1) The problem, why it is important, and why the proposal will help address the issue

Despite a current downturn in the commodities cycle, Northern communities are continuing to face pressures to allow extractive resource industries to develop in their regions and this pressure will increase when commodity prices once again start to increase (AANDC, 2015; Coates, 2015; Gill & Sevigny, 2015; GNWT, 2013; Lang et al., 2014; NAEDB, 2015, 2016). In the past there have been few visible benefits to these communities from extractive projects and often these projects have produced a range of negative impacts (Abele, 1987; Berger, 1977; Niezen, 1993; Page, 1999; Watkins, 1977). These pressures come at a time when these communities are faced with a range of challenges that threaten their long-term sustainability and well-being. Recent research has provided these communities with an increasing amount of information on how best to deal with extractive industry developments (Bradshaw & McElroy, 2014; Hodgkins & Weber, 2016; Jones & Bradshaw, 2015; Natcher, Castro, & Felt, 2015; Rodon & Levesque, 2015; Southcott, 2015a). This research has pointed out where communities can negotiate more and improved benefits and better mitigate potentially negative impacts. Yet success at obtaining increased benefits from extractive industry development also presents problems. In many jurisdictions, these benefits have created a path dependency on extractives that currently threatens many northern communities (Bennett, 2016; Petrov, 2016). There is a threat of some aspects of the ‘resource curse’ diminishing the likelihood of sustainability (Huskey & Southcott, 2016; Parlee, 2015). While there is a need to ensure long-term sustainability, new research must ensure that these activities do not endanger the long-term sustainability of the region.

This research proposal differs from earlier work in that it focuses on ensuring extractive development does not lead to a path dependency on extractives. There is a belief that extractive development is early enough in the region that it has time to examine ways to avoid an over-dependence on extractives (Wilson & Stammler, 2016). By using the short-term benefits of non-renewable industrial projects to help deal with current challenges such as limited capacity, well-being, food insecurity, and a lack of socio-economic diversification, there is a real possibility that communities can ensure these activities help sustainability rather than endanger it. The proposed project would address these questions through the lens of social innovation (Ayob, Teasdale, & Fagan, 2016; van der Have & Rubalcaba, 2016). For our purposes, social innovation is seen as a process of developing new social practices to better meet human needs that are currently being unmet, with an emphasis on empowering communities (Moulaert, MacCallum, Mehmood, & Hamdouch, 2013; Swyngedouw, 2005). It is an extension of terms such as social economy and social enterprise (Shin, 2016). Recent research has shown its value for regional and community development in Indigenous communities in Canada (von der Porten, 2014).

This project will therefore undertake research in partnership with representatives of these communities that will provide the region with knowledge on the best ways to use social innovation to maximize the benefits from extractive industry development without creating a dependence on these same activities. New land claims and increased self-government has given these communities an ability to negotiate the conditions under which extractive industry projects are allowed to proceed. This research will assist these communities to negotiate better arrangements for their long-term viability.

2) The objectives and their significance

The formal objectives of this project will be to:

- continue to connect researchers, community and Indigenous organizations, governments, and the private sector together to create new common communities of interest related to maximizing resource development benefits for northern communities in a way that promotes their long-term viability;
- undertake research that will provide communities with information that allows these communities to better understand how they can best use the short-term benefits of extractive industry activities to enhance their future sustainability through social innovation;
- pursue linkages with other research networks to provide communities in Canada’s North with comparative research from other areas of the Circumpolar North and communities in the global south;
• ensure that this research is based on reciprocal and trusting relationships between researchers and partners, that it engages these communities in all aspects of the research, and that it gives proper value to local knowledge systems;
• assist in the building of research capacity in northern communities through promoting the involvement of northern students and community researchers;
• stimulate the development of new knowledge sharing and mobilization techniques that will allow research results to be more readily utilized by actors in the region; and
• help Canada continue its position as a world leader in supporting research that deals with environmentally and socially sustainable resource development that maximizes benefits to local communities without endangering their long-term sustainability.

As northern communities recover from the current bust cycle and prepare for the next resource boom, previous research has shown that new benefits are possible. At the same time these benefits may increase path dependency and bring about elements associated with the resource curse. There is a need for leading edge research that can assist communities in both increasing benefits from extractive resource development and ensuring that these benefits lead to long-term sustainability. By connecting relevant groups, undertaking research on increasing benefits without increasing dependency, focusing on the potential of social innovation, linking with other related research networks, building respectful relationships, building research capacity, and finding the best ways to share knowledge, we will produce significant and relevant research that will be of value to northern communities.

