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Disentangling Benefit-Sharing Complexities of Oil Extraction on the North Slope of Alaska

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Abstract: This paper analyses benefit-sharing arrangements between oil companies, native corporations, the North Slope Borough, and Indigenous Peoples in Alaska. It aims to disentangle the complexities of benefit-sharing to understand existing procedural and distributive equity. We identified benefit-sharing regimes involving modes, principles, and mechanisms of benefit-sharing. This includes modes that reflect institutionalized interactions, such as paternalism, company centered social responsibility (CCSR), partnership, and shareholders. Principles can be based on compensation, investment and charity. Mechanisms can involve negotiated benefits and structured benefits, mandated by legislation, contracts, or regulation. Furthermore, mechanisms can involve semi-formal and trickle-down benefits. Trickle-down benefits come automatically to the community along with development. The distribution of money by the North Slope Borough represents the paternalistic mode, yet involves investment and mandated principles with top–down decision making. They are relatively high in distributional equity and low in participatory equity. Native corporations predominantly practice the shareholders' mode, investment principle, and mandated mechanisms. The oil companies' benefit-sharing represents a mixed type combining CCSR and partnership modess, several principles (investment, compensatory, charity) and multiple types of mechanisms, such as mandated, negotiated, semi-formal and trickle-down. These arrangements vary in terms of distributive equity, and participatory equity is limited.

Keywords: benefit-sharing; oil production; Arctic; Indigenous Peoples; Alaska; participatory equity; distributive equity

1. Introduction

Across the world, Indigenous communities are facing large-scale industrial resource extraction, such as oil and gas extraction and mining. Perspectives in the literature diverge when it comes to the distribution of societal benefits of oil and gas exploitation. On the one hand, authors refer to a resource curse that explains why oil-rich countries generally have a poor overall economic performance and undemocratic governments [1–4]. An alternative body of literature (referring to the US, Canada, Norway and Russia) views oil as an important asset for development [5–8], as long as it is accompanied with strong institutions and policy instruments to fight the resource curse.

In the 1990s, the concept of 'social license to operate' (SLO) appeared, which called companies to act beyond legal compliance and address stakeholder concerns and needs [9–13]. An oil or mining company would have a SLO when its activities, performed in line with all requirements regarding resource extraction, were acceptable to society. An important constituent of SLO is benefit sharing [14]. While SLO remains to be a broad, metaphorical term, emphasizing the need for trust, legitimacy and credibility [15,16], the concept of benefit sharing is more tangible and essential for fighting the resource curse.

Our paper will demonstrate that a key requirement for avoiding the resource curse is to establish and maintain appropriate institutions for benefit-sharing arrangements. These benefit-sharing arrangements include both monetary and non-monetary goods delivered from extractive industries to local communities [3]. According to the literature, benefit-sharing arrangements in different Arctic regions are very complex, involving many interests, stakes, and layers of arrangements [17–22]. By disentangling complexities, researchers made an effort to systematize and classify benefit-sharing arrangements in the Arctic [21,23,24]. However, few studies relate the complexity of benefit-sharing arrangements to the issue of equity [17,19,20]. In this paper, we contribute to this debate by providing insights into the benefit-sharing regime of oil extraction on the North Slope of Alaska and relate these to indigenous perceptions of equity on the distribution of funds coming from oil companies.

Oil extraction at the North Slope of Alaska has been operational since the early 1970s. In 1968, the discovery of large deposits of oil in Prudhoe Bay on the North Slope of Alaska and the rush for oil and gas changed institutional settings and land ownership. The North Slope of Alaska has produced around 15 billion barrels of oil, and the Prudhoe Bay oil fields have produced around 12 billion barrels [25]. This affected indigenous cultural landscapes, which previously had no clear boundaries. Over time, a range of institutional arrangements has been designed to ensure fair and equitable decision making on socio-economic benefits and compensation for Indigenous communities to accommodate the co-existence of profit-driven commercial oil development with the Indigenous Inupiat people's subsistence economy. For example, it was extremely important that the operations of transnational oil companies would be acceptable to Indigenous society. Research shows that the North Slope of Alaska represents a relatively low-income region with oil development as the single industry that avoided the resource curse successfully [26]. Scholars argue that this happened not only because of the productivity of oil fields, but also because of the establishment of strong indigenous-led institutions that manage to keep oil income within the region [26].

A benefit-sharing regime represents a complex, highly institutionalized setting. Governance of oil in the North Slope of Alaska involves multiple actors that share oil rent with local communities. Therefore, there is a need for an elaborate framework that captures different levels/layers of benefit-sharing and their characteristics and assess perceived fairness and equitability of these arrangements by Indigenous Peoples.

The major research question is: How are benefit-sharing arrangements organized and implemented in Alaska, and what does this mean in terms of procedural and distributional equity?

This paper highlights complexities of the benefit-sharing regime and analyzes whether the existing benefit-sharing arrangements on the Alaska North Slope are equitable and inclusive. We focus on the interaction between oil companies and the above mentioned indigenous-led institutions, i.e., North Slope Borough (NSB), Arctic Slope Regional Corporation (ASRC), native village corporations) in redistributing benefits.

The paper will start with theoretical insights into the concept of benefit-sharing, and will continue with the description of the methodology used in the research, including case study selection. Finally, it will describe the organization of benefit-sharing practices and analyze them in terms of equity.

2. Theoretical Framework: Envisioning Equitable Benefit-Sharing Thorough Stakeholder and Shareholder Theories

In this study, shareholder and stakeholder theories are combined with the theoretical insights from empirically-grounded research on benefit-sharing. Shareholders are holding sticks and receiving dividends. Stakeholders include, but are not limited to state agencies, non-governmental entities, Indigenous Peoples, and local communities. Both shareholder and stakeholder theories represent a normative approach to corporate social responsibility (CSR), highlighting what a good practice of responsible business is. According to shareholder theory, coined by Milton Friedman, the major duty of business managers is to increase profits to legitimize the trust of companies' investors and shareholders. Therefore, managers are morally obliged to run the company to maximize shareholder profits because shareholders have advanced capital to the company. However, these duties can only be carried out through legal means and with a long-term orientation [27,28]. Stakeholder theory adopts a broader lens, acknowledging that firms bear the responsibility to both shareholders and stakeholders. The major difference is that stakeholder theory argues that the interests of all stakeholders have to be satisfied, even at the expense of companies' profitability [28,29]. Contemporary managerial theories highlight that the logic of companies' CSR is embedded in interdependency between the stockholders and societal actors [30]. Scholars argue that shareholders are not the only investors; society is also an investor in any business venture. Scholars distinguish between two major categories of stakeholders: Interested, such as NGOs, for example, and affected, e.g., local and/or indigenous communities that experience harm or benefits from companies' operations [31,32]. The interests of stakeholders may contradict each nother; therefore, stakeholder theory assumes that it will be necessary to prioritize and make tradeoffs in efforts to satisfy stakeholders' desires [33]. By responding to the demands of interested stakeholders, companies reduce reputational risks and may make progress toward receiving a social license to operate (SLO).

The concept of SLO appeared in the 1990s as companies were called to act beyond legal compliance and address stakeholders' concerns and needs [9–13]. An oil or mining company would achieve an SLO when its activities, performed in line with all requirements regarding resource extraction, were viewed as acceptable by key social groups. An important constituent of SLO is benefit-sharing [14]. In broad, metaphorical terms, stakeholder theory and the concept of SLO emphasize the need for trust, legitimacy and credibility in company-stakeholder relations [15,16]. At the same time, the concept of benefit-sharing is more tangible to addressing the needs of local communities, that are experiencing impacts of resource extraction.

Benefit-sharing is defined as the distribution of monetary and non-monetary benefits generated through a resource extraction activity to affected stakeholders [34,35]. Benefit-sharing can imply transfers from companies in the form of tax payments, damage compensation, royalty payments, dividends, or socio-economic contracts [35,36]. In some cases, the state can control the process of benefit-sharing by means of sovereign wealth funds, land lease agreements, obligatory social investments or voluntary company initiatives [37–39]. Benefit-sharing may appear philanthropic because the funds support cultural festivities, languages or sports, as well as strategic investments in education in subjects important to the oil and gas industry in order to generate potential employees of the company.

Previous studies identified benefit-sharing regimes, that include modes, principles and mechanisms. [21]. Regimes constitute a broad overreaching range of different kinds of formal and informal relationships between companies and communities involving the distribution of funds, as well as in-kind benefits. Regimes are embedded in national legislation, companies' ownership and policies, practices in use, historical legacies, opportunities for Indigenous Peoples' involvement in decision making processes, and existing power dynamics in communities.

Modes of benefit-sharing refer to institutionalized forms of interaction between oil companies, state agencies and communities around the distribution of oil wealth. In our previous studies, we identified several modes: Paternalism, company centered social responsibility (CCSR), partnership, and shareholder mode [17,21,39,40]. Empirically, it became apparent that most benefit-sharing practices are mixed and combine the characteristics of several ideal types.

In the paternalistic ideal type, the state dominates in welfare provision coming from oil money (see Figure 1).

Figure 1. Paternalistic Mode of Benefit Sharing.

In CCSR, companies retain power and control over benefit-sharing arrangements, which companies mostly set with stakeholders; benefit-sharing is structured in a way that helps to avoid reputational risks with NGOs and conflicts with local communities, investors and shareholders. The partnership mode is based on a stakeholder approach, in which social actors are seen as contributors to the companies' wellbeing and vice versa [33] (see Figure 2).

