similar negotiations with Guam. However, the US Department of Interior officials responsible for carrying out the directive of the president impeded any further steps into this direction and the documents with the orders from the president disappeared (Cagurangan 2007). The people of Guam continued pushing for more self-determination. Eventually they succeeded in their efforts to hold a referendum in January 1982. The referendum showed a clear majority voting for Commonwealth status with only 10 percent favoring the status quo as an unincorporated territory – nonetheless, the U.S. Congress refused the desired change. To date, the people of Guam are granted neither the right to vote in presidential elections nor the right to self-determination, their island remaining on the list of the UN Special Committee on Decolonization.

The social conditions, however, have changed quite remarkably. The population has multiplied by the factor 12 during the last century and almost quadrupled since the end of World War II, although military personnel are not being included. Waves of immigrants were caused by wars, politics and climate change. Between 1990 and 2000 the population increased by 16,3% but the growth slowed down to 1,5% per year, at least partly due to the emigration of Guam residents to Hawaii or to the mainland in search for better economic opportunities. Presently, Chamorro make up little more than one third of the population, while more than one fourth is Filipino, about 7% White, 7% Chuukese, 5% other Pacific Islander, 6% other Asian, 10% Mixed and 2% Other (Government of Guam 2017:11-12). English and Chamorro are the official languages, with English being the most common but still the mother tongue to less than half of the population, followed by Tagalog being the next frequent. The population is young, having a high birth rate and high life expectancy, but the observed lifetime is shorter. This is partly due to the extremely high rate of infant mortality, which is probably the result of Agent Orange sprayed in some Guam villages between 1968 and 1970 (Noel et al. 2015). Strikingly as well is the extraordinary high suicide rate, four times as high as the rate among Asian Americans and Pacific Islanders living on the US mainland.

According to the data of the Department of Public Health and Social Services (Government of Guam 2017:15-17), 23% of Guam's population live in poverty, almost half of them minors living in poor housing or on the streets. Frequently, homelessness is caused not only by poverty but also by unemployment, rising housing costs and domestic violence. Especially in the case of children, homelessness is often combined with family problems, neglect, abuse, drugs or alcohol misuse. About 21% of Guam's inhabitants have no health insurance. "The Asia Pacific Island communities, including Guam, face a crisis of non-communicable diseases […]" (Government of Guam 2017:9). According to information from the interviews, the expression "non-communicable (epidemic) diseases" has been created to refer to "social diseases" like poverty, addiction and violence which are not communicable, but tend to spread like epidemic diseases. If social sustainability is to be reached, these epidemics have to be overcome.

## 4. Expert Interviews
### 4.1 Research Design

For the purpose of finding out more about the chances for social sustainability in Guam, qualitative research was conducted in February 2019. Expert interviews were

carried out with representatives of NGOs concentrating on various social problems and with professors of the public University of Guam. In advance, most of the interviewees were contacted by email, but only few of them answered. Finally, all of the appointments had to be fixed short term. However, the interviewees were quite cooperative in the arranging or rearranging of subsequent contacts, some even offering me a ride to get there.

The interviews were based on a half-structured interview guide individually adjusted to the particular expertise of each interviewee. The questions asked concerned their activities, working conditions, the kind of persons and problems the expert was occupied with and the obstacles he or she was facing in her work. The length of the interviews differed broadly, lasting between one and several hours. They were conducted either in the office of the interviewee or in a café-restaurant. As for the ethnicity of the interviewees, it varied from Chamorro to White and other Pacific Islanders, most of them uniting different ethnicities, all of them seemed to regard him- or herself primarily as a citizen of Guam, although the ethnic division occasionally was addressed in the interviews.