3) The existing state of knowledge
Prior to the Berger Inquiry, for those outside the region, resource development in the Canadian Arctic was primarily meant to benefit Canadians as a whole. During the 1970s the idea to build a gas pipeline from the newly discovered gas fields in the Western Canadian Arctic, to markets in the south, met opposition from new Indigenous organizations who had witnessed many negative impacts from previous resource development (Abele, 1987). The federal government decided to create an inquiry led by Thomas Berger. The Berger Inquiry was a watershed moment for the development of the north (Bone, 2009). The final report clearly stated that, based on the evidence analyzed by the inquiry, a project such as the proposed pipeline would have negative impacts on northern communities.

While the report of the Berger Inquiry, and publications associated with it (Watkins, 1977), were largely considered the first widely known criticism of extractive resource development in the north, this theme has dominated social science research until recently (Angell & Parkins, 2011). This started to change in the mid-1990s. The literature starts to portray Indigenous peoples less as “passive victims” and more as empowered participants (71). The signing of modern land claim treaties in the years following the Berger Inquiry combined with the processes of decolonization gave communities a perceived increased ability to control extractive resource projects (White, 2002). A new vision of a mixed economy emerged which saw sustainable development of these communities dependent on a balance of traditional, wage, and transfer economies (Elias, 1991; Kruse, 1986). New powers for territorial governments and new mechanisms such as Impact Benefit Agreements (IBAs) meant that there was a greater chance of capturing the benefits from extractive projects. The experiences of the Inupiat on the North Slope of Alaska offered hope that resources could be used to build capacity in Arctic communities (Knapp & Morehouse, 1991).

Northern communities continue to be very much aware of the dangers of extractive resource development yet given limited options, they note the need to examine how these projects could potentially be used to improve community well-being (SERNNoCa, 2010). Over the past six years the ReSDA research project, and other researchers and organizations, have focused their attention to finding ways that communities could get more benefits from extractive resource development with less negative impacts (Southcott, 2016). One key area of research has been a better understanding of social impacts of extractive development on communities and what to do about them (Cater & Keeling, 2013; Czyzewski, Tester, Aaruaq, & Blangy, 2014; Davison & Hawe, 2012; Green, 2013; Ritsema, Dawson, Jorgensen, &
Another important area of research has been on finding ways of tracking and measuring impacts through developing new indicators and monitoring systems (Edouard & Duhaime, 2013; NAEDB, 2013; Petrov, 2014). The Environmental Impact Assessment (EIA) process had been recognized as an important means by which negative impacts can be considered and mitigated. It is also a process that can be used to engage communities in development. An important area of research in this regard is the barriers to the EIA system fulfilling these objectives and what can be done about it (Cox & Mills, 2015; Noble, Hanna, & Gunn, 2014; Noble & Udofia, 2016; Udofia, Noble, & Poelzer, 2015). In the past, very little of the resource rents from extractive projects stayed in the region. Yet with new land claims and devolution of powers to territorial and regional governments, new research has been studying revenue flow with the aim of improving local capture of these revenues (Huskey & Southcott, 2014; Huskey & Southcott, 2016; O’Faircheallaigh & Gibson, 2012; Thistle, 2016). Other research is looking at the best ways for communities and regions to manage and distribute these new revenues (Briones et al., 2014; Coates, 2015; Coates & Crowley, 2013; NAEDB, 2015; O’Faircheallaigh, 2013). Making sure extractive industry development does not negatively impact the environment is a central concern for northern communities, notably by those that have a high dependence upon subsistence harvesting. Research showing how communities can say no to those proposed projects that present too much risk is an important part of ensuring benefits outweigh potential negative impacts (Bernauer, 2010; Procter, 2016). A new area of research relates to how communities can best deal with the environmental legacies of past extractive developments and how they can use site remediation for local benefit and for the assurance of the suitability of remediation plans (Dance, 2015; LeClerc & Keeling, 2015; Sandlos & Keeling, 2016).