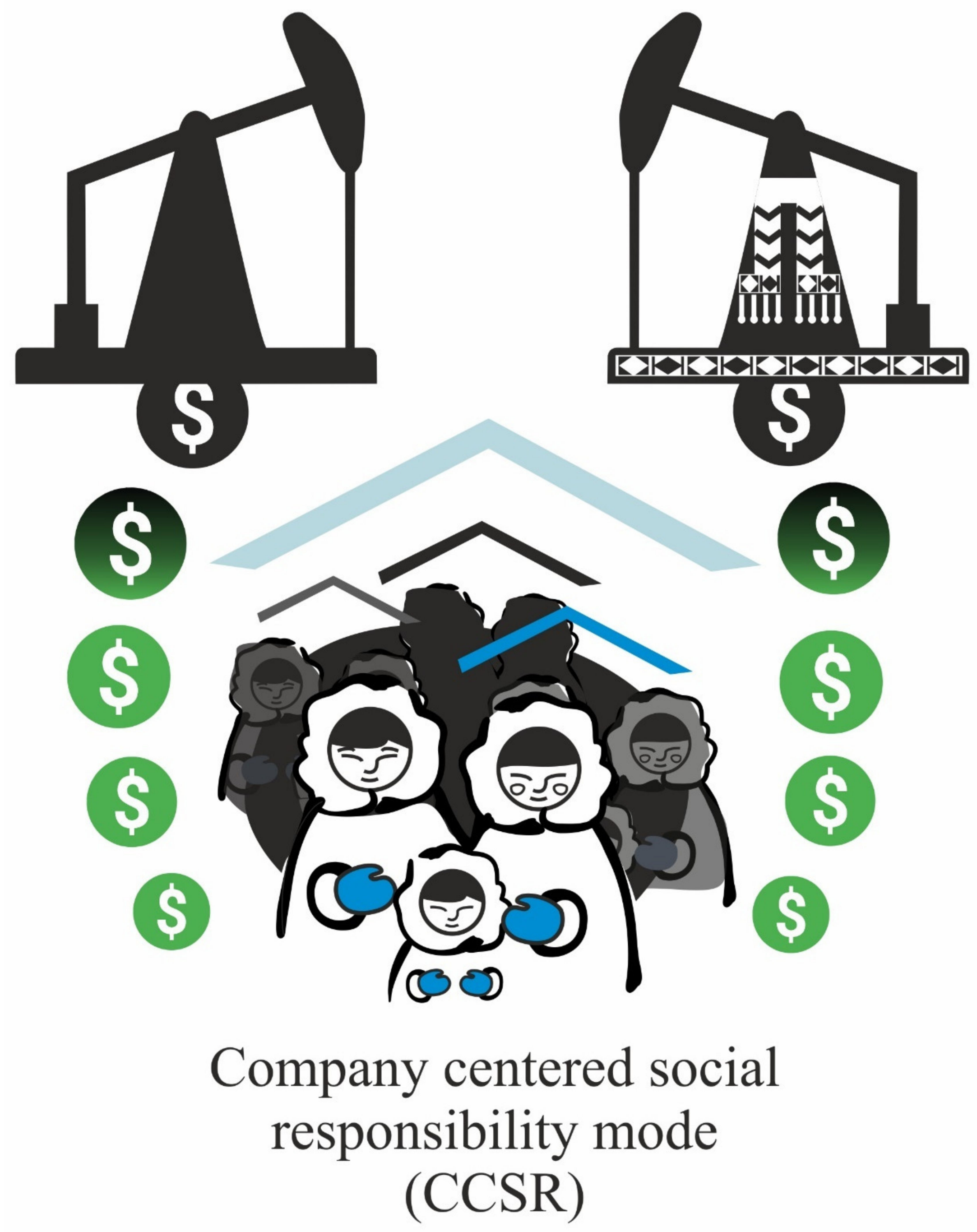

Figure 2. Company Centered Social Responsibility Mode of Benefit Sharing.

The aim of the partnership is to foster self-reliance, empowerment and community involvement in sharing oil benefits and costs. Indigenous organizations, companies and the state agencies make joint decisions on benefit-sharing (see Figure 3).

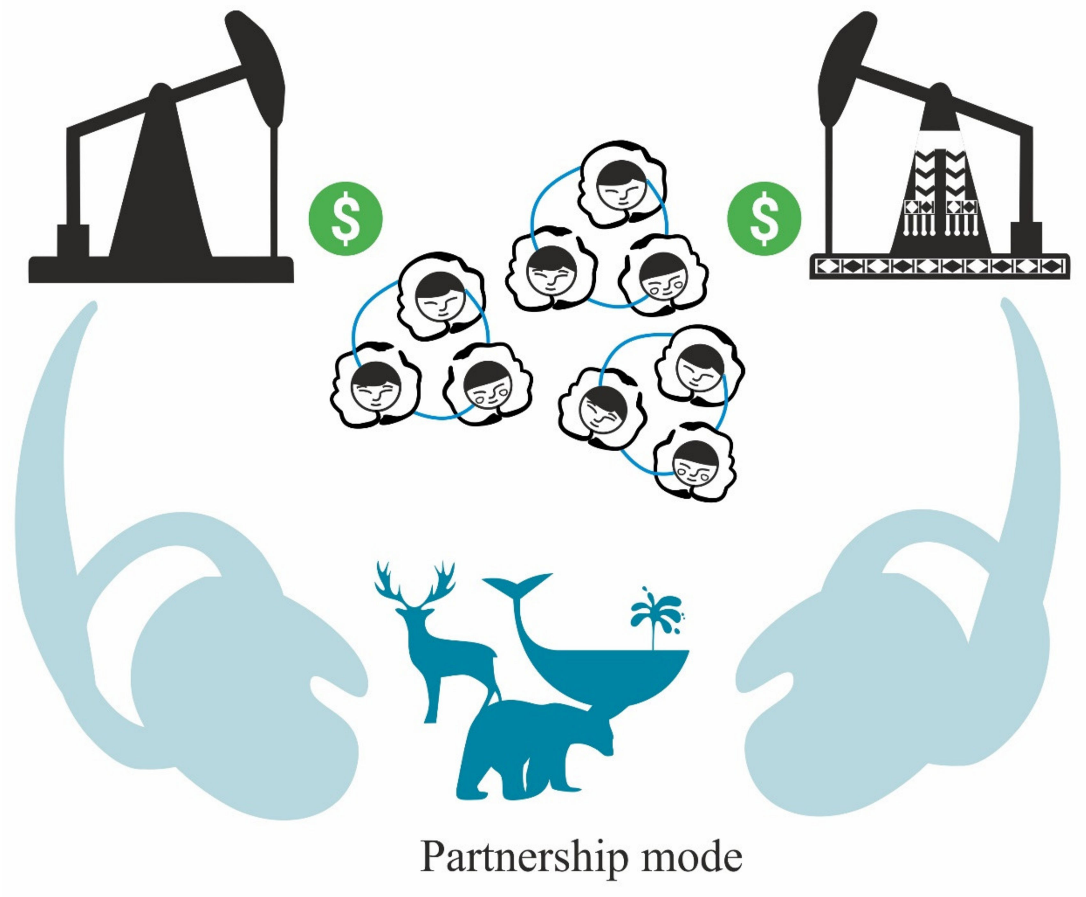

Figure 3. Partnership Mode of Benefit Sharing.

The shareholder mode happens in Alaska, where every citizen receives oil dividends every year from the state. Indigenous Peoples are shareholders of native corporations and receive dividends from them (see Figure 4). The peculiarity of this case is that Indigenous Peoples simultaneously are shareholders of a native corporation and affected stakeholders whose traditional economic activities may be damaged by extractive industries. Finally, the beneficiary mode occurs primarily in Canada, where community-based non-profit organizations manage oil money coming from companies [17,21,39,40].

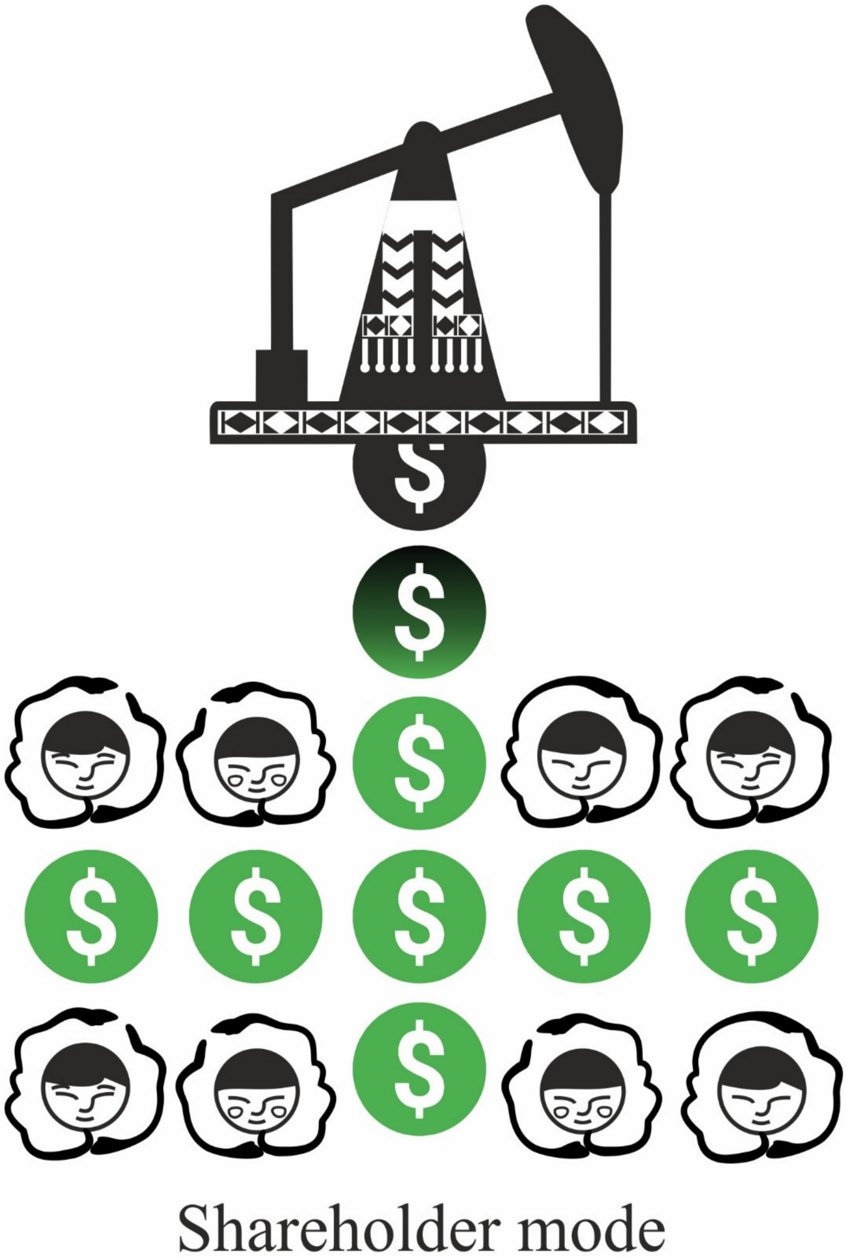

Figure 4. Shareholder Mode of Benefit Sharing.

These modes are rooted in several principles. The principles define the nature of benefits, such as compensation, investment, and charity [21]. Compensation for loss of pasture lands, hunting grounds, or for irreversible impacts on traditional culture and lifestyle is a principle, which law or state policy typically dictates and stipulates possible collective socio-cultural or environmental costs the community endured and the way in which a community will be reimbursed. The investment principle involves building physical or social infrastructure "voluntarily". Investment also can be in an educational or community capacity building [40,41]. For example, investors can build roads, create new jobs for the residents, and give stipends to Indigenous Peoples to study at Universities and colleges. Charity principle entails sponsorship of cultural events, festivals, and conferences among many others.

Finally, we distinguish the mechanisms of benefit-sharing arrangements. Mandated mechanisms are required by legislation or contracts. Negotiated benefits represent a mechanism oil companies deliver to communities as a result of negotiations. Semi-formal benefits involve sponsorship as well as different kinds of goods and services that the community gets upon request from the company.

Trickle-down benefits are those that automatically come to the community, along with development [17]. Mechanisms of benefit-sharing have unclear boundaries. For example, a certain degree of negotiations may be involved in contracting, semi-formal agreements and even trickle-down benefits.

