Tony Gauvin
School of Economics, University of Maine
Orono, ME

COMMUNITY CAPITALS FRAMEWORKS AND RURAL SUSTAINABLE DEVELOPMENT

INTRODUCTION

Sustainable development has become the newest 'buzz word" and it has taken on many meanings depending on the discipline and orientation of individual or group providing the definition. For environmentalists it has become a rallying cry for natural resource protection and elimination of environmental degradations. For businesspersons and economists, it is an era of sustained economic growth. For social activists, sustainable development becomes a platform for equitable (re)distribution of goods, services, and rights. I have been reading on sustainable development for several years and have discover dozens of definition and interpretations of sustainable development and the only unifying theme I see is that of improving "quality of life", a very subjective outcome easily manipulated in the various contexts given before.

The roots of sustainable development began in the 1980's The term sustainable development was first defined in the Brundtland Commission report of 1987 and is given below.

> *Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:*
>
> - *the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and*
> - *the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.*
>
> (World Commission on Environnment and Development, 1987, p. 43)

This definition lacks preciseness and should be interpreted as a call to action rather than a desired outcome. It is the journey not the destination; we pursue sustainable development but we can never say we have achieved sustainable development. Sustainable development can never be a

finite equilibrium state; it is process. I would even go as far as saying there is no equilibrium state is available in sustainable development.

Further reading into the Brundtland report allows you to see some common themes. The first being there is some fundamental limits to growth imposed by the biosphere. There is a lack of faith in scientific and technology solutions to improve the human condition. (Batie, 1989) Another theme is that individual well being increases over time at a sustained rate, and that the distribution of positive well-being should be disparate; the neediest being given priority. There is also the concept that every generation was responsible for endowing the next generation with capital assets that was no less than was made available to the present generation. (Pearce, 2002) Others have interpreted this intergenerational capital endowment requirement as a transfer of a productive base. Partha Dasgupta defines this productive base below.

> *An economy's productive base includes not only its capital assets (stocks of manufactured, human, and natural capital; knowledge), but also its institutions (including its cultural coordinates). Together, they offer the infrastructure open to the people, even as they produce, consume and trade. A society's productive base is a diverse collection of durable objects, some tangible and alienable (buildings and machinery, land and animals, trees and shrub), some tangible but non-alienable (human beings, the oceans), some intangible but alienable (codified pieces of knowledge, such as patentable ideas), some intangible and non-alienable (air, skills, the legal framework, and cultural coordinates), and some that involve both human capital and mutual expectations (institutions, social capital).* (Dasgupta, 2007, pp. 6-7)

Given my previous work in rural community development, I was struck by the similarity of Dasgupta definition of the productive base and the Community Capital Framework Model developed by rural sociologists Jan and Cornelia Flora. All the elements mentioned in Dasgupta definition fits inside the seven capitals of the Community Capital Framework Model. Can we use the Community Capital Framework Model with an accompanying analytical technique to determine the sustainability of a rural community and help to develop polices to enable rural sustainable development? This paper explores the Community Capitals Framework Model and determine it's suitable as a model for assessing rural sustainable development. Analytical methods, potential, policy generation, and related topics will come in later in this paper.

My preferences from rural sustainability research stems from three concerns. The first is in the Brundtland definition of sustainable development there is a requirement to give priority to the needs of the world's poor. According to the latest report from The International fund for Agricultural Development, 70 % of the world's poor live in rural areas. The second is the majority of natural resource required to sustain life on this planet exists in rural areas while the majority of the population requiring these resources live in urban areas which can lead to contention and conflict if the urban areas seek sustainability through subjection (colonization) of the rural areas. The third is that I was raised in a rural area and prefer to live in a rural area so I have a personal preference for rural sustainability.

THE COMMUNITY CAPITAL FRAMEWORK MODEL

The community capital framework model originated from the field of rural community development. Community development seeks to empower people and groups of people with the skills and knowledge to bring about change in their own communities. Community developers do not determine outcomes, they facility communities to seek their own outcomes through the creation of processes and institutional changes. The community development process values equity among community participants and democratic processes to enable change and focuses on establishing long-range sustainability and increased well-being of the community. There is resonance between community development ideals and the Brundtland definition of sustainable development. I have always considered community development the process that keeps us on the path to sustainable development.

Community capitals are resources in a community used to create new resources. In the Community Capitals Framework (CCF), seven capitals are indentified and placed in order for useful analysis; natural, cultural, human, social, political, financial and built. (Flora & Flora, 2008) These Capitals are complimentary and overlapping. If one type of capital is emphasized over the other capitals, then the others will be compromised in effectiveness. Communities are analyzed with the CCF models through a system approach through identifying capitals (stocks) and capital investments (flows), interactions between capitals and impacts to capitals. (Emery & Flora, Spiraling-UP: Mapping Community Transformation with Community Capitals Framewrok, 2006) Community resources can classified in more than one capital category. The following diagram provides a visual indication of these interactions and relationships between the seven capitals.

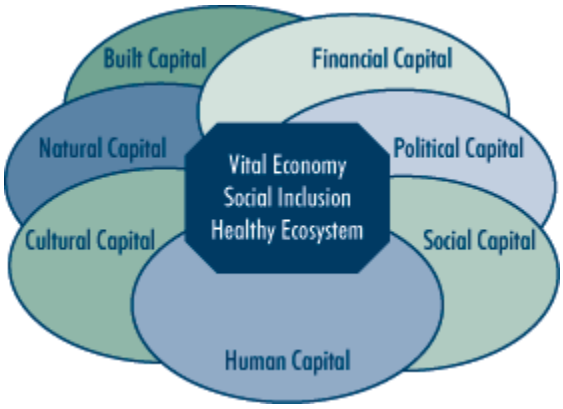

FIGURE 1. COMMUNITY CAPITALS (5TH ANNUAL COMMUNITY CAPITALS FRAMEWORK INSTITUTE, 2008)

NATURAL CAPITAL

Within the community capital frameworks model, natural capital is often discussed before the other capitals since it provides the base for all other capitals in the community capital framework. Natural capitals are tied to place and include land and landscape, climate, air water, soil and the biodiversity of both plants and animals. (Flora & Flora, 2008) Natural resources can utilized to generate financial capital, provide the resources for built capital, provide natural landscapes with artifacts and symbols to support cultural capitals provide place to allow communities to grow and develop social, human capital and political capital. Natural resource policy affects natural capital in positive and negative ways. Natural capitals can be finite (fossil fuels), renewable (forests) or infinite (solar energy). It can be preserved (national parks) or exploited (strip mining). In today's, post industrial society, based on the European settlers' values, natural capital is treated merely as a factor of production to build financial capital without little consideration for the impacts on the other five other community capitals. The westward push of the European settlers in the United States was to seek newer sources of natural capital to convert to financial capital leaving behind the depleted natural capital of eastern settlements. Native Americans use natural capitals as a foundation for social and cultural capital with little concern for transforming it into financial capital. This difference in valuing natural capital was the basis for the European settlers desire to push the native Americans off the land.