Perhaps the best-known way by which northern communities can now obtain more benefits from extractive industry activities is through IBAs. These have helped increase benefits to local communities but they are also sometimes problematic (Caine & Krogman, 2010). Recent research has looked at improving IBAs to ensure that they more adequately address community needs (Bradshaw, Fiddler, & Wright, 2014; Gibson & O’Faircheallaigh, 2015; Jones & Bradshaw, 2015). The relationship between the subsistence economy and extractive industries has always been seen as extremely important to northern communities. The Berger Inquiry highlighted the fact that subsistence activities are fundamental to the long-term survival of many northern communities but that industrial development could be destroy these activities (Berger, 1977). However, in an era where communities exercise more control over industrial developments, and when the costs of subsistence activities are often prohibitive to many, several studies have pointed out that extractive industry development is now a crucial support for the subsistence economy (Koke, 2008; Kruse, 1986, 1991). New research is re-examining this relationship by looking at the overall obstacles to the northern subsistence economy in an effort to understand the conditions under which extractive industry can best ensure the long-term survival of subsistence activities (Natcher, Shirley, Rodon, & Southcott, 2016; Southcott & Natcher, 2018). Another important issue surrounding extractive industry development and northern communities is the difference in impacts based on gender. Recent research has tried to isolate these differences and suggest ways to deal with them (Cox & Mills, 2015; Mills, Dowsley, & Cameron, 2014; Natcher, 2013; Staples & Natcher, 2015; Stienstra, 2015). Finally, it is difficult to determine the best way to maximize benefits of resource development to communities when there is an inadequate notion of well-being to both interpret results and guide future negotiations. Recent research has therefore tried to better understand what communities perceive as well-being in a manner that can contribute to better managing of extractive industry impacts and benefits (Edouard & Duhaime, 2013; Jones & Bradshaw, 2015; Parlee, 2016; Parlee & Furgal, 2012). The significant impact of ReSDA is seen that it has played a major role in most of the research findings mentioned above (Southcott, Abele, Natcher, & Parlee, 2016).

The impact of the earlier SERNNoCa project is seen in that several recent studies have highlighted the innovative potential of social economy organizations to help northern communities deal with social
and economic challenges in their region (Abele & Southcott, 2016; Southcott, 2015b). This type of innovation using community-based solutions is increasingly known as social innovation (Moulaert et al., 2013). Under certain conditions, regions can use social innovation to transform development (Fontan, 2008). This project then hopes to use social innovation to help northern communities develop new ways to benefit from extractive development but avoid dependency.

4) Theoretical approaches

The team is united by common objectives and not by common theoretical approaches. Researchers come from a variety of disciplines each with their own unique theoretical interpretations and methodological preferences. This being said, among almost all partners and researchers there is a recognition that the legacy of earlier forms of colonialism continues to impact northern communities (Alfred & Corntassel, 2005; Coulthard, 2014). These impacts are seen using both the perspective of internal colonialism (Hodgins, 2009), and related discussions of the impacts of historical trauma (Kirmayer, Gone, & Moses, 2014; Kral, 2011; Tester & McNicoll, 2004). In addition, the emerging work on settler colonialism (Veracini, 2010) is useful in helping to understand continuing development impacts (Hoogeveen, 2015; Preston, 2013). At the same time, by the nature of the research questions, researchers in this proposal do not rely on overly deterministic or structuralist theoretical perspectives. There is a recognition of agency in that communities do have the ability to act. They are constrained by a colonial legacy and other obstacles but at the same time they do have the ability to overcome these obstacles given the right conditions. Past collaborations between researchers coming from differing theoretical traditions have led to theoretical innovations that are likely to continue in the present proposal. While some of the previous research leans towards a political economy theoretical perspective and a continued dependence on staples theory (Hodgkins & Weber, 2016; Huskey & Southcott, 2016; Mills & Sweeney, 2013), other research has attempted to develop a theoretical model based on the community capitals framework (Parlee, 2015). The community capitals framework has also been seen to be useful in developing a new version of staples theory (Southcott, 2016). Others see the possibility of using the notion of creative capital in conceptualizing development in northern communities (Petrov, 2016). Keeling and Sandlos have used the historical political ecology framework to understand past impacts of mining on northern communities (Keeling & Sandlos, 2015). The concept of social innovation has emerged as a potentially useful way to stimulate thinking on similar development issues (Warnecke & Houndonougbo, 2016) especially in partnership-based research (Fontan, Harrisson, & Klein, 2013). It fits well with our recent research on development alternatives for northern communities (Abele & Southcott, 2016).