Mandated benefits are associated with specific acts of legislation or regulation. Mandated benefits are often taxes and royalty payments to the state or to the community in case the company is using federal, state, or community land [42]. Companies must pay taxes, and tax distribution is based on national, regional, or local legislation. Another typical example of mandated benefits is the Alaskan permanent fund that distributes money from oil rent to every Alaskan citizen, and the Alaska Native Claim Settlement Act (ANCSA) requirements; 70% of the money from resource extraction in the Alaska Native Regional Corporations have to be shared with other regional native corporations [8].

Negotiated benefits are an eclectic group of arrangements between companies and regional, district, and municipal authorities, or between companies and communities. For example, the impact benefit agreement (ABI) that is common in Canada [43]. In Russia, the federal, or more often, regional authorities imposed and negotiated socio-economic cooperation agreements both formally and informally as a legacy of the Soviet state practices [19]. The post-Soviet practice encompasses a system where the extractive industry fulfils a part of the normal state functions. The negotiation of benefits becomes centralized even though the local government is active in requesting benefits from these negotiations. This system gives little voice to the community, and mostly serves the interests of the state in its interpretation of the local needs [19]. Negotiated benefit-sharing happens when foreign investors or partners impose requirements on lending entities. Regional extractive companies may be open to such loans and partnerships in order to get access to capital. Lenders, such as the European Bank for Reconstruction and Development (EBRD), put conditions which require benefit-sharing. However, benefit-sharing may not be well connected to real community needs and faces implementation challenges, if these standards do not conform to the local realities [20]. In Alaska, voluntary local/indigenous employment quotas and hiring preferences negotiations take place, yet the company makes the final decision on them. The common practice in Alaska is contractual agreements and royalty payments for using private land, which native corporations and oil companies negotiate.

The semi-formal mechanism of benefit-sharing occurs when a company responds to community actors', local authorities', or private citizens' requests often without much transparency or public participation. Companies are selective in their replies to certain local petitions, which helps them in risks avoidance. The decision-making power always rests with corporate leadership, and is often perceived as the company's goodwill, to which a local community is not formally entitled. From a company's standpoint, this is a "social expenditure" embedded in its role as a dominant local economic actor.

The trickle-down benefit mechanism includes gains the community experiences from general economic impacts, such as income growth, employment, increased consumer spending, new infrastructure development, procurement through indigenous, and local businesses and the creation of local jobs. Trickle-down benefits are typically unspecified in benefit-sharing agreements, are not based on companies' strategy, and emerge due to the multiplier effect in the economy or increases in cash flow in local consumption [18].

In cases where companies strategically develop an effective stakeholder approach, benefit-sharing arrangements are expected to contribute to local communities' welfare and enhance the residents' control over their lives [44,45]. Principles of "fair and equitable benefit-sharing" are rooted in international conventions related to biodiversity protection, international human rights, maritime law and the right to science [46,47].

To analyze perceived fairness and equitability of benefit-sharing arrangements in Alaska, we employ the equity concept differentiating between participatory and distributive equity [48]. The former is associated with indigenous communities' participation in decision-making, particularly regarding the forms and the number of benefits received. The latter implies that the funds and benefits received by the communities from the oil companies are distributed in an equitable way.

The regimes, modes, principles, and mechanisms that we described above have an impact on perceived equity in benefit-sharing arrangements as they highlight in what cases negotiations may exercise participatory equity, and to what extent the design of the existing legislation, such as Alaska Native Claim Settlement Act (ANCSA), can foster distributive equity.

3. Materials and Methods

3.1. The Study Area: The North Slope of Alaska

The North Slope Borough (NSB) covers 228,800 square kilometers, which constitutes 15% of Alaskan land. The Borough has planning and development control of the North Slope, which the state of Alaska and oil companies initially opposed. The westernmost point of the NSB is Point Hope, located at the cape in the Chukchi Sea, from where the NSB extends for 1,050 kilometers to the border with Canada in the east. The northernmost point of both NSB and Alaska is Utqiagvik; the southern border is 360 kilometers away from this point. The National Petroleum Reserve in Alaska lies in the northeast of the North Slope. Oil infrastructure is concentrated in Prudhoe Bay. This is also where the 800-mile Trans-Alaskan pipeline begins; it ends at Prince William Sound near the City of Valdez. Part of the territory (35,560 km2) on the Barter Island, close to the village of Kaktovik, is occupied by the Arctic National Wildlife Refuge. The federal Department of the Interior exercises control over the National Petroleum Reserve, and the Arctic National Wildlife Refuge [8].

According to statistics, there are 8,075 permanent residents in the NSB, most of which reside in one of the eight municipalities. There is a large number of people who come to work in the oil industry on the North Slope, spending at least six months there each year. These individuals are also regarded as residents of the Borough; therefore, the total population amounts to 11,563 [49].

The capital of the Borough is Utqiagvik, which is the largest of these municipalities. Nuiqsut is the most affected community, surrounded by oil infrastructure. Kaktovik is a community situated close to the Arctic National Wildlife Refuge (see Figure 5).

Figure 5. Map with research sites.

3.2. Study Design, Data Collection and Analysis

The research design was based on a multi-sited study, which combined qualitative sociological methods used in the cities with the sociological ethnography methods in the villages. These methods were used for building an empirically grounded classification of benefit-sharing arrangements between oil companies and Indigenous Peoples in Alaska. Therefore, the major focus was on the interaction of two approaches to benefit-sharing articulated by transnational corporations and Indigenous stakeholders. We investigated attitudes towards benefit-sharing among Indigenous Peoples through the lens of "social worlds" to illustrate how distinct groups assess equity in the process of sharing oil rent [50,51]. Using sociological methods, we have classified benefit-sharing arrangements in several ideal types (modes of benefit-sharing), principles, mechanisms and regimes. We developed the analytical framework in our previous studies of benefit-sharing arrangements in Russia and Canada [17,21,39,40]. The application of this analytical framework allows us to further develop our classification of modes of benefit-sharing arrangements and assess how these modes perform in terms of equity and justice.

For this particular study, we combined sociological and ethnographic methods during field expeditions to Alaska in 2015–2018 [52]. We used the case study approach to analyze the key benefit-sharing arrangements in three villages on the North Slope of Alaska, in 2016–2018, spending 2–3 weeks in each village every year [53]. Three expeditions took place in June 2016, August to September of 2017, and July 2018. Each case study represents an empirical inquiry to discover "how" or "why" the benefit-sharing is organized and implemented in a certain way between transnational oil companies, native corporations and Indigenous Peoples [54]. We selected Utqiagvik as it represents a regional center, where offices of major institutions involved in benefit-sharing are located. We also selected two other settlements, due to their location close to oil operations; Nuiqsut is surrounded by ConocoPhillips facilities, and Kaktovik is located 60 miles from the ExxonMobil Point Thomson project. Data collection also took place at Indigenous Peoples' gatherings in Washington DC, Fairbanks, and Anchorage—these were related to setting up or implementing benefit-sharing arrangements, as well as at the companies' offices of ConocoPhillips, Exxon Mobil and Shell in Houston (January–February 2018).

Our main qualitative research methods were semi-structured interviews, participant observation, and document analysis. Semi-structured interviews are based on an interview guide prepared to address major topics to be discussed. The informants have the freedom to go beyond the guide and introduce new topics in the interview and determine to what extent they want to disclose their views [55,56]. We conducted interviews with all stakeholders who have a say in benefit-sharing arrangement, e.g., federal, state, regional (e.g., North Slope Borough), and local governments, including cities and tribes, oil companies operating on the North Slope of Alaska, regional and local village corporations, Indigenous and non-indigenous representatives of local communities, and environmental NGO representatives. For each group of actors, we developed a separate interview guide to capturing specific views and expertise of the informants. Key issues discussed in the interviews included the set-up of benefit-sharing arrangements and the way these benefits are delivered to the communities of the North Slope. The interviews paid special attention to participatory and distributive equity in benefit-sharing arrangements. We conducted a total of 116 semi-structured interviews (see Appendix A), lasting between 30 minutes and two hours. We recorded, transcribed, and coded interviews.

Participant observation involved participation in formal gatherings, conferences, workshops, meetings (see Appendix B), as well as informal daily life events of our informants [57]. For example, the author of this paper assisted as Indigenous people to butcher whale meat and prepare meals. During this activity, many informal conversations between the researcher and Indigenous informants occurred. The combination of these methods allowed triangulation, construction of validity and reliability [58]. In addition, we analyzed federal and local legislation regulating industrial activity in Alaska and rights of Indigenous Peoples, corporate standards, company policies and public reports with information on social investments, and governmental transcripts of meetings (e.g., Northeast NPR-A (National Petroleum Reserve-Alaska), Regional Mitigation Strategy Workshops, Subsistence Advisory panel meetings). The paper uses many abbreviations (see Appendix C)

4. Background: Layers of Benefit-Sharing

4.1. The North Slope Borough

In order to administer oil revenue from Prudhoe Bay, the Inupiat people living on the North Slope of Alaska established the North Slope Borough (NSB) in 1971, operating under the state of Alaska [59]. It was intended that the Inupiat natives would run it, and granted the right to tax oil infrastructure in Prudhoe Bay. Arctic Slope Native Association (ASNA), which was involved in the land claims movement, fostered the formation of the NSB, aware of the deficiencies of ANCSA, outlined above, and looked for a fair way to allocate money to the villages of the North Slope. The state government and the oil companies opposed the creation of the NSB. Oil companies filed a lawsuit against it, presuming the NSB had no legal power in fiscal matters. After the creation of extensive litigation in 1972, the Alaska Supreme Court ruled the formation of taxation powers of the NSB as constitutional [59,60]. As a result, the NSB continued to operate, tax oil infrastructure, and improve infrastructure in the villages, and together with the Arctic Slope Regional Corporation (ASRC), became an important regional institution for the accumulation and distribution of oil wealth.

On the local level, three lateral governance structures operate. The first structure is municipal second-class city governments, which is a subordinate of the state of Alaska. The NSB funded and implemented these in all villages, except Point Lay. The second structure is federally-recognized tribes, or "native villages", that formed in the framework of the Indian Reorganization Act. These tribes continued to exercise political power parallel to the NSB government, solicit federal grants, and run federal programs. The third structure is when village corporations exercised economic power with the profits the community depends upon.

With the multi-layer governance of natural resources, it is very hard for state agencies to act in a business-like way, providing services in an efficient way as the new public management paradigm calls for [61–63]. Federal and state governments exercise a certain degree of power with regard to resource governance with their agencies, oil companies, regional institutions, ASRC, NSB and local municipal governments (cities), native villages (tribes), and village corporations. They are all involved in the allocation and distribution of oil money on the North Slope of Alaska. All these actors are continually involved in mitigation processes related to benefit-sharing; this significantly reduces their efficiency.