In 2000, rural communities held 21% percent of the US population (U.S. Census Bureau , 2000) but represent 97% of the United States land area. (Flora & Flora, 2008) While locality does not determine ownership, the negative impact on natural capitals affects rural communities disproportionally compared to urban areas, forcing rural inhabitants to bear the costs of

unsustainable natural resource policies without reaping the benefits. This effect is very evident in the *appropriations doctrine* water policies of the US Southwest.

> *Urban dwellers and lobbyists believe that they are the engine that keeps the state running and that deserve access to the water. Rural farmers who do not want to give up any of the water supply have targeted as "selfish." However, the farmer' position is that people living in the city do not understand how much farmers rely on the water supply to farm their land, The water crisis in the West is real, and decisions regarding the use of rural water supplies are difficult and multifaceted. (Flora & Flora, 2008, pp. 37-38)*

In other parts of the United States, a *Riparian Doctrine* applies to water rights where landowners abutting water flows can utilize the water as long as they do not severely affect downstream users. Urban needs for rural natural capitals and natural resources rights contentions will affect natural resource policy for the years to come.

Natural capitals also include the biodiversity of the various flora and fauna species within a region. Biodiversity exists in three forms; ecological diversity, species diversity and genetic diversity. The three forms are interconnected and necessary for the resiliency of our rural regions. Current agricultural policies and practices have had a negative effect on biodiversity as plant and animal are breed and genetically modified for greater food production. Biodiversity has also been reduced by the increased mobility of humans and the transportation of goods across ecosystem boundaries Invasive species, like kudzu in the south and the ash borer, have been artificial introduced that have forever changed the ecological systems in which they now thrive. Biodiversity has also been reduced by the increased mobility of humans and the transportation of goods across ecosystem boundaries Decreased biodiversity leads to increased risk of greater proportions of individual spices dying off due to diseases or changes in the environment.

Natural Capitals also includes energy in its many forms; steady state, renewable and nonrenewable. Fossil fuels, an easily transportable and very energy dense fuel, is responsible for industrializations and increased economic vitality but at the expense of the environment and the climate. Fossil fuels produce toxins and green house gases as they are utilized. Natural capitals also provide carbon sequestering plants that can ameliorate some of these negative impacts. More environmental friendly sources of energy, hydroelectric, wind power and solar power and biomass fuels, are all part of rural natural capitals. Global Energy sustainability will be achieved only when

rural energy sources are sufficient to supply urban energy demands. Energy policy will be an urban/rural conflict.

CULTURAL CAPITAL AND LEGACY

In rural communities, cultural capital frequently manifests as legacy. Families, groups and communities pass on to subsequent generations their understanding of society and roles within society. Cultural capital defines values and affects choice and decision-making of individuals within the group. Cultural capital would include languages, traditions, rituals and festivals, symbols and aspirations. *"Cultural capital can be thought of as the filter through which people live their lives, the daily or seasonal rituals they observe, the way they regard the world around them and what they think is possible to change..* (Flora & Flora, 2008, pp. 55-56) In the family setting, legacy also determines the intergenerational transfer of capitals required for sustainable development.

Cultural capital can also determine status, class, stratification and conflict. When one cultural group is dominant, it may subvert the ability of other cultural groups to pass along a legacy. This is very true of the American "melting pot" as Native Americans and many ethnic groups, including French-Canadians, where assimilated through a process of "normalization." Class structures often prevent certain social group to transcend class specific norms. Karl Marx, Max Weber and Pierre Boudreau all define class structures that can composed a significant portion of the cultural capital of a region. Class structures are often based along socioeconomic partitions where professions determine wealth and status within a community. The poor and the working poor are a special classification in sustainable development but the cultural capital of this class has a strong self-reinforcing component in the parent child relationship where aspirations passed along are low and motivation to transcend the low status is minimal. The intergenerational legacy passed along in poor and working poor families is insufficient and creates a self-perpetuating class. (Flora & Flora, 2008)

Small rural towns, particularly in the Northeast and Midwest, share an interesting cultural similarity. These towns have higher percentages of family owned business and self-employed business people than metropolitan areas. This class of Rural Independent Entrepreneurs share a common philosophy of hard work and personal sacrifice in the pursuit of wealth and improvement of self and family. Wealth is pursued, not for reasons of consumption of luxury goods, but to establish independence and security and to provide for an intergenerational legacy. Parents strive to provide a place to live, meaningful employment in the family business or sufficient capital to

become self-employed, and status within the community through a value system of hard work, good living and commitment to the community. (Flora & Flora, 2008)

HUMAN CAPITAL

Human capital includes many attributes of people and is often measured by educational attainment and/or and ability to participate vigorously in the work force. Beyond the work productivity attributes, human capital can include life experiences, leadership, community-building skills, parenting abilities, social skills, creativity and mental and physical health and well-being. I would define human capitals as all the attributes of people that them a valuable, contributing member of the community in which they reside. Employment potential can have a negative or positive effect on rural human capital as regions with greater employment potential, mostly urban, will attract talent and those with poor employment potential will experience a loss of human capitals. This phenomenon occurs along urban/rural divide as younger people leave rural areas for the greater employment possibilities of urban centers. Many rural communities have large expatriated groups of human capital that may return to the rural communities if the employment outlook shifts in favor of the rural communities. (Flora & Flora, 2008)

Human capital is affected by many factors including quality of education and health care available in the region. Rural areas face significant challenges in both education and health care as low population density and lower rural wages do not provide sufficient tax bases to fund these efforts. Increases in educational attainment of youth in rural areas often leads to youth outmigration as rural jib markets have limited needs for highly skilled and educated workers. This out migration of youth produces an older and greyer population, which requires more health care. Many rural communities are become more reliant of retirees with fixed incomes from outside the local region to provide health care and service employment for the younger working population. (Flora & Flora, 2008)

SOCIAL CAPITAL AND COMMUNITY

The configuration and quality of interactions between humans defines social capital. Social capital is vested in human interactions in formal organizations and informal social groupings. Social interactions can be enhanced by geographical proximity, shared interests, and/or history. Understanding the social interactions within a rural community, including any inequities, can help in understanding power differentials, social inclusion and exclusion, and processes by which community action is initiated and developed. (Flora & Flora, 2008)

Social capital can be divided into two parts; *Bonding Social Capital and Bridging Social Capital.* Bonding social capitals defines connections that occur among homogenous individuals and groups. These connections can be based on class, race, gender, family, ethnic and similar social segmentation variables. (Flora & Flora, 2008) Members of the groups often know each other through multiple settings and roles as they tend to participate in eth same activities and organizations. Bridging social capital enables diverse groups of individuals bonded together to pursuit specific ends. Such bonds tend to be emotional charged as individuals gather to pursue specific outcomes such community betterment projects or to exclude specific development perceived as injurious to the community. A diversity of ideas and approaches to problem solving results from bridging social capital formation but without a catalyst or some point of contention these single focused groups may not form. (Flora & Flora, 2008)

Both bridging and bonding social capital exist and interact in rural communities and to extent of quantity and quality of each capital determine collective actions within the community. The following four sector graph helps to determine the level of collective action that may exist in the community.