5) Research Questions

Current research is developing a consensus around the idea that focusing solely on benefits without taking into consideration the consequences of these benefits will likely create an over dependence on extractives that will be bad for the long-term sustainability of northern communities (Southcott, 2016). This concern highlights the significance of this proposal which is organized around one overarching question: How can communities best use social innovation to transform the short-term benefits of extractive resource development into long-term renewable development? Differing from ReSDA, the new focus is on using social innovation to avoid a path dependence on extractives. In the Canadian context, the answering of this central question can best be done by focusing research around four main theme questions: How can we best manage impacts of extractive industry? How can we use the benefits of extractive development to enhance long-term community well-being? How can we best use the benefits of extractive projects to improve food security in northern communities, and to support the subsistence economy and Indigenous culture? How can we use extractive developments to build capacity and diversify the economy of these communities? The proponents believe that answers to the above theme questions can be found by looking at how social economy organizations can best be used through social innovation. An examination of current research and discussions between researchers and partners has resulted in the development of 23 research sub questions, organized under the above-
Managing Impacts on Northern Communities (Dawson) 1. What are the major problems communities and organizations currently face regarding the assessment of social impacts? How do communities feel about their current role? What are the best cases? (Noble/YESAAB, MVEIRB, NIRB, Inuvialuit Joint Secretariat). Research has indicated that while the assessment of social impacts has improved considerably over the past 20 years, problems such as the ability of communities to genuinely participate in the assessment regime remain (Noble et al., 2014; Udofia et al., 2015). 2. What are the impacts of extractives on health and what are the best examples of mitigating negative impacts and accentuating positive impacts? (Schiff, Freeman, Christensen, Cunisolo/eNuk, NTI). ReSDA related research, and research elsewhere, has indicated that the specific health impacts of resource development, and what to do about them, are poorly understood. This represents a barrier to communities’ abilities to make decisions on whether development projects will enhance or hinder sustainability (Jones & Bradshaw, 2015). 3. How can we improve the indicators we use to monitor resource development and other impacts? How can communities collect, control and use this information? (Wichmann, Petrov, Parlee/IRC, Territorial Statistical Bureaus, Tracking Change). Communities are indicating a need to find better ways that impacts can be measured and monitored in a way that they themselves can control these processes (Petrov, 2014). 4. How can we better integrate concerns shared by women into assessments and understanding impacts and resource decision-making? These include impacts on poverty, sharing, and food security. (Dowsley/FemNorthNet, Pauktuutit). There is increasing evidence that gender plays a role in the ability to influence resource and sustainability decision-making and that therefore we need to find ways that the concerns of women can be adequately dealt with (Mills et al., 2014; Stienstra, 2015). 5. How can the new governance structures in the north best provide greater control and ownership in the resource sector and what are the best examples of effective negotiations and models for managing developments (Loukacheva/CYFN). Governance structures such as new comprehensive treaties are frequently discussed as an means of ensuring local and regional control of development yet more research is needed on how best to use these new powers (Ozkan & Schott, 2017; Ritsema et al., 2015).

Food security, Subsistence Activities, and Culture (Natcher) 6. How can we best monitor the barriers to subsistence activities and use this monitoring to determine the best examples of resource extractive developments being used to enhance subsistence activities? (Natcher, Southcott, Rodon/Makivik). The maintenance of subsistence activities is crucial for the sustainability of northern communities yet due to a lack of available research there is no consensus on whether resource development is a positive or negative influence on these activities nor is there adequate data on best practices (Southcott & Natcher, 2018). 7. What are the best examples of food security and food distribution being enhanced by extractive resource development and what are the best ways for subsistence foods to be distributed to communities experiencing extractive development? How does the value chain of northern food production operate and how can it be adapted to benefit community economic development and help alleviate conditions of northern food insecurity? (Furgal, Cunisolo/Arctic Co-ops, Climate Change IFS3) Food security is a central sustainability concern for most northern communities and research needs to find out how resource development can be used to enhance rather than diminish it (CCA, 2014). 8. How can we use the short-term benefits of extractive resource development to enhance the development of more culturally appropriate and more sustainable economic activities? What is the potential for renewable resources development in the north (production capacity, by region, product, and market potential)? (Furgal/Shared Future). As extractive industries only produce short-term benefits, to ensure sustainability there needs to be more research on finding ways to transform these benefits into longer term activities associated with renewable resource and other types of development (Rodon & Schott, 2014).