Communities receive parts of state revenues from oil companies,' royalties, plus production and corporate income taxes through state grants and revenue sharing. The NSB, is an important agent when it comes to benefit-sharing through taxation of oil infrastructure. The companies expanded their operations, and land covered by oil and gas infrastructure has constantly been increasing; thus, oil and gas infrastructure value reached $21.8 billion by 2019. In 1984, the NSB Fund was established to accumulate resources for the time when oil revenue goes into decline. The NSB Fund had over $575.5 million in 2014 [64]. Taxes flowing to the NSB allow for the retention of a large part of resource extraction income in the region. Thus, the Borough acts as compensation for the deficiencies of ANCSA and an instrument to provide critical public infrastructure, such as schools, water, waste-water treatment, landfills, and power to communities.

The services the NSB provides include police and firefighters, search and rescue teams, road construction and infrastructure development, running water, sewage maintenance, streetlights, power and heating, medical services and facilities, fuel storage systems, and waste disposal. The Borough also provides financing for schools in villages and a college in Utqiagvik [64].

4.2. Native Corporations

To govern indigenous interests in oil production, President Nixon signed the ANCSA in 1971. With ANCSA, congress intended to compensate indigenous communities for the development and impacts of oil fields. However, native communities saw ANCSA as an opportunity for the natives to own and manage the land they had always inhabited. The native communities first opposed ANCSA, as they wanted to own and govern all the land of the North Slope and they only collected their entitlement with regard to 44 out of 90 million acres of the indigenous territories. The ASNA represented the voice of the Indigenous Peoples. However, the Alaska Federation of Natives, representing the whole indigenous population of Alaska, supported the law, which was subsequently passed by Congress. Thirteen regional corporations, including the Arctic Slope Regional Corporation (ASRC), and 208 village corporations were established. These entities, being land custodians of sorts, received compensation capital according to the law. Corporations received $962.5 million for the lands they lost; 45% went to village corporations, 45% to 13 regional corporations, and 10% to enrolled individuals [65]. Native corporations registered as commercial joint-stock companies, such as companies whose stock is owned by shareholders.

When an oil company uses the surface or subsurface land, it must pay royalties to the landowners. Consequently, land allocation determines the amount of money flowing from oil companies toward native corporations. According to ANCSA, village and regional corporations received 44 million acres of land. In doing so, the village corporations gained the right to the land surface, while the regional corporations received the right to surface and subsurface (mineral rights). The corporations were free to select parts of the land to take custody of. However, the selection was limited as the National Petroleum Reserve (NPR-A) land became federal in 1923, which the Arctic National Wildlife Refuge (ANWAR) followed in 1960. In this way, indigenous communities lost ancestral lands and hunting grounds. Village corporations selected land close to the village boundaries in order to receive the title to surface rights and to use it for subsistence hunting and fishing. The regional corporations selected lands throughout the region [66].

Approximately 80,000 Alaskans are currently enrolled in native corporations. Residents with "quarter blood" were eligible for membership in 1971, and had the choice of joining village and regional corporations. In addition, residents born before 1971 received 100 shares, and residents born after 1972 inherited the shares later, earning the label "afterborns" [67]. Shares for "afterborns" were a point of contention for corporations and varied by company. For instance, the ASRC made a positive decision on this issue; as a result, the number of shareholders grew from 3,700 at the time of establishment to 13,122 in 2019. In 2019, the dividend per share was $70, which is a significant sum of money, especially for families with children [68]. We studied village corporations that decided not to provide shares to members born after 1972. This decision entailed certain intra-generational inequalities, which we will explain in the next section.

Under the stipulations of ANCSA, the regional corporations share income from resource revenues with other corporations. This is due to the fact that some corporations own land rich in oil and minerals, while others do not. Regional corporations that own land share seventy percent of all corporation resources coming from resource extraction in Alaska lands received via ANCSA law. In case regional corporation purchased new lands in the US or beyond, the revenues from these lands do not have to be shared [69]. The purpose of ANCSA was to prevent land claim disputes and make an effort to assimilate Indigenous Peoples by involving them in the market economy. Shareholders receive major benefits in dividends. In addition to other benefits, the law provides Inupiat employment, taxes, rents, community assistance benefits, and income from royalties from other land users, which the recipients can share or invest. However, ANCSA can also be a political compromise. The indigenous residents received recognition, compensation and permanent settlement of land claims, but they also accepted corporate culture by force, which contradicted their tribal values and their subsistence economy based on sharing [70].

4.3. Transnational Oil and Gas Companies

The majority of benefits from oil companies come from different kinds of taxes and royalties. For example, in 2015, ConocoPhillips paid 190mln to the NSB as a property tax; ConocoPhillips pays sixty percent of its oil income to royalties. The profits of its Alpine facility went to the state and ASRC, profits from Greater Mooses Tooth One (GMT-1) went to Borough of land Management (BLM), and profits from GMT-2 went mostly to ASRC. Fifty percent of all company royalties go to the federal government for using NPR-A; the state distributes half of this money to cities in the form of grants. Utqiagvik gets the most grant money as they employ experienced people as grant writers. With leases purchased in GMT-1 and GMT-2, there will be billions of dollars coming in royalties from new facilities in coming years when construction ends [71,72].

Benefit-sharing beyond taxation is often part of stakeholder strategies of transnational corporations designed to acquire SLO. To achieve this, companies need to respond to the requests of both transnational and local stakeholders. When communities have support as part of CSR or a partnership, it is easier for the companies to approach them, undertake permitting processes, and operate successfully [73].

Therefore, companies are committed to strategic investments in education, training, and capacity building in indigenous communities, which happens through direct sponsorship or grants to indigenous and non-indigenous non-profit organizations. For example, ConocoPhillips invests three to ten million dollars a year in different kinds of charitable contributions across Alaska. ConocoPhillips, Exxon Mobil, British Petroleum, and Shell support STEM (science, technology, engineering, and math) education and universities and colleges in Anchorage, Fairbanks, and Utqiagvik [74].

4.4. Bureau of Land Management

The regional mitigation strategy (RMS) is a Bureau of Land Management (BLM) policy intended to offset residual impacts of oil development on communities of the North Slope, including socio-cultural impacts to Inupiat subsistence uses. It introduced a new instrument of compensation for damage from oil production for indigenous communities.

In 2014, with the fall of oil prices and the decreasing amount of money flow to the communities of the North Slope, the head of BLM and ConocoPhillips negotiated an $8 million contribution to the RMS compensatory fund. The RMS implementation plan stated that, of this money, one million was for BLM policy development processes, and the rest was for distributing to affected communities as a result of mitigation.

In 2015–2016, BLM developed the RMS in consultation with representatives from the oil industry, such as ConocoPhillips, federal and state governments, Alaska indigenous groups, North Slope communities, environmental NGOs, the NPR-A Working Group, and other interested stakeholders. After three workshops involving interested and affected stakeholders and multiple rounds of comments, the BLM issued the Draft NPR-A mitigation strategy, which explains compensation mechanisms and technicalities for impacts from the ConocoPhillips' GMT1 project. Assumedly, the mitigation strategy will compensate for all forthcoming oil and gas developments in the Northeast NPR-A. Seven million dollars from ConocoPhillips, however, was earmarked for the infrastructural needs of Nuiqsut, which is the most affected village on the North Slope. A trilateral group formed in Nuiqsut involving the Kuukpick corporation, the city and the tribe. The group decided to purchase gravel and build an access road to Colver River, allocate funding for kids' daycare, and hire an architect for designing the new Cultural Centre. ConocoPhillips paid half of the sum in 2017 and the other half in 2018 [75].

5. Results

Oil production contributes to indigenous communities in Alaska in multiple and intricate ways, and the benefit-sharing regime is complex [21] Benefit-sharing agreements must be fair, equitable regarding procedure and distribution, and just in the eyes of the actors involved. These characteristics are not only achieved by providing damage compensations to the communities [46–48]. At the individual level, residents complement their income from the subsistence economy with potential employment wages, Alaska permanent fund dividends, and dividends from native corporations. At the collective level, tax and royalty payments are essential for developing community infrastructure, while sponsorship from oil companies contributes to education. In the next sections, we will illustrate how modes, principles and mechanisms of benefit-sharing co-exist on the Alaska North Slope, and how they collectively perform in terms of procedural and distributive equity depending on the actor that delivers benefits (see Table 1)

Table 1. Actors, modes, principles, mechanisms and equity in benefit-sharing.

Actor	Mode	Principle	Mechanism	Participatory Equity	Distributive Equity
BLM (Arctic Slope Mitigation Strategy)	Paternalism (top–down)	Compensatory	Negotiated	Many consultations, both in the region and outside the region. Low (for Indigenous Peoples); Native orporation negotiated in behalf of communities	High (the most affected village received compensatory money)
NSB	Paternalism	Investment	Mandated semi-formal (ask and get)	Low	High (except large construction projects).
State of Alaska	Paternalism	Compensatory Investment	Mandated for distributing to affected communities (channeled from the federal level to the state and back to the community); grants-competitive.	Low	To all households (young people not satisfied); relatively high.
ASRC	Shareholder	Investment	Mandated	Low Decisions made by the board and shareholder's votes	High (distribute to "afterborns")
Native village corporations	Shareholder	Investment	Mandated	Low Decisions made by the board and shareholder's votes	Low Do not share with "afterborns"
Transnational Corporations	CCSR, Partnership Contribute to shareholder (contracts with native corporations)	Investment Charity Compensatory	Mandated (taxes and royalties to the federal and state levels); negotiated (royalties to native corporations); compensatory money (RMS); semi-formal (sponsorship, "ask and get").	Kuukpik subsistence advisory panel-high; with native corporation-high; with communities (relatively high)	High

Federal and local governments, energy companies, and indigenous organizations may disagree on how much and what kind of resources communities need and how resources should transfer to the communities. They may also disagree on how to measure the effects of resource development. Thus, benefit-sharing arrangements bring equity issues [76]. We separately analyze the level of local residents' participation in decision-making regarding oil production and benefit-sharing, while also maintaining a focus on the changes in the distribution of material oil wealth that informants perceive.

5.1. Paternalistic Mode

5.1.1. The North Slope Borough

The paternalistic mode often involved mandated benefits, especially from the state agencies, which jeopardizes procedural equity, although distributive equity may be sufficient [77]. In Alaska, scholars perceive paternalism in relationships between governments and Indigenous Peoples as rooted in colonialism [78]. Despite tribes being federally recognized as self-determination entities that have "government to government" relationship with both federal and state agencies, in practice, they experience patronage, coming from the state, which only pretends to acknowledge self-determination by natives [79]. A vice-chair of Gwich'in Council describes the process as "the federal government consults the tribal people to some degree, but I would not say it's a consent driven process. A lot of times, consultation means "we will hear you, but not necessarily listen to you, and not necessarily incorporate your desires" [80].