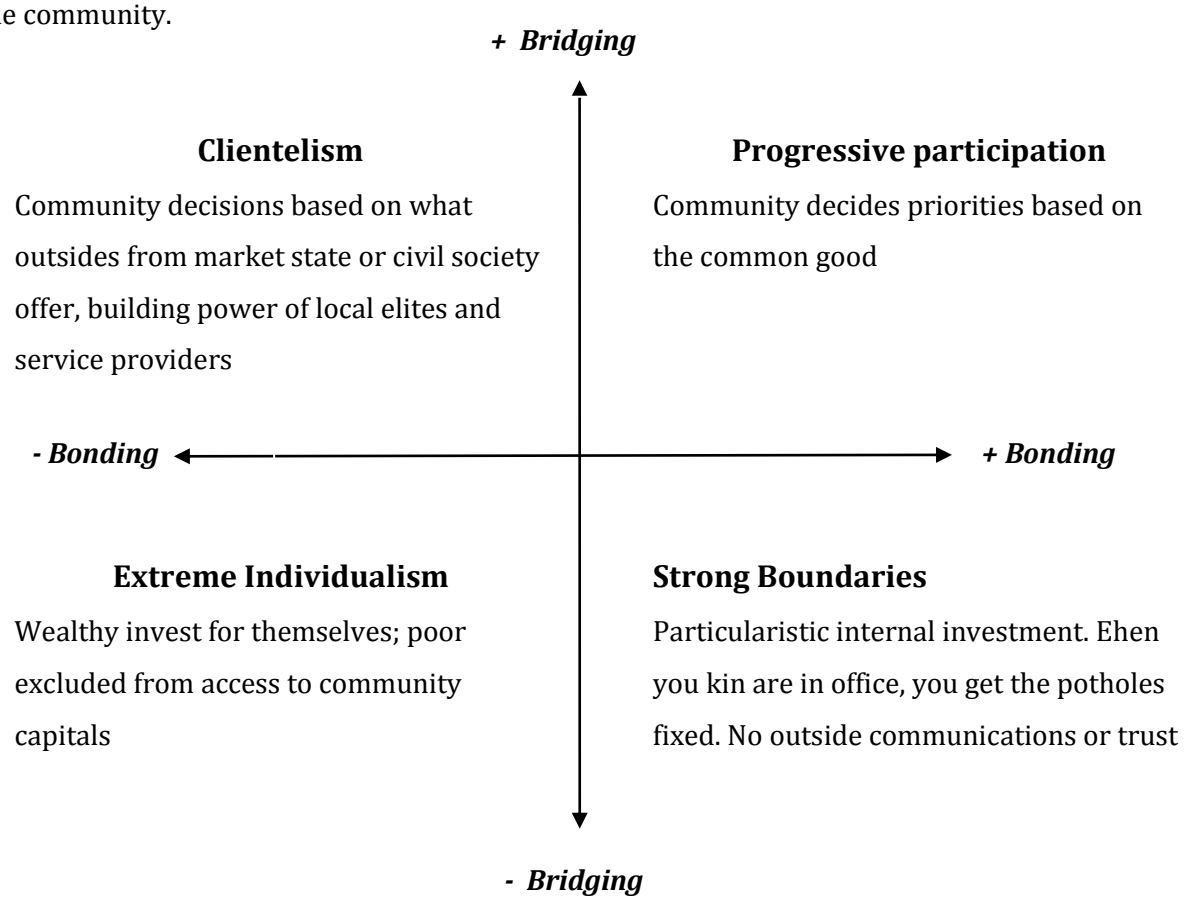

FIGURE 2 SOCIAL CAPITAL TYPOLOGY (FLORA & FLORA, 2008, P. 126)

Three of these four categories, where at least one of the social capitals is low, make it difficult for the sustainable development to occur as they result in power differentials that can lead to disparate allocations. The four categories where both bonding and bridging social capitals are high we get effective community action and the possibility of creating an Entrepreneurial Social Infrastructure (ESI).

ESI is a *"consequence of high bridging and bonding social capital."* (Flora & Flora, 2008, p. 131) but is a category separate from social capital since it is a form of community action that results from specify allocations of social capitals. Communities benefit from ESI since the well-developed social allows for collective actions towards community betterment. ESI promotes diversity and social inclusion. Information flow is pervasive with equalitarian access. The collective efforts created through ESI links social capital to agency, where community members feel empowered and responsible for community well-being. While controversy may exist in communities with ESI, groups with differing agendas seek to cooperate instead of resorting to conflict.

POLITICAL CAPITAL

Political capital helps to transform other capitals and enhances the development pf built capital, social capital, cultural capital and financial capital. Political capital is defined by access to power, organization, resources and power brokers. (Emery & Flora, Spiraling-UP: Mapping Community Transformation with Community Capitals Framewrok, 2006) Political capital allows organizations and communities to influence the distribution of resources and set agendas for what resources are to be cultivated. It determines standards and the rules and regulations to enforce those standards. Social and cultural capital affects political capital and within small rural communities, the dominant cultural capital often determines the holders of political capital, often to the exclusion of diverse viewpoints. Political Capital is self-reinforcing and seeks to maintain status quo. While political capital can be in the hands of elected officials in most rural communities, the political capital rests with the people that are consulted by the elected officials when difficult issues arise. (Flora & Flora, 2008) While national and international political bodies can control many aspects of rural communities even very small communities exercise power in seeking their ends.

Power is at the heart of political capital; who has it, how is it accessed, how is it exercised and how can it be manipulated to produce a desired outcome. In communities utilizing class based theories of power, the class that controls economic system often controls the community. An idivdiual or a group can hold power but when a community uses collective power to affect the

distribution of public and private resource its is referred to as community power. Community residents can gain increased quality of life and the future security of the community through an equitable distribution of community power. The smart growth movement is rooted in community power and rarely exists in communities that exercise a class-based theory of power. Smart growth addresses all the capitals in the CCF and seeks to crate vital communities with a high quality of life while still fostering a growing economy. (Flora & Flora, 2008)

All communities have a existing power structure and for excludes groups understanding the existing power structure helps gain political capital. Four key questions were developed by Jeff Sharp and Jan Flores, which helps to uncover information about existing power structures. (Sharp & Flora, 199)

1. *Who can best represent this town to the outside?*
2. *Whose support do you need to get things done?*
3. *Whom do you need to implement a project?*
4. *Who can stop a project in the community? (Flora & Flora, 2008, p. 165)*

The questions may produce different answer depending on the specific topics under consideration with one power structure existing for economic issues and another structure for local health care issues.