Enhancing community well-being (Parlee) 9. How do northern communities define, measure and track the impacts of development on the well-being of their communities? (Parlee, Petrov/GNWT, IRC) Well-
being is increasingly seen as the primary goal of sustainability for northern communities yet to help these communities achieve this goal there is a need to better define what communities mean by well-being and how best to monitor it (Parlee, 2016). 10. What are best practices for linking Indigenous knowledge (local and traditional knowledge) and management practices into decision-making about resource development? How can IQ and TEK be used to inform the development of renewable resource economies in the north? (Parlee/Tracking Change) The ability of northern communities to better control development is limited by a lack of research on the best ways of integrating local and traditional knowledge into decision-making (Huntington, 2014). 11. How can communities best distribute revenues from resource development? (Rodon/ MinErAL) While communities are increasingly seeing fiscal benefits from resource development, the way that funds are distributed in communities impacts the degree to which this revenue helps or hinders their sustainability (NAEDB, 2015; Rodon & Levesque, 2015). 12. What are the best models of community sovereign wealth funds for communities to use? (Poelzer/GNWT, YG) The use of sovereign wealth funds to manage resource revenues can help the long-term sustainability of northern communities but research needs to provide communities with information on the best models to use (Coates, 2015). 13. How do we support creative/innovative approaches to fostering community well-being when facing the boom and bust cycles of resource developments? (Schiff/YRC, ARI, NRI, LI) Research has indicated that boom and bust cycles are a major concern to northern communities and they desire more information on how to ensure well-being through the mitigation of the negative impacts of these cycles (Coates, 2014; Stienstra, 2015).

Building capacity and diversifying the economy (Southcott) 14. What are the best examples of education and training programs for long-term sustainability? (Hirshberg, Berman/GN) Using resource development to increase education and training possibilities is one of the major objectives of northern communities when they negotiate agreements such as IBAs but they need more information on whether these agreements are effective for this purpose and under what conditions (Hodgkins, 2015; Palesch, 2016). 15. What are the best arrangements for work/life balance in FIFO arrangements for northern workers? (Saxinger/Nacho Nyak Dun) Northern Indigenous communities are increasingly becoming involved in fly in fly out employment arrangements yet communities need more information on how best to use this in a way that supports the long-term sustainability of the community (Davison & Hawe, 2012; Saxinger & Gartler, 2017). 16. What are the impacts of extractive development on mobility of northern communities? Do they increase or decrease mobility? (Heleniak, Berman/Nordregio) Extractive resource development is often promoted as a way to keep youth in their home communities and to attract people back yet research on whether this is the case is extremely limited (Christensen, 2012; Southcott, 2010). 17. How can extractives support business development that can then be used for renewable development? What is the current state of northern entrepreneurial capacity and what existing/new skills can be used to develop renewable resource development opportunities? (Schott/Arctic Co-ops, KIA) Business development through backward linkages has long been seen as a possibility when sufficient local control of development exists. New business structures linked to new treaties offer a potential for this to happen in the north but more research is needed to identify the necessary conditions for this to happen (Anderson, Dana, & Dana, 2006; Watkins, 2014). 18. What are the best examples of communities dealing with resource bust periods and the closure of extractive activities? (Beaulieu, Harpelle, Keeling/LI, YG) Bust periods are particularly difficult for communities which depend heavily on extractive industry and northern communities need focused research on how best to deal with industry closures (Rixen & Blangy, 2016). 19. What are the best employment arrangements? (Mills/GNWT) Wage employment has been proven to be difficult for many communities as they attempt to maintain traditional lifestyles. In negotiating agreements such as IBAs northern communities can influence the employment conditions for their community however they need more information on which arrangements are most likely to be beneficial for them (Mills & Sweeney, 2013; Tester et al., 2013). 20. Are IBAs working in terms of mitigating mining’s impacts and delivering community benefits? Are IBAs enabling progressive change or perpetuating colonial relations? And to
what degree are IBAs serving as effective vehicles for community visioning and development? (Bradshaw/Nunatsiavut Govt) Impact Benefit Agreements have the potential to be an effective form of empowerment yet more researcher is required on whether these agreements are working and under what conditions (Bradshaw et al., 2014; Gibson & O'Faircheallaigh, 2015). 21. How can remediation activities be best used to support the long-term sustainability of northern communities? (Keeling, Sandlos, Keske/DLAA) Mining remediation can be an important source of benefits for communities and can be used to support their long-term sustainability under the right conditions. Research can help determine how best to ensure these communities benefit from remediation (Dance, 2015; Sandlos & Keeling, 2016). 22. How can infrastructure relating to resource development, such as transport and energy, be best used to support the long-term sustainability of northern communities? (Dawson, Schweitzer/FES, CoRe) A lack of adequate infrastructures is another important obstacle to the sustainability of northern communities. Historically, resource development has been behind much of the infrastructure development in the region and with innovative research it could assist communities in this regard (Lang et al., 2014; NAEDB, 2016). 23. How can we improve models, such as the staples model, to better understand where resource development leakages are occurring and where linkages could occur? (Huskey, Southcott/Yukon Govt) The ability of communities to use resource development to ensure long-term sustainability can be facilitated by the development of models, such as staples theory, to help them understand past problems (Huskey & Southcott, 2016).