As it was described earlier, benefits for communities are allocated through the state of Alaska and the North Slope Borough (NSB), both of which receive taxes from oil infrastructure. These benefits are delivered in a paternalistic way and belong mostly to the investment principle of benefit-sharing. The NSB subsidizes hospitals and police, builds houses, operates fire stations and helicopters, and funds schools. For example, in 2019, assessed properties of the NSB constituted $21.8 billion, from which oil and gas taxable properties constitute $20.3 billion [81]. The NSB continues to be a major employer, health care, and infrastructure provider. For example, in 2019, NSB collected in tax approximately $379 million, coming mostly from oil property tax and spent $77.8 million for eight villages infrastructure, airports, landfills, community facilities, natural gas infrastructure, road maintenance and equipment, for wages around $80.3 million, for education around $49 million and for wildlife management $5.7 million, for Inupiat heritage, language and culture 5.5 million. Overall public works constituted approximately 82 million [81]. This represents a big sum of money taking into account that overall population in NSB is only 20,953; around 10,420 of the population are village residents, of which 4000 are Inupiat, and another 10,533 are oil workers [82]. Therefore, one can acknowledge that there is a significant amount of money that can be distributed to communities.

All the interviewed citizens in the villages acknowledge that the NSB formation and its institutional set up was extremely important for the wellbeing of the Inupiat people. However, they feel that they do not get enough. The North Slope Borough, despite being run by natives, in the view of natives, does not distribute the oil tax money according to the villagers' needs [83,84]. However, villagers can ask and complain about the decisions, on large construction projects, the capital investment programs that the NSB assembly and various powerful actors made. Money is supposed to be distributed to eight NSB villages according to their needs and requests. However, citizens feel that Utqiagvik accumulates most of the resources, while villages receive much less, decisions are made top–down, mostly by ruling elites [85]. NSB is involved in large construction projects, however, little money is designated in the budget for repairing existing infrastructure, which is decaying [86]. As we can see, this creates a situation when residents express high and often unrealistic expectations of the NSB authorities. Villagers perceive benefits as misdirected and limited. NSB holds public meetings in the villages, but residents feel that their voices are often not heard. Therefore, in mandated arrangements, partly due to paternalism and according to perceptions of remote villagers, there are pitfalls in both procedural and distributional equities, despite significantly allocated money.

5.1.2. Bureau of Land Management (BLM)

Another example of the paternalistic mode of benefit-sharing is BLM policy. As it was explained above, BLM with ConocoPhillips negotiated the Regional Mitigation Strategy in 2015 as a compensation for adverse impacts of oil and gas extraction at the newly opened GMT-1 and 8 mln dollars were allocated [87]. This strategy was supposed to become a new policy tool using the compensatory principle as a template for further agreements for new extractive projects in the Reserve [88]. After negotiations concluded, it would become a mandated mechanism in case the Trump administration did not freeze its implementation. As we will explain later, RMS was set up as a participatory, however the paternalistic mode.

BLM organized multiple consultations, held both outside and within the region, and invited a variety of stakeholders. This approach indicates that the process was highly participatory. However, our informants felt that the design of the process was top–down and authoritarian. BLM took 1 million dollars to organize the RMS process, Nuiqsut citizens felt that this was wrong; in their opinion, all money needed to go to the most affected communities. They felt that BLM spent money on studies to measure impacts that will attract more planes and helicopters with scientists, which will scare caribou and effect indigenous hunting [89]. The representative of ASRC argued that the BLM had a predetermined agenda; during the consultation processes, they reinterpreted local voices towards their own interests and agendas [90]. The fact that BLM invited many environmental NGOs to the RMS workshop upset the representative and highlighted this as a pitfall in procedural equity. He argued that NGO representatives were all over during breakout sessions and disturbed the local decision-making process by diluting local voices: "[T]his was one sided deal, I was frustrated, our voices were diluted . . . " [90] ASRC was intended to file a lawsuit against the government in case the consultation period was not extended and time given to indigenous organizations to comment on the proposed policy. The representative of ConocoPhillips also criticized the process, arguing that locally formed NPR-A working groups could develop the RMS mitigation strategy and that outside stakeholders were not helpful for the overall process [91]. ASRC representatives felt that the RMS process brings division to indigenous governance organizations instead of facilitating unity [90]. Local people felt that BLM hired a consultant that could not understand the natives, was speaking to them with "western" language and was trying to force natives to put a monetary value on their subsistence [92].

During the RMS process, tensions emerge between the city administrations, tribal governments, village and native corporations around the distribution of funds, as these three entities have different interests. Tribal governments do not benefit from oil extraction directly and tend to be more environmentally oriented. They argued that it is impossible to evaluate the damage to native subsistence and culture. They were not in favor of future oil development despite compensatory money. The city government was neutral, while regional and village native corporations were pro responsible development of oil and gas resources: "We need to maximize benefits and participation. New development is not new for us... we know how to proceed." [90]

When the new federal administration froze an RMS mitigation strategy, native stakeholders reassessed its value. Several tribal members in Nuiqsut felt that the RMS is necessary as there should be more mitigation money because the irreversible impacts of oil development are high. On the contrary, a representative of ASRC argued that local people need opportunities, hard work, and jobs that would overcome dependence on governmental welfare, all of which RMS would promote. Therefore, he was satisfied with freezing the RMS strategy, hoping that paternalism between governments and natives is possible to overcome.

In terms of distributive equity as a result of GMT-1 compensatory money, as much as seven million dollars went to the community of Nuiqsut, which was the community most affected by development. The people agreed upon how the money would be spent.

5.2. The shareholder Mode

This shareholder mode comes from legislation and therefore, is mandated and appears to be the most dominating mode in Alaska. An example of this mode is exercised by the state through the Permanent Dividend Fund and by private regional and village native corporations. Through the permanent fund, the distributive equity is high as every Alaska citizen, including native and non-native people, receives the same amount of money that can be spent or invested in education, for example. Participatory equity is also high as there is a wide public debate about closing and/or suspending distribution of funds as a reaction to low oil prices.

ANCSA legislation determines the shareholder mode and the consequences for its equity are very complex. ANCSA was designed as a corporate mode for natives, and as a strategy for assimilation, and opportunity for development.

The Indigenous Peoples of the North Slope are simultaneously shareholders of native corporations and affected stakeholders. Native corporations not only contribute to their shareholders with dividends, yet in their stakeholder strategy, use the investment principle. They build community infrastructure, invest in education and create jobs. Community benefits from investments, while individuals benefit from dividends. Individuals, in turn, can use dividends for spending or personal investment. Almost all of Indigenous Peoples of the North Slope of Alaska are shareholders of the for-profit ARSC, which distributes 30% of its net income and hold shares of one of the village corporations to them. Thus, they receive dividends from both. The ASRC contracts resulted in compensation for extractive activities, which village corporations received through agreements about surface use. This money was also partly distributed to shareholders.

ASRC, along with the village corporations overseeing the mineral-rich lands, controls the development of resources, as it owns mineral-rich lands that it leases to oil companies. As a result, the corporation provides jobs to its members: In 2014, $44.1 million went to shareholders as wages. The corporation issued the first dividends for ASRC members in 1978, which amounted to $185,000. Since that time, this number has dramatically grown: In 1991, the total amount of dividends was above $1.5 million, and by 2008, this number exceeded $65 million. As of 2017, the amount of dividend paid to all shareholders exceeded 1 billion. In 2018, shareholders with 100 shares received $7000 in dividends [93].

Under ANCSA native corporations became strong indigenous institutions [69,94]; however, the shareholder mode has its limitations in terms of distributive equity [95]. The main ANCSA shortcoming is the distribution of shares to younger generations; therefore, it is called a “divide and conquer” arrangement. “Afterborns” receive fewer rights from some native corporations, however, other corporations only give dividends to those born before 1971 or those who received shares as inheritance or a gift. Tensions in indigenous families occur and continue between those who are born before and after 1971, around communities as well as within families.

ASRC represents a positive example with high distributive equity acknowledging the need to share with “áfterborns.” It became a large and successful for-Profit Corporation that has multiple contracts with oil companies. “*ASRC is involved almost in any aspect of oil industry, we own two refineries in Alaska, we do contracting around the US in oil field services, we partner with ConocoPhillips and have good relationships with them.... we had contracts with Shell when they were drilling.*” [90]. In addition to operating on the North Slope, ASRC has businesses outside of Alaska, which contribute to the larger amount of dividends. ASRC shared more than $1 billion with other regions of Alaska, due to ANCSA 7i requirement to share 70% of resource revenue from (oil, gas, and minerals) [90]. This contributed to equitability between corporations that own resource-rich land and those who own resource-poor land. In this way, all Alaska Natives on the North Slope of Alaska benefit from ASRC oil revenue.

All our informants in Utqiagvik, Nuiqsut, and Kaktovik indicate that dividends from ASRC constitute a significant amount to their budget, helping to pay for gasoline, weapons and other equipment that they need for their subsistence hunting and fishing activities. ASRC dividends are especially helpful in cases when families have many children, as ASRC adopted the policy of sharing with "afterborns," several generations of residents born after 1971 receive shares. The number of shareholders has grown from 3000 in 1972 to 13,000 in 2018, and to avoid dilution of shares the corporation makes every effort to grow faster than the population grows. Distributing thirty percent of its net income and reinvesting sixty percent. However, managers acknowledge that there is a continuing tension within corporations between the distribution of shares and investment. Some community members question the equality of money distributed, versus spent on operations, as salaries of top managers in ASRC are high, accounting $1.5 million a year [96]. Other informants acknowledge the importance of good company management and feel that salaries are well deserved.

In terms of participatory equity, indigenous shareholders express concerns. Some informants argued that the board decided all about ASRC operation. Other shareholders feel that ASRC and the NSB elites collectively make decisions on spending and investments, and ordinary shareholders are informed, but do not participate much in the decision-making processes.

Village corporations have similar pitfalls in participatory equity and sharp pitfalls in distributive equity, which causes tensions within both communities and particular families. In investigated cases, Kuukpik Corporation in Nuiqsut turned out to be much more economically powerful than village corporations in Utqiagvik and Kaktovick. In all three villages, "afterborn" informants raise issues of distributive intra-generational inequality as shareholders of all three village corporations voted for distributing dividends only to those born before 1971 [97–99]. It is not possible for "afterborns" to assist in village corporations. The tensions in communities were sharper in Nuiqsut, where a Kuukpik corporation distributes a significant amount of money to its shareholders. Tensions appear within families in Nuiqsut: "*My grandmother is a manipulator, she said I will not inherit shares because I smoke marijuana and help to little with chorus at home.*" [100] "*My older brother and his wife are Kuupick shareholders, I do not know exactly how much they get, but I guess, in average, $50,000 per year. I am only one year younger, my wife and I have three children, and we get nothing*" [101]. In Utqiagvik and Kaktovik, young Inupiat also raises the issue of intra-generational distributional equity, but tensions between those born before 1971 and "afterborns" are much less sharp as village corporations are less profitable then Kuukpik, and distributed sums are not so significant for the household budget. With the decision of village corporations on denying shares to "afterborns", the number of non-shareholder population in rural communities grows, contributing to intra-generational inequalities.