FINANCIAL CAPITAL

Financial capital represents any resource that can be easily translated into monetary instruments or goods used in the productions of monetary instruments or other assets. These highly liquid monetary instruments can be used for consumptions or investment. The uses of a given resources determines whether it is an investment or a consumption good. A person can purchase a pick-up with plow for his own use but if he uses it to start a plowing business, it becomes an investment. An investment is any financial capital that is used to generate more financial capital. Under this definition, there are several tangible forms of financial capitals. There are capital goods (which may intersect with built capital discusses in the next section) which includes cars, machines building that are used to generate new resources. Land becomes a investment form of financial capital when utilized to sell the natural resources in or under the land or simply as a place to develop. Real estate developers, resource speculators and agri-business all but land for the profit potential of the various used of the land. Financial capital also includes all

the financial instruments; stocks bonds, derivatives, futures, funds, letters of credit, loans and money. (Flora & Flora, 2008)

Financial capital can also be categorized by public or private capital and degree of mobility. Private capital is for use of individuals, groups or businesses. Public capitals are resources invested by a community. Farmland is private capital but a national forest is a public capital. At times there are mixed private and public capitalism for example when a logging company buys timbers rights in a national forest. State university represent mixed use as private individuals invest their financial capital as tuition and state tax taxes offset the additional costs of a college educations.

Mobility refers to ease of movement of financial capital. Money is easily moved but land is not. Typically, financial capital and human capital have high degrees of mobility and move to where it earns the highest return. With today's electronic markets financial capital moves at the speed of light making it difficult to retain financial capital in rural communities with low returns on investment. The largest challenge for rural communities is how to keep financial capital local to support local development needs. The deregulation of the banking industry 1980's negatively impacted rural banks as capital flowed from rural areas to areas where it generated higher short-term returns. Oddly enough, it was this effect that made rural communities more resilient to the 2008 crash of the financial markets when these short-term investments collapsed. (Flora & Flora, 2008) Progressive rural communities are seeking new ways of maintaining local financial capital through local and regional community development financial institutions. In rural New England, local credit unions have help to slow the out flows of local financial capitals.

BUILT CAPITAL

Built capitals are those goods and services that facilitate and promote productive human activity. Development police that are intended to enhance built capital are thought of as improving the human condition. Community infrastructure, roads, public water and sewer systems, industrial parks, etc. are all examples of built capital. Built capital differs from financial capital in that built capital provides value through productive use and financial capital through monetary gain. (Flora & Flora, 2008)

Built capitals are categorized by access and consumption. If particular individuals or groups are denied access to a built good, it is classified as an *exclusive access* built capital. If the built capital is available to all users, it is an *inclusive access* built capital. Public water and sewers systems in rural communities are exclusive access since those inhabitants living in the outskirts of town do not

have access and must provide and their own well and septic systems. Public parks are inclusive. Consumption is another classification parameter for built capital. A built capital can have rival or joint consumption. A built capital exhibiting rival consumption can be used by one person, others cannot simultaneous consume the same good. An example would be electricity; no other person can consume the same megawatt that I have consumed. Joint consumptions indicate that that many users can consume the built capital as the same time. An example would be a road system. Some resource once thought to be near infinite and thereby a joint consumption built capital are now subject to rival consumptions as that resource becomes scarce. (Flora & Flora, 2008)

Using the two classifications, access and consumption, we can define four types of built capital as shown in table 1. (Flora & Flora, 2008, p. 210)

TABLE 1 TYPES OF GOOD AND SERVICES

	Consumption	
Access	Joint	Rival
Inclusive	Collective	Common-pool
Exclusive	Toll	Private

Private goods are characterized by rival consumption and exclusive access. An example would be landfills where you must pay for the refuse you dump. Those that cannot pay are excluded and the landfill can only accept refuse until it is full. Joint consumption and exclusive access defines a toll good or service. A toll road or bridge is an example of a toll good; those that cannot pay or own a car cannot use it and many can use it at one time. Common-pool goods exhibit inclusive access and rival consumptions. A public school is accessible to all but can only hold a fixed number of students, for new students to enroll, others must leave. Collective goods are inclusive access and joint consumption. Streets and roads (non-toll) are collective goods. Within any community, many built capitals fall within each categorical type but different groups with differing cultural capitals may categorize them differently. Some believe that communities with more private built capitals foster greater innovation and others believe that communities should have more common poll goods to ensure that every individual in the community can reach their potential. (Flora & Flora, 2008)

An interesting research question is determining the shift of goods and services between the four types of built capital in a given community over time. For many rural communities, building and maintaining built capital has become a challenge. Much of the original rural infrastructure was built in 1930's (post-depression) through the 1950's (Post World War II) and now is becoming either obsolesced and/or in dire need of repair. At times, there is insufficient public financial capital to repair or replace the collapsing infrastructure and private financial capital is utilized. This gives rise to privately held public utility companies that can operate under monopoly conditions. These public monopolies must be regulated to ensure equitable and affordable access. Some communities will use public built capitals to generate income from other communities requiring the good or service. An example would be a local police force providing security for a neighboring community for a fee.

Four important built capitals for a rural community would be clean water, liquid and solid waste disposal, transportation and telecommunications. Water, along with air, has long been considered a common-pool capital, available to all with joint consumption attributes. As supplies of good clean potable water becomes scarce, this is no longer true. Lack of water is first a community issue before it becomes a regional, national and international issue. Waste disposal in rural areas is problematic as rural areas are perceived as waste sinks for the urban areas and rural communities often process and dispose of more waste than they produce. Transportation, especially public transportation, has been negatively impact in rural areas. Most rural areas do not have access to any external public transportation as railroads tracks are being removed and regional airports are closing. The one built capital which could have a pronounced positive (or negative) impact on rural communities is telecommunications. The deregulation of telecommunications in the 1990 was intended to increase competition and allow small rural telecommunications to enter the market but that has not occurred. It is unlikely the rural telecommunications will improve without federal and state government involvement.

MOVING TO AN ANALYTIC FRAMEWORK

Through analysis and research into the CCF, I believe it to be sufficiently robust to serve as a model for sustainable development. It includes environmental concerns, economic growth issues, equity among community members and an underlying theme of positivism. It is also a model for change and how change can occur in rural communities. It can be used for systemic evaluations to measure progress towards sustainability. (Emery & Flora, Spiraling-UP: Mapping Community

Transformation with Community Capitals Framewrok, 2006) The CCF model also has a greater reliance on human interactions in a social context and very little emphasis on technological or scientific innovations. The invocations would be a product of the community development under the CCF model and not a required input. The seven capitals do define Dasgupta's productive base for intergenerational capital endowment required for sustainable development.

Future work would look at analytic methods and a few case studies where the Community Capitals Framework was used to create enhance community well-being or solve complex problems within the community. Analysis of these methods and case studies should allow for a description of a methodology for enabling rural sustainably and developing policy to enhance sustainability. If this is possible than these polices would be rooted in a democratic grass roots process that is at heart of community development. Policies generate in this manner are more likely to succeed since they are created by the community and for the community. Buy-in should be assured if the CCF process is applied correctly.

The literature on sustainable communities often focuses on urban communities. Given the greater population density and resource demands of urban communities, it is prudent to consider how urban communities can become more sustainable. The reality is that urban communities can practice sustainable development but cannot reach sustainability, they lack the necessary resource base to do so. Without rural communities, urban communities cannot exist. Rural communities provide many of the resources necessary to sustain an urban center. Food and water are rural natural resources and well as wood, stone and most other natural capitals required to build the cities. The human capital in most cities is often rural transplants. Given the urban dependencies on rural communities, sustainable development cannot exist without sustainable rural communities. However, the literature on sustainable development for rural communities is lacking and for many rural communities, sustainability has become a challenge.