6) Methodological Approaches
There is a common understanding that research is also related to the legacy of colonization in the Canadian North and that to be effective methodologies must be decolonized (Battiste, 2011; Smith, 2013). In order to do this, the approach that this proposal is suggesting, as developed during SERNNoCa and ReSDA, can best be described as collaborative research. This term has come to represent a general framework for describing the various participatory and community-based methods valued by rural and Indigenous communities (CCGHR, 2008; Nicholls, 2009). It is guided by a commitment to “bottom up” thinking and doing and on decolonizing research (Southcott et al., 2005). This approach is effective at affirming local best practices for research, building capacity, and meeting the needs of communities in terms of both process and outcomes. Research collaboration is framed within specific conditions regarding ownership and control of the data. Research will be guided by OCAP (FNIGC, 2014). Communities will own, control, have access to, and possess data produced by this research. With our partners we will negotiate a plan which will both meet the spirit of the OCAP principles and meet the needs of data management outlined in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2 2014).

In terms of the actual methodologies used in subprojects, these will include a variety of qualitative and quantitative methods. Priority will be given to new developing Indigenous methodologies (Denzin, Lincoln, & Smith, 2008; Kovach, 2010). These developing methodologies are not only more appropriate for studying Indigenous peoples but also, unlike most Western approaches to research which are based on knowledge creation, this project hopes to not only create knowledge but also “also decolonize, rebalance power, and provide healing” (Drawson, Toombs, & Mushquash, 2017: 12). Another common method that is often used by these types of projects is the community research workshop which can be an effective way of both validating the research, sharing knowledge, and involving the community in developing next steps (ReSDA, 2013). Communities also however have a need for improved quantitative data and that can be innovatively collected and used by communities themselves in an attempt to improve the their ability of communities to monitor impacts (Axelsson & Skold, 2011; Petrov, 2014).

7) Partnership, training, knowledge mobilization, data management, progress indicators
To put too many demands on partners in a short period of time could be problematic. As a result the research will be spread out over seven years. While we have long-standing relationships with most of the partners involved in this proposal, one of the challenges we have faced in the past in building these relationships is the capacity of the partners (White, 2009). The proposed structure of the project, building on that of SERNNoCa and ReSDA, reflects this concern. Day to day decisions are decided upon by a management committee made up of the theme coordinators and the network coordinator. The central decision-making body of the project is the Steering Committee made up of five researchers and six partner representatives. The partners chosen for the Steering Committee are the research institutes in the three territories and Labrador as well as two other partners later. The research institutes all have close connections to the other partners in their region and generally have the capacity to help ensure effective collaboration with other partners. These institutes will also act as the regional coordination office and, when required, host the SISARD regional coordinators. They will assist researchers and partners in their region and will provide logistics, when needed, to Regional Partnership Advisory Committees. Regional Partnership Advisory Committees will be created to operate when needed or at the request of partners. Regional coordinators will be hired during specific periods to assist with research and knowledge sharing. The five researchers on the Steering Committee include the four thematic coordinators and one representative of our international research partners. In addition, the project will have an International Experts Group (Abele, Coates, O’Faircheallaigh, Huskey) who will review research projects and will advise the Steering Committee during an annual project research workshop. The main coordination office will be hosted by the Yukon Research Centre. Work over the past 11 years has allowed us to develop an effective decision-making, conflict resolution, and data management process that is codified in a Network Research Agreement for SISARD available for viewing at www.resda.ca.