Although, there is no doubt that the ANCSA law, with its shareholder mode, contributed significantly to the wellbeing of Alaskan natives, by investing in community infrastructure and wellbeing, and by broadening opportunities for the development of Indigenous Peoples, providing jobs and educational opportunities, the distributive equity varies from high (ASRC) to low (village corporations), and communities perceive participatory equity as relatively low.

5.3. Mixed-Mode: Transnational Oil Companies

Transnational oil and gas companies have similar stakeholder strategies and explore diverse modes of benefit-sharing. They are meandering between CCSR, partnerships, and contributing to the shareholder mode (see Figure 6).

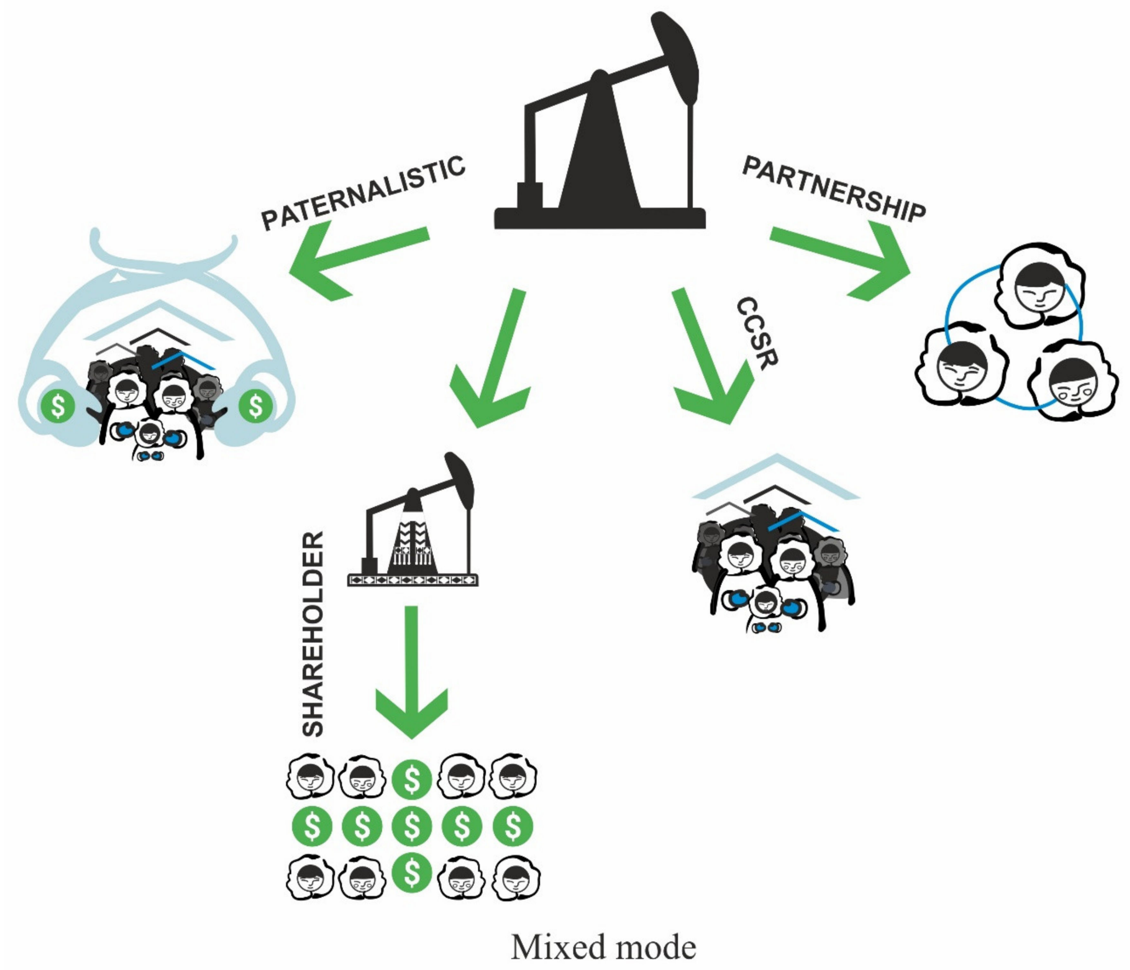

Figure 6. Mixed Mode of Benefit Sharing.

Elements of paternalism also take place. Mandated benefit mechanisms dominate, as companies pay taxes to all federal levels, the state of Alaska, and the NSB levels. They pay royalties when they use state or private land. Such as on all government levels and native corporations. Governments, in turn, deliver benefits in a paternalistic way. Royalty payments depend on ownership of the surface and subsurface land, which determines royalty rights to the resources. Companies may pay royalties to the federal government, the state, ASRC, or a village corporation. Royalties may be channeled to the local communities differently by different actors, in the form of grants, equity shares and/or direct payments.

Companies pay royalties to the federal government for using the federal land at the Arctic National Petroleum Reserve (NPR-A). Fifty percent of this money is returned to the state and distributed to communities of the North Slope in the form of annual grants to municipalities for social, cultural services (city of Utqiagvik, city of Nuiqsut, etc.). For many years, Utqiagvik was receiving more grants than Nuiqsut despite Nuiqsut being more affected by oil developments. This happened because the population is larger in Utqiagvik and the city has a better managerial capacity. However, in 2017, the fact that Nuiqsut is the most affected community was acknowledged, and 1.7 million dollars grant awarded to the city of Nuiqsut.

Royalties that companies pay to the state and to the federal governments are mandated, and the amount is determined, while royalties to native corporations are negotiated and fixed at the agreements. Thirty percent of royalties that ASRC receives from companies go to their own shareholders, and as it was mentioned above, seventy percent has to be shared with other regional corporations. When village corporations receive royalties, the village corporation distributes it only to its own shareholders. In such a way, the royaties companies may contribute to the shareholder type of benefit-sharing as they are channeled via native corporations toward indigenous shareholders. As it was mentioned above, contracts between transnational oil companies and native corporations also contribute to the shareholder type of benefit-sharing. Native corporations negotiate contracts and benefits coming to community organizations.

Companies use investment, charity and compensatory principles in benefit-sharing. ConocoPhillips and ExxonMobil make use of CCSR and partnership modes with elements of paternalism towards Indigenous Peoples as they represent a group of affected stakeholders. CCSR manifests itself when both companies try to gain SLO, assessing possible risks and avoid conflicts. Both ConocoPhillips and ExxonMobil support Utqiagvik and villages on the North Slope, and both companies contribute mostly to the places that are close to their operations, e.g., ConocoPhillips to Nuiqksut, ExxonMobil to Kaktovik. By being good neighbor companies, on the one hand, they demonstrate respect for Indigenous Peoples' rights, and on the other hand, run their own business more smoothly.

Both ConocoPhillips and ExxonMobil avoid the "bricks and mortar" approach to benefit-sharing, such as when the company builds infrastructure in communities. Instead, they explore strategic community investments in health, education, and community initiatives. By engaging youth, ConocoPhillips, for example, tries to develop a long-term workforce. ConocoPhillips also support schools on the North Slope, STEM education summer camps for high school students, health care training (for example Nuiqsut Health Fair), Career quest in Nuiqsut Trapper school, and food banks. ExxonMobil also annually supports the school, its activities, and equipment.

Both ConocoPhillips and ExxonMobil engage in charitable contributions, and they support NGOs statewide in the form of grants. For example, in 2014, ConocoPhillips contributed $6 million to 400 NGOs. Through grants, companies support health and safety, the environment, and the arts. Companies work not only with affected stakeholders, but also with interested stakeholders. Contributions to indigenous organizations, as well as environmental NGOs are strategic for companies. For example, Polar Bear International and the Center for Biological Diversity facilitated ExxonMobil's permitting process and compliance with NEPA regulations during Point Thompson construction. NGOs helped to reroute ExxonMobil's ice road to avoid disturbance of polar bears and their cubs [102].

Companies are committed to strategic investments, focusing on economic development, along with maintaining a subsistence lifestyle, involving cultural heritage programs in indigenous communities situated close to their operations. For example, Shell, when still present in Alaska, contributed $10,000 for traditional ice cellars for whaling captains and ExxonMobil co-sponsored the project [102,103]. ExxonMobil is involved with the Eskimo Whaling Commission and hires locals for subsistence monitoring during its offshore operations. ExxonMobil established communication centers staffed by local Inupiat operators to assist hunters and to coordinate its own industrial operations for sharing whale-hunting waters [102].

ExxonMobil introduced a win-win strategy for cultural resource management in Kaktovik. As a result of mitigation with community, ExxonMobil brought back artifacts to Alaska from the Canadian Museum of History that was excavated in Kaktovik in 1914. Kaktovik residents reconnected with their Inupiat cultural heritage, and ExxonMobil fulfilled cultural resource management requirements for Point Thompson oil and gas project and managed to avoid costly assessments of Point Thompson impacts [104].

In Alaska, a significant flow of benefit-sharing is channeled via contracts of transnational companies with native corporations. Therefore, by implementing their stakeholder strategies, transnational companies are simultaneously contributing to native corporations' shareholders, therefore, making Indigenous Peoples final beneficiaries. Keeping native corporations strong is one of the missions of oil companies that are eager to be good neighbors. For example, thirty to forty percent of all goods and services for ConocoPhillips Alaska operations are supplied by native corporations, mostly ASRC and Kuukpik, other regional native corporations, such as NANA and Doyan are also involved. Part of native corporations' profits gets distributed as dividends to the indigenous shareholders on the North Slope and beyond. For instance, ASRC shareholders (from the North Slope communities) received money from Point Thompson project, ConocoPhillips, and other global projects. NANA and Doyan are distributing dividends to other parts of Alaska, spreading oil money beyond the oil region.

In addition to the CCSR mode of benefit-sharing, companies explore partnerships, which they build with native corporations, or with municipal governments. The most remarkable was the partnership between Shell and the Arctic Inupiat Offshore (AIO). The AIO was formed by ASRC and six North Slope village corporations which bought the overriding royalty interest in Shell licenses, meaning that both benefits and risks will be shared when drilling starts between Shell and AIO. When Shell left, AIO continued to operate, hoping to build similar relationships with other oil companies. ExxonMobil and Kaktovik Inupiat Corporation built another partnership. ExxonMobil established the Kaktovik Community Foundation to support community needs, long term infrastructure programs and scholarships to Inupiat youth.

To ensure Indigenous Peoples' food security and traditional subsistence hunting, research partnerships come into play. Shell made significant contributions to the research of subsistence resources on Alaska North Slope by setting a scientific program in partnership with the NSB, scientists from Shell, scientists from Alaskan Universities, Indigenous Peoples were participating. At least one person from each village was providing indigenous knowledge on whaling, seals and fisheries. Shell was supervising the program, ensured data integrity, and monitored publications. Shell has spent more money on research on subsistence resources of the North Slope that the federal government [103].

ConocoPhillips set up operation funds for Kuukpik Subsistence Oversight Panel, which includes members of the city, the tribe, and Kuukpik corporation, which is designed to prevent oil development impacts on subsistence. Natives participate in wildlife monitoring together with scientists employed by the company; their indigenous knowledge was used in Subsistence Mapping Project and Inuit Circumpolar Council Alaskas' Food Security project [91].