There has been no greater challenge for rural communities than globalization. As the world gets smaller and international trade becomes more commonplace, rural communities are facing new and profound challenges. The concept of place, a key component of rural communities, is lost in the financial manipulations of the modern economy as financial and human capital becomes increasing mobile. The social fabric of rural communities is ripped apart by displacement of entire economic sectors to developing countries where lower wage standards produce greater returns on increasing mobile capital. Human capital moves away from rural areas as economic opportunity diminishes. Natural capital, which is tied to place, often existing in abundance in rural areas is

quickly being appropriated and depleted by urban centers and, in the case of rural areas in less developed nations, appropriated by more developed nations.

The plights of rural communities are many and well known. Rural sociologists and community developers know of these issues and have been developing tools and techniques to assist rural communities. One of these tools is the Community Capitals Framework (CCF) developed by Jan and Cornelia Butler, rural sociologists from Iowa State University. The CCF was analyzed in a previous paper and found to have great resonance with the sustainable development tenets of the Brundtland Commission Report and many sustainable development researchers, particularly Dasguptas, Baties and Peirce. (Gauvin, 2011) The intent earlier sections of this paper was to assess the CFF usefulness in evaluating and/or enabling sustainable development in rural communities. Now, we seek to make connection between CCF and community development practices to develop a process and methodology for rural communities to embark on sustainable development and provide rural community an evaluative tool to assist in their sustainable development efforts.

Community capitals are resources in a community used to create new resources. In the Community Capitals Framework (CCF), seven capitals are indentified and placed in order for useful analysis; natural, cultural, human, social, political, financial and built. (Flora & Flora, 2008) These capitals are complimentary and overlapping. If one type of capital is emphasized over the other capitals, then the others will be compromised in effectiveness. Communities are analyzed with the CCF models through a system approach by identifying capitals (stocks) and capital investments (flows), interactions between capitals and impacts to capitals. (Emery & Flora, Spiraling-UP: Mapping Community Transformation with Community Capitals Framewrok, 2006) Community resources can classified in more than one capital category. The following diagram provides a visual indication of these interactions and relationships between the seven capitals.

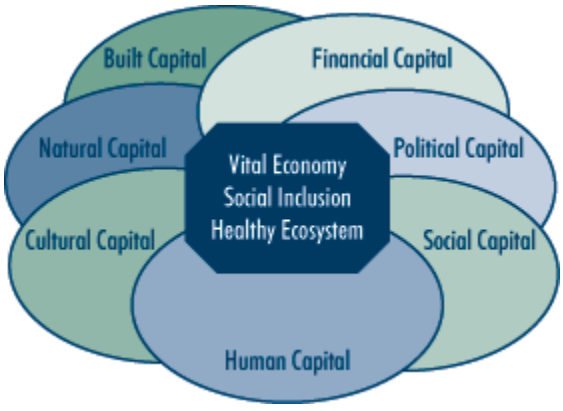

Figure 3. Community Capitals (5th Annual Community Capitals Framework Institute, 2008)

To make the connection between the CFF and sustainable development, there must an understanding on what constitutes sustainable development. Since publication of the 1987 Brundtland Commission Report, the meaning of sustainable development has been contested in the research literature. The researcher, cited more often than others in sustainable development, is Herman E. Daly. Using Daly's definition, sustainable development requires the satisfaction of three inter-related problems.

These are maintaining: (1) a sustainable scale of the economy relative to its ecological life support system; (2) a fair distribution of resources and opportunities, not only among members of the current generation of humans, but also among present and future generations (and even in some formulations among humans and other species); and (3) an efficient allocation of resources over time that adequately accounts for natural capital. (Daly, Toward some operational principles of sustainable development, 1990) (Norton, Costanza, & Bishop, 1998, p. 194)

The three concerns can be summarized as intergenerational equity, intragenerational equity and an economy that is scaled correctly for the ecology and accounts for natural resources. The equity concerns are manifested in the social, cultural and political capitals of the CCF and the scale and natural resource issues can be part of the natural, financial, built and human capitals. Observance of the amount of stocks of these capitals as well as the flows between them can provide an indication of the possible success of sustainable development efforts and polices in a rural communities.

The process and polices of sustainable development in rural communities are often the products of community development. The next section of the paper, the four most common approaches to community development are analyzed within the context of the community capitals frameworks. The intent of this paper is the paper to provide an analytic method for determining how well a rural community is progressing towards sustainable development by integrating the community capitals framework model, community developments models and a qualitative method for evaluating progress towards sustainability. The method will evaluate the capital accumulations or depletion of the seven community capitals as well the flows between them. The community

capitals framework was discussed in a previous paper (Gauvin, 2011), community development methodologies are discussed in the next section and an evaluative model for analysis follows. Finally, using a combination of the CFF, community development and the evaluative model, a course of action for sustainable development will be theorized for Fort Kent, a small rural community in Northern Maine.

COMMUNITY DEVELOPMENT METHODOLOGIES

Community development seeks to enable positive change in a community through building of collective agency of the community members. The goal of community developers is to help citizens of a community, through collective agency, solve common problems and contribute to a greater quality of life for all members of the community. (Flora & Flora, 2008) The largest and most active professional organization of community developers is the Community Development Society International which outlines its goals in its principles of good practice. When looking at these principles, there is great overlap with sustainable development as defined by the Brundtland Commissions with the major difference that sustainable development is often viewed as a goal and community development as a process.

Principles of Good Practice

We believe that adherence to the Community Development Society's Principles of Good Practice are essential to sound community development.

Promote active and representative participation toward enabling all community members to meaningfully influence the decisions that affect their lives.

Engage community members in learning about and understanding community issues, and the economic, social, environmental, political, psychological, and other impacts associated with alternative courses of action.

Incorporate the diverse interests and cultures of the community in the community development process; and disengage from support of any effort that is likely to adversely affect the disadvantaged members of a community.

Work actively to enhance the leadership capacity of community members, leaders, and groups within the community.

Be open to using the full range of action strategies to work toward the long-term sustainability and well being of the community. (Community Development Society)

There are four major approaches employed by community developers when engaging with a community. The goal of the community developers is to be a change agent and each approach defines a *different role for the change agent, a different orientation to task versus process, different clientele, a different image of the individual, a different conception of the basis of change, a different core problem to be solved and a different action goal.* (Flora & Flora, 2008, p. 349) The four choices are the technical assistance model, conflict model, self-help model, and, recently borrowed from organizational development theory, appreciative inquiry.

TECHNICAL ASSISTANCE MODEL

The technical assistance model is communities engaging with experts, often from away, to solve a specific problem or implement a specific outcome. The focus is always on solving the problem and or completing the task along previously established criteria. This model is outcome driven and process independent. The funding for employing the expertise is often the results of a grant opportunity or, in some cases, a private investment source. There are many occasions where the grant opportunity drives the desired outcome. For example, if there is a Community Block Development Grant (CBDG) opportunity for revitalization of neighborhoods with high percentages of foreclosed homes, a community may elect to hire an expert to develop and administer a program to revitalize a failed sub-development in the community in order to leverage that funding opportunity. Once the task is completed, the relationship with the expert(s) is often dissolved.