Lakehead University will be the main host institution. It will house the office of the Principal Investigator/Research Director, be responsible for administration of the project, and will host the main research laboratory. The location of Lakehead University in a provincial north makes it an ideal location in the sense that many of the issues facing the communities involved in this proposal are shared by the communities of Northwestern Ontario. The presence of a large Aboriginal student population from northern communities means that the project itself will generate much interest in the institution.

One of the most important challenges facing sustainable resource development in the Canadian Arctic is the lack of highly qualified personnel and the lack of adequate training opportunities for northerners. A key objective of this project will be to enhance capacity in this area in a way that benefits northerners, industry, and Canadians in general. All research projects funded by the network will include the training of HQP as a fundamental part of the project requirements. Applying models developed by SERNNoCa and ReSDA, this project will give preference to students based in or originating from Northern Canada. In particular, special strategies will be developed to attract Indigenous students from the region. It is estimated that at least 30 students at the Master’s (22) and Ph.D. level (8) will be funded directly by the network. In addition, funding will be used to attract five post-doctoral positions including one located at the main coordination office in the Yukon. Through our partnership with the UArctic Thematic Network on Extractive Industries these students will benefit from participation in the graduate fields schools and other activities associates with this network. Community researchers are often a
crucial part of research in the north and as was the case with SERNNoCa and ReSDA we will actively support the training of these researchers through regional workshops and other methods.

Through SERNNoCa and ReSDA we have come to recognize that knowledge mobilization is key to undertaking successful research in the north. Over the years we have preferred to use the term knowledge sharing instead of mobilization as it is more indicative of an effective exchange and engagement with partners (ReSDA, 2013) but for the purpose of this proposal the two terms are used interchangeably. This project will build on the success of previous activities. An initial detailed knowledge sharing strategy for SISARD has been developed and is available at www.resda.ca. In addition to standard tools such as a project website, plain language reports and summaries, and project-based community workshops, each year an annual workshop will be held in a different region of the Canadian Arctic and various partners and other groups will be invited to participate. Video presentations of researchers and partners will be made available on a project YouTube website. The virtual ReSDA Atlas of Extractive Industries, funded by CanNor, will be updated. Regular webcasts of research projects will be organized. The standard academic forms of knowledge sharing will also be continued as the project will produce 4 edited manuscripts and 3 special editions of journals in addition to a minimum average of 2 peer-reviewed publications for each subproject.

The ReSDA data management plan, based on the previously mentioned OCAP principles, will be used as a base for this project but will be reviewed for new ideas. Following negotiations with partners a common data documentation system will be established and made available on the project website. The project will consult with similar research projects to establish up to date metadata formatting and protocols. Key progress indicators will be: the start and completion of projects, the number of graduate students involved, number and quality of knowledge sharing activities, and the number of publications.

The project is designed in a way that the research will directly benefit partners. The subprojects are designed so that they are based on a research need of partners and the research will fulfill this need. The project will increase the information and research capacity of northern partners and the project will help link them to organizations with similar needs. In so doing the project will have a long-term impact that will continue beyond the life of this particular grant.

8) Potential of the Project
Through its research and partnerships, the ReSDA project has helped to promote interest surrounding extractive resource development and Arctic communities that led to a series of other projects in the US, Fenno-Scandia, and Russia. The interest must now be shifted to not only increasing benefits but to avoiding an increased dependency on extractives. By working closely with its partners this proposed project will ensure that communities in the Canadian Arctic have the information to decide whether they want extractive development, under what conditions, and what they need to do to avoid dependency. In terms of specific future contributions, this project will have an impact beyond the social science research community. It will result in research that will allow northern communities to: better understand and monitor the impacts of extractive resource development; use extractive industry benefits to enhance food security, subsistence activities, and local cultures; develop a better understanding of community well-being and how extractive projects can be used to support well-being; and discover better ways to use extractive industry benefits to build capacity and diversify their economies. Canada can then be used as a model for other areas of the Circumpolar North and indeed in any region where rural and Indigenous communities are facing similar decisions.
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