Semi-formal benefit-sharing arrangements are also part of the mix, and there is a significant amount of trickle-down benefits that are coming to communities. When community representatives face urgent needs, semi-formal arrangements come into play. For example, if there is not enough money for a boat trip or a camp for kids, they phone the company to ask for support. Nuiqsut residents frequently apply to ConocoPhillips for immediate support [91]. One of the examples of trickle-down benefits along with building roads and creating jobs is that "*Point Thomson project keeps their doors open*" [102]. People traveling through on snowmobiles can have a rest stop there and sleep for free.

Our research demonstrates that distributive equity in benefit-sharing arrangements between companies and indigenous communities is high. The most affected communities receive the most. Companies use different modes of benefit-sharing that assume different mechanisms of delivery of benefits. This expands the number of channels through which money flows to the communities that can be used by residents for different purposes. However, citizens of affected villages complain about the amount of money that is delivered, taking into account that costs of oil extraction for them are high. Representatives of tribal governments of Nuiqsut think that mitigation money is not enough, as impacts of oil extraction are high, people need to travel further for hunting as caribou pastures are currently at a big distance from the village. People complain about the respiratory diseases that are widely spread in Nuiqsut community. They think that oil pollution causes these diseases. Residents are interested in precautionary measures in case of an accident on one of ConocoPhillips facilities, and they demand an evacuation plan.

Representatives of both tribal government and native corporations in Kaktovik are upset that they are getting less money and support as there is no oil development in ANWAR. They find that contributions from ExxonMobil are too small and not frequent enough [105].

According to our findings, companies make a significant effort to ensure a high level of participatory equity. Both ConocoPhillips and ExxonMobil constantly do consultations with local communities and organize public meetings; they have grievance mechanisms established and community liaison people on staff. However, the interaction between companies and communities can be characterized as top–down participatory paternalism; citizens are asking for certain goods and services, and the companies are responding to requests. Partnerships take place, as well. One specific organizational arrangement, such as the Kuukpik Subsistence Oversight Panel established with ConocoPhillips in Nuiqsut, is a good example of a partnership in which Indigenous Peoples had a strong voice in protecting their subsistence resources. Another example of a partnership arrangement is the Point Thompson working group in Kaktovik, which Exxon Mobil established during the construction period, involved different stakeholders, including company representatives, board members of Kaktovik Inupiat Corporation, and leaders of the Native Village of Kaktovik [105]. In this arrangement, participatory equity, delivered via the partnership mode, was high.

6. Discussion and Conclusions

The Alaska North Slope benefit-sharing regime is constituted by principles, involving investment, compensation, and charity [21]. Different actors implement these principles in practice. For example, the North Slope Borough and native corporations are heavily involved in the investment. The RMS involves fully compensatory money. Oil companies are involved both in investments and charitable contributions. In Alaska, all paternalistic, CCSR, and partnership modes are observed, in which the shareholder mode is dominant and unique.

Mechanisms of benefit-sharing arrangements depend on land ownership (royalty payments), existing legal, institutional, and cultural environments, as well as on the company that operates in the area, such as transnational corporations, native regional or native village corporations.

Legislation, contracts and/or regulation requires mandated mechanisms. Under the paternalistic mode, they involve the distribution of taxes that companies pay to the NSB and royalties paid to the state. Under the CCSR mode, they are represented by community investment funds and foundations, in our case, on the North Slope Foundation, created by native corporations that serve for channeling money from oil companies. In a partnership mode by fixed contracts between transnational oil companies and native corporations, these contractual relationships simultaneously contribute to the shareholder mode as money earned via contracts is distributed to shareholders. In the shareholder mode, ANCSA legislation requires mandated sharing.

Negotiated benefits represent a large group which can be different under different modes. For example, benefit-sharing arrangements that were negotiated as part of the regional mitigation strategy, belong to the paternalistic mode, but were highly participatory, yet organized in a top–down way. Under the CCSR mode, negotiated benefits are limited to company policies and royalties paid in the framework of land use agreements. Therefore, both participatory and distributed equity are limited. Under the partnership mode, benefit-sharing arrangements involve co-management and coordination between industrial activities and subsistence or cultural activities, which includes the flexibility of industrial activities depending on wildlife migrations or events important for indigenous hunting. In case the company employs Indigenous Peoples, their work schedules can be flexible to accommodate their subsistence hunting activities.

Semi-formal benefits involve different kinds of goods and services that communities get upon request from the NSB, transnational oil companies, or native corporations. We call this an "ask and get" system. Sponsorship that the local community requests also belongs to this category. Trickle-down benefits involve those coming from industrial development as such, including employment, infrastructure the company builds for its own operation and used by communities, increased cash flow, local economic growth, and income growth.

Principles, modes, and mechanisms together provide a systematic framework for analyzing benefit-sharing regime in Alaska [21]. To understand how and to what extent benefit-sharing arrangements are equitable in terms of participatory and distributive equity, we looked at principles, modes, and mechanisms of delivery of monetary and non-monetary support by particular actors (see Table 1).

All state actors, BLM, the state of Alaska, and the NSB (partners with ASRC) engage in paternalistic relationships with local communities, which is not in line with the new public management mode, which calls for abandoning the top–down approach to service delivery [61]. Participatory equity is low under the paternalistic mode, despite distributive equity being high as communities justly receive large sums of money. As a result, communities became totally dependent on oil money, and created and maintained a specific category of paternalism—oil paternalism.

Native corporations are engaged in both stakeholder and shareholder relationship with Indigenous Peoples. The stakeholder relationship involves CSR, while shareholder relationship uses mandated mechanism of delivery of shares determined by ANCSA. In this way, native corporations' practice dual investment, yet to the same target group, to Indigenous Peoples [33]. Despite investment inequalities that are apparent and originate from the ANCSA design as only those born before 1971 receive shares according to the law requires. Native corporations were responsible for decisions related to shares for "afterborns". This influenced distributive equity. High distributive equity can characterize the ASRC shares with "afterborns", while distributive equity of village corporations remains to be low, creating intergenerational inequalities. Shareholders of village corporations themselves became responsible for inequities toward "afterborns." Due to this fact, in villages of the North Slope, a significant population of natives has grown, who are not shareholders. This creates sharp inequalities. Nuiqsut natives became shareholders of wealthy Kuukpik corporation as Kuukpik is involved in the oil business, yet other villages have less successful native corporations. This created another set of inequalities between villages on the North Slope. Native corporations operate like other corporations in the US, and do not allow much participation by shareholders. Therefore, participatory equity is also low.

Transnational oil companies implementing their stakeholder strategy engage with communities using a mixed-mode of benefit-sharing. CCSR is dominant; however, oil companies' partner with native corporations and create partnerships in co-management of subsistence natural resources. Contracting services with oil companies belonging to native corporations contribute to the shareholder mode as they share revenue from their contractors. With communities at large, relationships are mostly paternalistic. Participatory equity is high in relationships between oil companies and native corporations and relatively low with communities at large. The distributive equity seems to be high because although communities receive a significant amount of funds, they are not satisfied and would like more financial support.

Our research shows that powerful actors predominantly make decisions on the distribution of benefits. The NSB decides on large construction projects on the North Slope with ASRC under closed doors. Transnational oil companies and native corporations negotiate Land use agreements and contracts. Representatives of native corporations are negotiating on behalf of all Inupiat people, securing subsistence hunting and preservation of cultures.

Native corporations have a strong voice in negotiations, while native villages (tribes) have political power. Tribes have a government to government consultations with BLM regarding oil development. However, despite political power that was granted to them, they remain to be fragile actors in negotiations. Tribes and cities are always invited to multiple consultations and meetings, such as workshops on the Arctic Slope mitigation strategy, subsistence advisory panels, community meetings with companies. At these forums, tribe and city representatives express their grievances, express their needs, and ask for monetary and non-monetary support. However, major decisions and negotiations are happening between more resourceful business actors, while more fragile actors are in the position of the needed. This has an impact on the SLO.

The NSB and native corporations easily give the SLO to transnational oil companies, while tribes mostly resist development. This happens because, in Alaska, there are multi-layer governing institutions that have different attitudes toward oil extraction that hardly reach consensus in decisions on benefit-sharing arrangements. Native corporations became part and parcel of Alaska corporate world, welcoming further development both on-shore and offshore and acknowledging that oil extraction can go hand in hand with traditional subsistence hunting and maintenance of Inupiat cultures.

Tribal governments are facing contradictions of the market economy introduced by oil development with the values of Indigenous Peoples, their subsistence lifestyle, food sharing traditions, and communal economy. Their stakes and attitudes toward oil expansion and benefits coming from oil differ from those of native corporations. City governments maintain a more neutral position.

This influences the dynamics around the SLO, which is mythical in Alaska as communities cannot stop development on licenses that are purchased by companies. The SLO assumes approval of development by wider society, but societies in Alaska are divided. SLO has strong normative dimensions, and therefore, differences in attitudes toward development of native corporations and tribes are apparent.

Native corporations, both regional and village easily approve the SLO to any new projects as they are involved in partnerships and contractual relationships with transnational oil companies. Alaska Natives are shareholders of native corporations, so they approve the business of native corporations, giving them the SLO. However, tribes do not welcome new oil development on licenses bought by the transnational companies despite the significant money flow, coming from oil and multiple benefits that they receive.

We previously discussed our research findings of benefit-sharing and its multiple advantages and disadvantages and its capacity for advancement, but we have not found a perfect standard of a benefit-sharing regime in Alaska. The North Slope of Alaska has evaded the resource curse [8]. However, the area did not accomplish sustainable development in general. The North Slope Borough did not achieve economic, social, and environmental arrangements altogether. Sustainable development on the North Slope includes ensuring the wellbeing and subsistence of the local indigenous populations and the ecosystems in the area [106]. The goal of benefit-sharing is to protect the environment and human health and prosperity as much as possible and provide financial compensation for the degradation of the land or ecological systems in the area. Benefit-sharing, which supports the sustainability of a community, is an instrument that assures economic, environmental, and social sustainability, if designed properly [106].

In future research, academics may benefit from indigenous knowledge to identify how to convert current benefit-sharing into benefit co-management in the future [21]. The current form of benefit-sharing is an informal system in which a company acknowledges the Indigenous populations' right to compensation and assistance. It can also be formal compliance with legislation and permitting requirements. This is in contrast to benefit co-management, in which communities receive benefits that fit their exact needs for the wellbeing and health of the community members and ecosystems. In addition, in benefit co-management, communities themselves take a role in devising the use of the benefits the companies give, which the name of the system itself suggests [107]. In future research, there will be a need to investigate a process to establish an effective benefit co-management scheme to ensure the sustainable co-existence of oil companies and Indigenous Peoples [21].