Before starting the interview, the interviewer introduced herself, the aim of the interview and the intended use of the data, affirming that the latter would be handled with care with regard to the interviewee's privacy and would never be used for any other purpose than the academic one explained before. All the interviewees agreed to the use of a tape recorder, but in some cases, the environment was too noisy to get useful results from recording. In any case, the interviewer took notes, trying to put down literally statements that seemed particularly relevant. After the interview, the recorded data were used for completing or correcting the notes wherever it was found necessary.

The data were analyzed in the style of Mayring's content structuring approach (Mayring 2010). In a first step, they were allocated to categories that evolved from the content of the interviews. These categories corresponded more or less to the respective fields of activity of the NGOs. In a second step, the data were reordered into new categories correlating to the following four questions.

a) What does it mean today to be a Chamorro in the US colony of Guam?
b) What does it mean to live on a Pacific Island/ to be a Pacific Islander?
c) What are the most urgent social problems faced by the community?
d) Which are the topics and factors crucial to enhancing social sustainability?

In a third step, all the data were additionally categorised according to their central dimension (demography, economics, politics, social welfare or culture).

## 4.2 Results

a) Being a Chamorro in the US colony of Guam means to live as a minority on the land of one's ancestors, with life being restricted in many ways. The most attractive and traditionally sacred places are occupied by the army. Due to the politics of the US, a substantial number of migrants have come and still do come to Guam, most of them needing support in multiple ways. Many migrants do not even know English or any other language spoken publicly in Guam. Initially, they might intend to travel further to the US mainland using Guam only as a bridge to jump over, but many of them arrive without any resources and, eventually, they tend to stay.

The rate of poverty, suicide, addiction, interfamilial conflict, violence and crime has risen, these "social problems" being sometimes brought in connection with the increasing number of migrants, although the migrants are never blamed but rather pitied in the interviews.

Living conditions are severe for many islanders, since prices are higher and wages lower than on the US mainland. In general, the lifestyle resembles that in other states of the US. On the one hand, several NGO activities are supported by public funding, on the other hand, public infrastructure can only be called inadequate in view of the lack of public housing, public transportation (which does not exist at all!) and healthcare, the superior facilities of which all being reserved for the US military and their families. It should be emphasized that interviewees did mention these points, but not in the manner of a complaint.

What the Chamorro informants did complain about, however, is the fact that their right to self-determination as a basic right is continuously being infringed upon by the US and the long desired change in political status refused.

None of the interviewed seemed to be indifferent to the presence of the military, either, even though it might create jobs. It is pointed out that it has not only devastated extended parts of the island's nature and the Chamorro culture, but also left ammunition camps and chemical weapons stored at the time of the Vietnam War and dumped toxic liquids into the ocean. According to one informant, people living close to the bases, show a significantly high rate of cancer.

What is touched on either explicitly or implicitly in most of the interviews are the extensive networks and the importance of reciprocity and donation in Chamorro culture. Young Chamorro, while finding better paid jobs and career opportunities on the mainland attractive, still stay on Guam because they feel responsible for taking care of their parents and relatives in need. This sense of mutual obligation seems to be one of not too many elements of Chamorro culture that have survived many decades of attempts by the US military to suppress Chamorro language and culture. Presently, NGOs painfully try to revive traditional language and knowledge, as for example the knowledge of healers who were the target of particular discrimination and harassment for a long time. The ways indigenous people communicated with their ancestors sank into oblivion under the repression by the Christian church. Values have changed, and differ between generations so that parents seeking to use educational methods learned from their parents are being laughed at by their children who attempt to break out. Occasionally, these children are found on the streets and taken care of by one of the numerous NGOs. Furthermore, Chamorro NGOs do not limit care to their own people. Chamorro's even spend a remarkable amount of time and energy to look after veterans of the US military vegetating on the streets, many of them sick, depending on drugs and alcohol, abandoned by their families. Chamorro NGOs bother to connect and reconnect families, people from different ethnicities, people alive to passed away ancestors, humans to nature and to their environment. From their perspective, Western influences brought freedom – including the freedom from strong familial and community bonds and the freedom for drugs.

b) Living on the islands of Micronesia is hard. The islands are small, some of them barely

inhabited by one thousand people. These local inhabitants used to live on fishing and farming, but fishing rights have become restricted as a result of international negotiations. On these smaller islands few jobs offer opportunities for earning cash, while prices are even higher and minimum wages still lower than on Guam. The poverty rate on the northern Marianas surpasses 50%.