The technical assistance model can add to the stock of community capitals depending on the nature of the engagement and the outcomes. The process, not the outcome of using the technical assistance model rarely adds to community capitals since it is not an inclusive process. Outcomes of the model however, can have many positive impacts. If the task was infrastructure related, it can increase built capital. If there is knowledge transfer between the experts and local community members, there will be an increase in human capital. If the project is well chosen, say, for example, a child care center, the community may experience growth in several capitals. By creating jobs, the child center increases financial capital. By constructing a new building, it increases built capital and by providing a place for young parents and their children to interact, the center would increase social and human capital. (Flora & Flora, 2008)

Communities employing this model may be doing so because they have a deficit of human capital, lacking anyone with the skills and expertise locally to perform the desired task. There may be also a deficit of social capital, if the expertise does exist in the community but it is not being engaged from lack of awareness of the resource or lack of civic engagement from the resource. Often the decision to employ an expert from away is made by only a few members from the leadership component of the community, usually members of a government bureaucracy, suggesting that access to political capital within the community is limited. This model, when serially successful, tends to maintain the political and cultural status quo.

Generally, employing the technical assistance model does not help a community become more sustainable, it lacks any holistic component and seeks to solve singular issues and problems. The local residents in the community are not engaged in this process and it reinforces local power structures, more so, when there are excluded groups within the community. This model does not address local equity issues unless equity was a desired outcome of engaging with the experts. The use of the technical assistance model declined rapidly in the American south staring in the 1960's, possible as a results of the civil rights movements. (Flora & Flora, 2008) This model is still prevalent in rural northeast communities like the town of Fort Kent which will be discussed later in the paper.

CONFLICT MODEL

The conflict model replaced the technical assistance model in many urban communities beginning in the 1930's. The first recognized implementation of the conflict model was in Polish neighborhoods in Chicago and it soon spread to the black sections of Chicago, Rochester, New York, Boston, and the two Kansas Cities. (Flora & Flora, 2008) It continues to be used in many communities as excluded members of the communities organized, often with the help of outside community organizations, to either contest a proposed project or to advocate for social reform. Saul Alinsky, the organizer in the Chicago Polish neighborhoods, is seen as the father of the conflict model and went on to train other social reformers like Cesar Chavez, the founder of the United Farm Workers. (Flora & Flora, 2008)

The assumption in the Conflict model is the political power in communities traditional rests with the social elites and for excluded citizens to gain power, they must seize power. This is an indicator of low bridging and bonding social capital. Often the excluded citizens lack financial and political capital but they are able to leverage cultural and social capital to gain both.

"*The goal of a conflict approach is to build a people's organization to allow those without power to gain it through direct action. Since organizations of the powerless do not have significant Monterrey resources, the must rely on their numbers. Their numerical strength is realized only through organizational strength."* (Flora & Flora, 2008, p. 354)

As a result of employing a conflict approach, communities become more participatory and democratic, increasing both bridging and bonding social capital.

Employing the conflict approach in rural communities brings special challenges. Often the culture of a rural community does not value conflict, which is seen as disruptive and unseemly. In rural communities, the conflict model is best employed when rural communities are impacted by sources outside the community seeking to make undesired changes to the community. Members of the rural community organize to attempt to block or subvert the change viewed as injurious to the community. (Flora & Flora, 2008) An example would be the communities in rural Maine attempting to block construction of telecommunication and wind towers in their communities.

Implementing the conflict approach in a rural community requires five steps.

1) The entry into the rural community of an outside organizer, often at the request of community members, to assist the community to form organizations and embark on useful direct actions. Often, rural communities will lack the social bridging capital to self organize and the outside organizer can facilitate the necessary changes.

2) Build grass roots organizations and coalitions to give voice to those members of the community that are often outside of the local power structures.

3) Engage in direct action by exercising the power of large numbers of concerned citizens working together to a common end. The successes from these direct actions will begin to legitimize these grass roots organizations.

4) Formalize the grass roots organizations into permanent institutions to ensure permanence of the gains acquired and acceptance of the organization into the local power structure, gaining both social and political capital. (Flora & Flora, 2008)

Self-help Model

The self help model is process oriented and less focused on outcomes but focused on the manner in which the outcomes are derived. The model is people focused and centers on the community working together to solve problems and take actions on group decisions. The self help model originated as results of two factors; the first was when the response of the political elite to the conflict model rose to violence and the second when the weak financial condition of the federal and state governments lead to cutting of programs that "*addressed safety nets and redistributions of existing programs.*" (Flora & Flora, 2008, p. 357) The self help process enables a shared community vision of the future through building of civic capacity of collective action. (Flora & Flora, 2008)

The self help model, like the conflict model, seeks to bring positive systemic change to a community but unlike the conflict model it is an attempt to institutionalize change as a process and is not merely a response to an undesirable condition. Communities employing the self help model will build permanent institutions and organization that facilitate the building of community relationship in order to pursue the shared vision of the future. Community developers become facilitators, helping the community to build the social fabric necessary to maintain the relationships necessary for this model and cease to be viewed as experts from away.

Some key assumptions of rural communities that employ the self help models is that they are homogenous or near homogenous and decision making in the community is based on a democratic process to reach consensus on issues. There must also be a high degree of autonomy in these communities so the collective action required of the self help model will succeed. These communities will have a high degree of social and political capital and the cultural capital will support participation and civic engagement. If these capitals are lacking and there are inequities in the community, the conflict model may be more likely to be employed. (Flora & Flora, 2008)

The self help model is usually implemented using the social action process facilitated by a community developer. The social action process enhances social capital and will work within the constraints of the political and cultural capitals of the communities. There are multiple steps to the social actions process and not all steps are necessary for all scenarios. All steps are to be performed using a collaborative, inclusive process. Some key steps are as follows:

1) Visioning – the community residents frame a common view of the future of their community and determine long term goals

2) Asset Mapping – determine the existing resources and assets available within the community. The discovered assets are then analyzed to determine impacts

on long term goals. The community capitals framework provides and valuable taxonomy for this exercise.