Our paper has demonstrated that benefit-sharing arrangements in Alaska have pitfalls in terms of both participatory and distributive equity. However, the lessons learned, especially from the stakeholder strategies of transnational corporations towards Indigenous Peoples and the shareholder mode of benefit-sharing, introduced by ANCSA law and implemented by native corporations, are important for the Arctic. In future research, it would be important to do a comparative analysis of benefit-sharing arrangements between extractive industries and local/indigenous communities in all Arctic countries. On the basis of this analysis, it would be possible to identify best practices of benefit-sharing and to reconstruct the ideal types of benefit-sharing practices that would be possible to adjust to diverse political, institutional and environmental contexts of the Arctic Countries. Researchers and indigenous permanent participants to the Arctic Council can work together in developing new guidelines for companies that will enter the Arctic, due to increased opportunity for shipping through the North Passage. Findings may be used by the Sustainable Development Group of the Arctic Council and by the Arctic Business Council.

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Appendix A

Table A1. List of interviews.

Date	Place	Category	Interviews	Number
14.10.2015	Anchorage	Indigenous	President of the Alaska Federation of Natives Alaska Area Vise President, National Congress of American Indians	1
14.10.2015	Anchorage	Government	Commissioner, Alaska Department of Revenue	1
16.10.2015	Anchorage	Company	Community investment advisor for Exxon Mobil in Alaska	1
14.10.2015	Anchorage	Indigenous tribe	President, Tanana Chiefs Conference	1
14.10.2015	Anchorage	Indigenous tribe	Tribal Member, Gulkana village Council	1
14.10.2015	Anchorage	Federally Recognized Regional Tribal government	Vice president Inupiat Community of the Arctic Slope	1
17.10.2015	Anchorage	Federal government	Sr. Advisor, Communication Strategy and Engagement Chair Sustainable Development Working Group	1
17.10.2017	Anchorage	Company	ConocoPhillips, community outreach and public relations office	1
16.10.2015	Anchorage	Company	BP, Director of Community Affairs	1
16.10.2015	Anchorage	Company	Community investment advisor for ExxonMobil in Alaska	1
24.09.2015	Fairbanks	Company	Statoil Alaska Regulatory Compliance Manager	1
25.09.2015	Fairbanks	Native corporation	CEO of Doyon Limited	1
25.09.2015 28.09.2015	Fairbanks	Permanent participant to the Arctic Council	Aleut International Association	2
28.09.2015	Fairbanks	Indigenous leader, native corporation	President, Tanana Chiefs Conference, ASRC	1
29.09.2015	Fairbanks	Oil company	Wildlife and Community Relations Supervisor, ExxonMobil	1
28.09.2015 29.09.2015	Fairbanks	Oil company	ExxonMobil Point Towson Project Community Relations Lead	2
29.09.2015	Fairbanks	Oil company	Exxon Mobil Corporation Public and Government Affairs, Community Relations Advisor	1
29.09.2015	Fairbanks	Oil company	Exxon Mobil Development Company SSH@E Manager, Point Towson	1
29.09.2015 30.09.2015	Fairbanks	Oil company	ExxonMobil Huston Office	2
30.09.2015	Fairbanks	UAF, indigenous expert	Vice Chancellor for indigenous studies, University of Alaska, Fairbanks, Guchi Council International, Arctic Council observer	1
04.06.2016	Utqiagvik	NSB	North Slope Borough/Community Health Aide Program, Department of Health and Social Services	1
04.06.2016	Utqiagvik	Indigenous leader	Vice President of the Inupiat Community of the Arctic Slope, former Mayor of the North Slope Borough, running for the Mayor in 2016	1
04.06.2016 05.06.2016	Anchorage, interview took place in Utqiagvik	Government	Chief Economist, state of Alaska	2
03.06.2016	Utqiagvik	Tribe	Tribal operations Native village of Utqiagvik	2
23.06.2016	Utqiagvik	Government	Local BLM representative	1
03.06.2016	Utqiagvik	NSB	North Slope Borough Planning Department, member of SAP panel	1
30.05.2016	Utqiagvik	Government	Administrative Manager of whaling commission	1
30.05.2016	Utqiagvik	Government	Alaska Eskimo Whaling Commission Executive Director	1
06.06.2016	Utqiagvik	Native corporation	Arctic Slope Regional Corporation, shareholder community program	1
20.06.2016	Utqiagvik	Tribe	Inupiat Community of the Arctic Slope (ICAS-acting director)	1
20.06.2016	Utqiagvik	Tribe	Inupiat Community of the Arctic Slope Natural Resource Director	1
20.06.2016	Utqiagvik	Tribe	Native Village of Utqiagvik Executive director	1
20.06.2016	Utqiagvik	Indigenous resident	whaler	1

Table A1. *Cont.*

Date	Place	Category	Interviews	Number
17.06.2016	Utqiagvik	Native corporation	Wainwright Village Operations Financial director	1
21.06.2016	Utqiagvik	Local resident	Pilot, living in Utqiagvik for the whole life	1
21.06.2016	Utqiagvik	Local resident	Former NSB employee, now teaching in UAF	1
21.06.2016	Utqiagvik	NSB	NSB Department of Natural Resources	1
21.06.2016	Nuiqsut, the interview took place in Utqiagvik	Local resident	Teacher in Nuiqsut	1
22.06.2016	Utqiagvik	Local resident	Engineer at the water treatment plant	1
22.06.2016	Anchorage, interview took place in Utqiagvik	Native corporation	UIC native corporation	1
22.06.2016	Utqiagvik	Indigenous	Elders	2
20.06.2016	Utqiagvik	Native corporation	ASRC, shareholder department	1
07.06.2016	Nuiqsut	Company	Village Outreach liaison, ConocoPhillips	1
07.06.2016	Nuiqsut	Indigenous	Unemployed mother	1
08.06.2016	Nuiqsut	Tribe	Native Village of Nuiqsut, environmental assistant	1
08.06.2016 09.06.2016 10.06.2016	Nuiqsut	Tribe, Tribal council	Native Village of Nuiqsut,	3
08.06.2016	Nuiqsut	Company	ConocoPhillips Village outreach coordinators	2
08.06.2016	Nuiqsut	Indigenous	Leader, elder	1
08.06.2016	Nuiqsut	Indigenous	unemployed	2
09.06.2016	Nuiqsut	Municipality	Thomas, Mayor of Nuiqsut, City of Nuiqsut	1
09.06.2016	Nuiqsut	Native corporation	Kuupik corporation employee	1
09.06.2016	Nuiqsut	Indigenous	Elders	2
10.06.2016	Nuiqsut	Municipal	Cultural Coordinator, Recreation director, Maintenance worker City of Nuiqsut	3
09.06.2016	Nuiqsut	Native corporation	Little Red Services, subsidiary of ASRC	1
10.06.2016	Nuiqsut	Indigenous	Elders	3
11.06.2016	Nuiqsut	Native corporation	Secretary of the Kuukpik Corporation, Kuupik employee	2
13.06.2016	Kaktovik	Tribe	Native village of Kaktovik	1
14.06.2016 15.06.2016	Kaktovik	Local residents	Tour guides	2
16.06.2016	Kaktovik	Municipality	Mayor of Kaktovik	1
16.06.2016	Kaktovik	Local resident	Post office	1
01.09.2017	Anchorage (interview took place in Kaktovik	Nonprofit Law firm	Trustees for Alaska, executive director, staff	3
30.08.2017	Kaktovik	Federal government agency	ANWR representative in Kaktovik	1
02.09.2017	Kaktovik	Local resident	School teacher	1
04.09.2017	Utqiagvik	Local resident	Artist, wailer	1
04.09.2017	Utqiagvik	Local resident	Elders	2
04.09.2017	Utqiagvik	Local resident	Landowner	1
03.09.2017 01.09.2017	Kaktovik	Local resident	Tour guides	3
04.09.2017	Kaktovick	Indigenous resident	Tourist guide, bed and breakfast worker	2
01.09.2017	Kaktovik	Local resident	City administrator	1
06.09.2017	Nuiqsut	Municipal government	City administrator	1
09.09.2017	Anchorage	Oil company	ConocoPhillips representative	1
03.09.2017	Kaktovik	Business	Waldorf hotel owner and his wife	2
04.09.2017	Utqiagvik	Business	Bed and breakfast owner, previously worked at NSB	1
05.09.2017	Utqiagvik	Indigenous leader	Candidate for NSB Mayor	1
08.09.2017	Anchorage	Expert	Executive director of the Institute of the North	1
18.01.2017	Houston	Oil company	Representative of oil exploration company, Exxon Mobil (written input)	1
19.01.2018	Houston	Oil company	ConocoPhillips, Director, Stakeholder Engagement and Social Responsibility	1
01.02.2018	Houston	Oil Company	Representative of PetroNeft Resources, worked for Schell	1
01.02.2018	Houston	Oil Company	Former employee of ExxonMobil government relations office	1
23.01.2018	Houston	Oil Company	Former public relations officer at Shell	1
17.07.2018	Utqiagvik	Regional Corporation	Spokesmen for ASRC	1
18.07.2018	Utqiagvik	Regional Corporation	Resource and Development officer, ASRC	1
18.07.2018	Utqiagvik	Regional Corporation	ASRC President	1
19.07.2018	Nuiqsut	Municipal government	Representative of Mayor's office	1
22.07.2018	Nuiqsut	Tribal government	Vice president of the Native Village of Nuiqsut	1
22.07.2018	Nuiqsut	Tribal government	Representative of Native Village of Nuiqsut	1
23.07.2018	Nuiqsut	Indigenous Resident	Subsistence hunter	1
29.07.2018	Denali Village	Municipal Government	Nuiqsut City administrator	1
04.08.2018	Anchorage	Oil Company	Public outreach officer	1

Appendix B

Participant observation:

4th annual AFN-NCAI (National Congress of American Indians) tribal conference, Wednesday, October 14, 2015, William Egan and Convention Center

annual AFN meeting, October 15–16, 2015
Energy Summit
Arctic Summit Science Week
March 8–9, 2016 Northeast NPR-A Regional Mitigation Strategy Workshop #3, Fairbanks
June 1–2, 2016 Borough of Land Management (BLM) National Petroleum Reserve in Alaska (NPR-A), Subsistence Advisory Panel (SAP) meeting, North Slope Borough Assembly Chambers, 1274 Agvik Street, Utqiagvik, Alaska
June 6, 2016. Meeting of ConocoPhillips and local community
June 9, 2016, ASRC, Participant observation at the beginning of the annual shareholder meeting

Appendix C

List of abbreviations.

ABI: Impact benefit agreement
AIO: Arctic Inupiat Offshore
ANCSA: Alaska Native Claim Settlement Act
ANWAR: Arctic National Wildlife Refuge
ASNA: Arctic Slope Native Association
ASRC: Arctic slope regional corporation
BLM: Borough of Land Management
CCSR: Company centered social responsibility
EBRD: European Bank for Reconstruction and Development
GMT-1: Greater Mooses Tooth One
NPR-A: National Petroleum Reserve
NSB: North Slope Borough
RMS: Regional mitigation strategy
SLO: Social license to operate
STEM: Science, technology, engineering, and math

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