Some companies from the US mainland take advantage of these conditions of cheap labour and ground. International trafficking organizations recruit girls from the islands, forcing them into sex labour and modern slavery. The education facilities are insufficient on many of these small islands, other parts of the infrastructure not being developed to modern standards either. Especially emphasized by the interviewees are the problems of plastic waste and medical care.

On the other hand: These islanders do enjoy self-determination and freedom from foreign rule. They elect their own government and voted for the political form of commonwealth they belong to ever since. Additionally, the US offered them free immigration into the US, where they can obtain US citizenship.

However, the treaties between the northern Marianas and the US will expire in 2023. Chinese billionaires are already waiting with attractive offers. For example, they aim to build a huge resort of 200.000 beds on an island counting not even 18.000 inhabitants. Thus, presently, NGO/CSOs have a critical role in watching the governments of the small islands regarding the forthcoming decision on whether to agree to a big developer bringing a lot of money in and promoting development – which would be the easy way to go – or to take the time to reflect on their culture and resources and think about what kind of development would be best suited, enabling them to have their local people in the forefront. In the words of an interviewee: "This is a hard job in relation to the one developer bringing in billions of dollars ready to exile in the local people." The "governments are not necessarily enemies, but they easily turn into a danger for the locals".

## 5. Discussion

As has become clear from the results of the analysis, Guam as a remaining US colony is facing a number of challenges regarding its chances for achieving social sustainability.

First of all, the right to self-determination of the people of Guam (whoever, according to international law, should be counted to them) has to be acknowledged, regardless of military and strategic interests of the United States of America.

Second, poverty and inequality have to be fought so as to offer a decent living to all people on the island. Health care facilities need to be augmented and existing ones made accessible to everybody in need. The present condition of the infrastructure calls for an expansion of public housing, the establishment of a public transportation system and the reform and refinement of other elements of the infrastructure as well.

Cultural diversity has to be accepted, and particularly, the sacred places to be returned to the indigenous people. Additionally, chemical weapons ought to be removed from the island and military waste cleaned up. Cultural beliefs and customs as well as traditional healing methods and their representatives have to be accepted and given room to be

practiced.

On the other hand, quite a few aspects of the conditions in Guam can be regarded as favourable to a future move towards social sustainability. Many people are actively engaged in NGOs that care for those in need and support the vulnerable, be they youth or veterans, migrants or Chamorro, disabled or belonging to a sexual or any other minority. Part of these activities are funded by the government, others by local or international donators. Nonetheless, this does not mean that NGOs in Guam would not be limited in their activities by lack of financial and human resources.

The high ratio of migrants and of people with a low level of education could, given the young population and the comparatively well-developed educational infrastructure of Guam, turn into a remarkable human resource. As one interviewee assessed it, changes could be expected from the energetic millennials if they would get involved with politics campaigning for self-determination. With support from the United Nations and other influential international organizations, there could be hope for change even though the US military leaders and their allies can hardly be expected to give in voluntarily.

It would take some time, but since Guam has a solid base of socioeconomic infrastructure, social sustainability has good chances of being attained if enough people move towards the goals it implies.

## References

Brundtland, G. (1987). Report of the World Commission on Environment and Development: Our Common Future. Retrieved June 20 from http://www.un-documents.net/our-common-future.pdf

Cagurangan, M.-V. (2007). Ford supported Commonwealth Status for Guam. *Pacific Islands Report, 1.4.2007*. Retrieved June 23 from http://www.pireport.org/articles/2007/01/04/ford-supported-commonwealth-status-guam

Camacho, K. (2008). The politics of indigenous collaboration: The role of Chamorro interpreters in Japan's Pacific Empire, 1914-1945. *The Journal of Pacific History, 43 (2)*, 207-222.