3) Project Identification – identifying specific projects that that can be implemented using the discovered assets that enable the long term goals identified in the visioning process. If assets are lacking, exploring external resources that can be leveraged to enable project implementation

4) Generate Community Commitment to identified projects – after projects are selected the community at large must commit to completion of the projects

5) Implementation planning – this process may require the aid of outside experts

6) Actualization – perform the identified projects using the implementation plan

7) Evaluation – measuring and assessing of the impacts of selected projects towards the long term goals established in visioning phase and determining if the visioning process and the social action process should be reestablished. (Flora & Flora, 2008)

APPRECIATIVE INQUIRY (AI) APPROACH

The Appreciative Inquiry Approach has only started to be used in community development in last decade or so and it comes from business leadership body of knowledge. Appreciative inquiry builds on existing community capitals and focus on what already works in a community. The three previous models are oriented to community deficits; AI is oriented towards community strengths. The AI model requires conversations between community developers and the local populations to determine what works best. Community developers using the AI approach become co-learners and help to co-construct community visions. AI recognizes that learning from others within a social organization is critical in understanding how the organization works. The conversations leverage human capital to build social capital. The learning is done through *the power of storytelling, the need to recognize the wisdom of others, the importance of curiosity in our quest for doing better and the primacy of conversations and dialogue.* (Flora & Flora, 2008, p. 362)

The term Appreciative Inquiry was first coined by David Cooperrider and Suresh Srivastva of Case Western Reserve University in Cleveland in 1987. It is based on action research but differs in that AI has an affirmative emphasis. Action research and AI are transformative processes for

studying human systems, realizing that change occurs when a human social system is being studied or researched. Those studies should reinforce the desired change by utilizing the subjects of the study as active participants in the research. AI is based on five guiding principle and has five implementation steps. (Fitzgerald, 2003) The guiding principles are as follows;

1) ***The constructionist principle*** *- Human knowledge and organizational destiny are interwoven. The way we know has a direct effect on what we do.*

2) ***The principle of simultaneity*** *– Inquiry is intervention. Change begins with the first questions we ask and the questions we ask determine what we find. Stories elicited by our questions become the scaffolding for conceiving and constructing the future. The emphasis in Al rightfully belongs on inquiry and the questions we craft have profound implications for changes in social practice. All questions do not seek "right" answers, but rather they generate conversations that seek out the "essential goodness" of the system as a platform for creating an even "better" system*

3) ***The poetic principle*** *– This principle shifts the metaphor of organization as machine to that of organization as text. Like a poem, the Bible, or a Shakespearean play, any human system is subject to endless interpretation. The story is constantly being rewritten through our shared interpretations. We can look into the system with any lens we choose. We can look for what is going wrong or what is going right and the greater gains are made when the means and ends of inquiry are aligned. Therefore, if we seek to increase employee retention, e.g., it makes sense to inquire into why people stay in our organization rather than focus on employee turnover.*

4) ***The anticipatory principle*** *– Our greatest resource for generating constructive organizational change is our collective imagination and discourse about the future. An anticipatory view of organizational life posits that the image of the future is a guiding force in organizational life. Considerable research from such diverse areas of study as medicine, sports psychology, education, and sociology support the relationship between positive imagery and positive action.*

5) ***The positive principle –*** *Language matters. The many applications of Al in diverse settings demonstrate that the more positive the inquiry the more it* endures. *When we inquire into those times when we are at our best, most successful, or most energized, people are drawn together. The positive data that emerges from such*

inquiry inspires people to form networks of collaboration to build on their strengths and reach for their dreams. (Finegold, 2002, pp. 237-238)

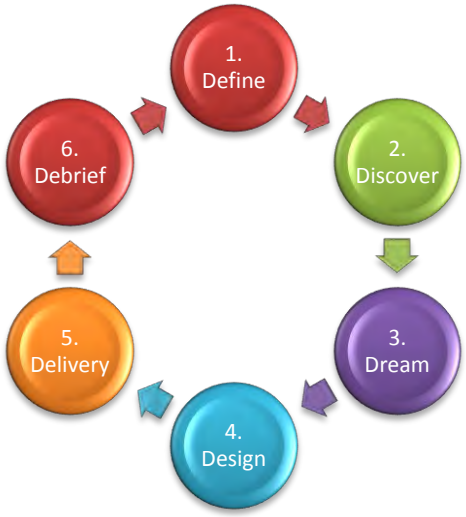

Figure 4 APPRECIATIVE INQUIRY PROCCESS FLOW

To implement the Appreciative Inquiry methodology in community development, you proceed through six interactive and sequential stages as shown the Figure 2 above. The **Define** Stage is used to decide the focus of the AI application. The focus should be on issues that community recognizes as needing change. The **Discover** Stage seeks to identify what is already working well within the community. It determines the community's positive core. In the **Dream** Stage, the participants in the AI process try to envision the community's future as a collaborative exercise and then create a shared vision for the future of their community. The **Design** stage finds new and innovative ways to create processes, methodology, institutions and outcomes to enable the shared vision of the future. The process would be implemented in the **Delivery** stage along with methods to sustain the envisioned change. The final stage is the **Debrief** stage which includes a celebration and reinforcement of the successes of the specific AI implementation along with measurement of the community capitals and progress towards the shared vision for the community. (Flora & Flora, 2008)

Using the appreciative inquiry model with the community capitals framework allows the community members to see the interactions between the community capitals and to understand how they can build sustainability within their community. The process takes longer to implement

than previous methods but the returns are also greater. It moves beyond the asset mapping approach of the self help model and shows how assets can be improved through appropriately selected processes. It also provides a historical record of the changes to the community capitals over time allowing determination of how well the intergenerational component of sustainable development is satisfied. The change in the community capitals is often depicted as "*spiraling up*" or "*spiraling down*" as shown in following diagram. A community spiraling up would be seen as more sustainable than one spiraling down. (Emery & Flora, Spiraling-UP: Mapping Community Transformation with Community Capitals Framewrok, 2006)

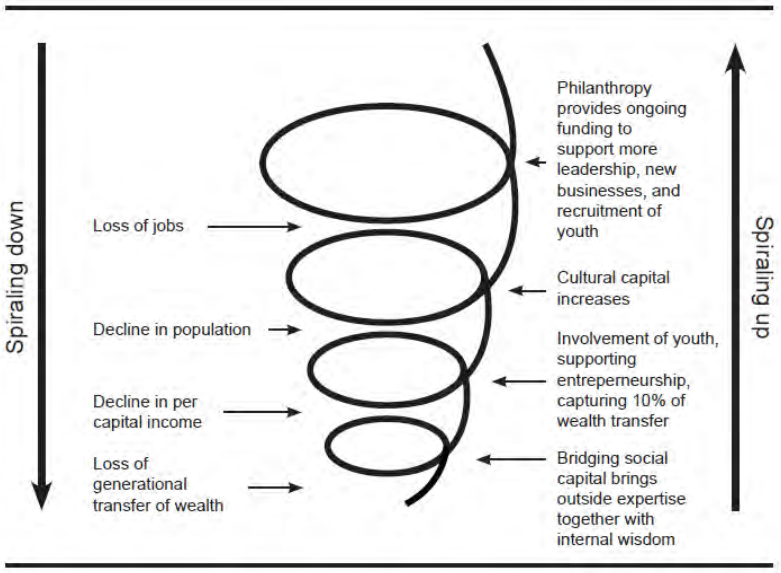

Figure 3 The Spiraling of Capital Assets (Emery & Flora, Spiraling-UP: Mapping Community Transformation with Community Capitals Framewrok, 2006, p. 22)

AN EVALUATIVE TECHNIQUE FOR RURAL SUSTAINABLE DEVELOPMENT

In 2003, the North Central Regional Center for Rural Development, NCRCRD, was engaged by the Claude Worthington Benedum foundation to conduct a study on the effectivity of community and economic developments in rural communities with populations of less than 10,000 people. The intent of the study was to determine how external financial investments affected community and economic development. The NCRCRD developed an assessment metric based on the Community Capitals Framework to measure how the external funding impacted the community capitals. (Fey, Bregendahl, & Flora, 2006) While the intent of the study differs from the intent of this paper, the

robustness of the model generated in the study can be leveraged to create an analytical model and assessment metrics for rural sustainable development.