Castillo, H., Price, A., Moobela, C. & Mathur, V. (2007). Assessing urban social sustainability: Current capabilities and opportunities for future research. *The International Journal of Environmental, Cultural, Economic and Social Sustainability, 3 (3)*, 39-48. http://dx.doi.org/10.18848/1832-2077/CGP/v03i03/54355

Eizenberg, E. & Jabareeen, Y. (2017). Social sustainability: A new conceptual framework. *Sustainability, 9 (68)*, 1-16.

Government of Guam, (2017). *Maternal and Child Health Services Title V. Block Grant. Guam.* Retrieved from https://mchb.tvisdata.hrsa.gov/uploadedfiles/StateSubmittedFiles/2018/GU/GU_TitleV_Print Version.pdf

Hale, J., Legun, K., Hugh, C. & Carolan, M. (2019). Social sustainability indicators as performance. *Geoforum, 103*, 47-55. https://doi.org/10.1016/j.geoforum.2019.03.008

Hattori, A.P. (2014). Navy Blues: US Naval Rule on Guam and the rough road to assimilation, 1898-1941. *Pacific Asia Inquiry 5 (1)*, 13-30.

Karbassi, L. (n.d.). (UN Global Compact) Social sustainability. Retrieved June 23 from https://www.unglobalcompact.org/what-is-gc/our-work/social

Klarin, T. (2018). The concept of sustainable development: From its beginning to the contemporary issues. *Zagreb International Review of Economics and Business, 21 (1)*, 67-94. DOI: 10.2478/zireb-2018-0005

Kohon, J. (2018). Social inclusion in the sustainable neighborhood? Idealism of urban social sustainability theory complicated by realities of community planning. *City, Culture and Society, 15*, 14-22. https://doi.org/10.1016/j.ccs.2018.08.005

Mani, V. & Gunasekaran, A. (2018). Four forces of supply chain social sustainability adoption in emerging economies. *International Journal of Production Economics, 199*, 150-161. https://doi.org/10.1016/j.ijpe.2018.02.015

Mayring, P. (2010). *Qualitative Inhaltsanalyse: Grundlagen und Techniken.* Weinheim und Basel: Beltz Verlag.

Montalbán-Domingo, L., Carcía-Segura, T., Sanz, M.A. & Pellicer, E. (2018). Social sustainability criteria in public-work procurement: An international perspective. *Journal of Cleaner Production, 198*, 1355-1371. https://doi.org/10.1016/j.jclepro.2018.07.083

Naidoo, J. & Muthukrishna, N. (2016). Child Well-being in a rural context: Shifting to a social sustainability lens. *South African Journal of Childhood Education, 6 (2)*, a458. http://dx.doi.org/10.4102/sajce.v6i2.458

Noel, J., Namazi, S. & Haddock, R. (2015). Disparities in infant mortality due to congenital anomalies on Guam. *Hawai'i Journal of Medicine & Public Health, 74 (12)*, 397-402. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4675364/

Perez, M. (2005). Colonialism, Americanization, and indigenous identity: a research note on Chamorro identity in Guam. *Sociological Spectrum, 25,* 571-591. DOI: 10.1080/02732170500176138

Tamara, P., Barbosa-Póvoa, A., Kraskawski, A. & Carvalho, A. (2018). Quantitative indicators for social sustainability assessment of supply chains. *Journal of Cleaner Production, 180*, 748-768. https://doi.org/10.1016/j.jclepro.2018.01.142

Vallance, S., Perkins, H. & Dixon, J. (2011). What is social sustainability? A clarification of concepts. *Geoforum, 42*, 342-348. https://doi.org/10.1016/j.geoforum.2011.01.002