There is difficulty in measuring the amounts or size of each community capital stock due to the overlapping nature of capitals in the CCF. Indentified assets can be part of more than one community capital. For example, assets can be both natural capital and financial capital if the natural capital asset is exploited for revenue or assets increasing social capital can also increase human and political capital. Natural capital varies from rural community to rural community since many rural communities are established to take advantage of particular natural resources such as a forest for a logging time, a deposit of coal for a mining town and proximity to a good harbor for a fishing village. (Fey, Bregendahl, & Flora, 2006) In terms of the material capitals, natural, built and financial, every community is unique and composition of each material capital affects the four human capitals, social, human, political and cultural, within the community. (Gutierrez-montes, Emery, & Fernandez-Baca, 2009)

The evaluation method used in the NCRCRD study was to evaluate how an investment made into a rural community into one of the community capitals affect the all the community capitals. The analysis required assessing the community capitals before and after the investment to determine change. The change in community capitals are assumed to be the outcomes of the community development effort established by the initial investment. A successful community development effort is one that is seen to create increase in the community capitals and "*contributes to healthy ecosystem, social equity and empowerment and vibrant regional economics.*" (Fey, Bregendahl, & Flora, 2006, p. 11) The process model for the research is shown in figure 4.

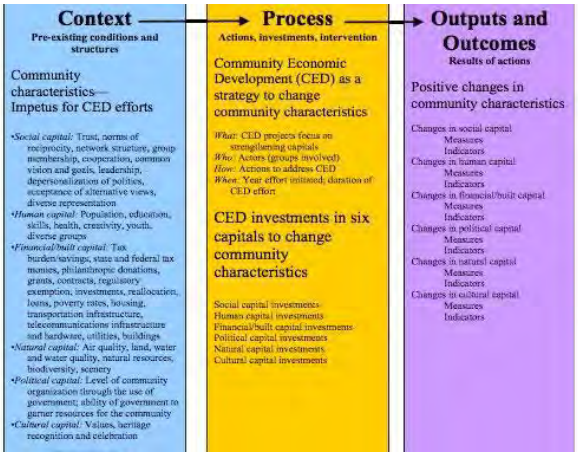

Figure 4 NCRCRD Research Model

The NCRCRD research model establishes specific indicators for measurement of the community capitals as preexisting conditions and structures. Outcome oriented measures are created for assessing the community capitals as outputs and outcomes. The need for specific measures in this study was to compare different communities to each other on how effective the communities were in leveraging the external investment. This requires a common set of metrics for statistical analysis. The differences in capital compositions, however, did not allow for direct comparisons between communities. No two rural communities have the same distribution of community capitals or the same affinity towards a particular optimal distribution. In the end the study divided communities into three categories, high, medium and low, and sought to determine commonalities among the higher communities and the lower communities to determine identifiable success factors. A listing of the factors discovered by this research study is given below (Fey, Bregendahl, & Flora, 2006)

"Higher" Outcome Communities

- *Articulate a long-term, unifying vision;*
- *Are interested in projects that meet long-term community outcomes;*
- *Write a strategic plan to begin CED efforts;*
- *Pursue projects leading to collective gains;*
- *Have completed projects showing the ability to get things done that can bring new funding opportunities;*
- *Often target CED actions to extend beyond the economic sector;*

"Lower" Outcome Communities

- *Lack a long-term, unifying vision;*
- *Are interested in projects that meet short-term project goals;*
- *Write a strategic plan during or after CED efforts, instead of at the beginning;*
- *Pursue projects leading to individual gains;*
- *Are often in the process of completing projects;*
- *Often limit CED actions to address the economic sector;*

• *Rely on catalysts other than the economy to galvanize CED efforts;*	• *Rely on loss of businesses or economic downturns to catalyze CED efforts;*
• *Primarily form new groups for the CED effort, showing an innovative spirit;*	• *Primarily form new groups for the CED effort, showing an innovative spirit;*
• *Sometimes use pre-existing groups to promote the CED effort, showing use of existing organizational assets;*	• *Sometimes use pre-existing groups to promote the CED effort, showing use of existing organizational assets;*

Table 1 Critical Success Factors

(Fey, Bregendahl, & Flora, 2006, pp. 16-17)

For this paper, the intent is to provide a method for a single community to determine the success of the community's sustainable development efforts so there is not need for a common set of metrics to measure community capitals. Comparability between communities is not necessary or even valuable, since each community starts off with a unique set of community capitals. Programs for sustainable and community development are often based on the uniqueness of the composition of capitals. The results of the NCRCRD research study are of use, particularly since the process model describing the measuring the community capitals, the analyzing the capital flows initiated by the various programs and processes, and then the reassessing the community capitals can also be used to measure progress of sustainable development efforts. The critical success factors in Table 1, determined by the NCRCRD study, can also act as key indicators for the rural sustainable development evaluative model.

Similar to the NCRCRD model, the Rural Sustainable Development Analytical Model, RSDEM, will have three process steps. The first step will be to measure the community capitals as viewed by community residents. The process requires an inclusive method for gathering the information and will utilize and an action research methodology. The preferred method would be use the Appreciative Inquiry model but some communities may have deficiencies in political, social or cultural capital to preclude using this approach. If so, another method of participatory action research may be used. The community members will catalogue assets within the community using an asset mapping technique and assign the assets to one (or more) of the community capitals. Each

asset within each capital will be assigned a weight of high, low or medium, determined collectively, signifying the value of those assets to the community. By engaging in a collaborative participatory process, community members begin to build bridging social capital and gain awareness of the community's cultural capital. This process should take than one meeting to accomplish in hopes that the participants will take the time to validate their thoughts with other community members. At the end of the exercise, the list of assets grouped by community capitals with their assigned weights should be posted in a public location. An example for natural capital is given below.

Natural Capital Assets in Our Town	
Copper deposits in Green Mountain	medium
Forest on Green Mountain	high
Clear flowing mountain streams	high
Native brook trout	high
Large populations of black fly	low

Table 2 natural capital assets

The second process step would be to analyze the capital flows associated with a planned or proposed community, economic or sustainable development projects, processes or policies. Flows should be identified as originating from outside the community or interior to the community and terminating inside or outside of the community. Indentified flows can originate from more than one capital and terminate in more than one capital. The impact to the amount of community capital stocks caused by the flows should also be indentified but it is not necessary it be done with strict mathematically certainty. A comparative assessment of the size of the flow is sufficient and words like lots, little, more or less are adequate descriptions of the impact to capital stocks. For example, a proposal to leverage a CDBG grant with existing town funds to create a new sewage treatment plant could generate the following flows can be describe as; "A large flow of financial capital from outside the community and a smaller flow of financial capital from inside the community used to slightly increase the built capital of the community and greatly increase the natural capital of the

community. “ This exercise is best accomplished as a brainstorming exercise involving community residents that are professionally involved with each of the particular community capitals.

The third process step would be to aggregate the indentified flows and determine the impacts to the community capitals that would occur if those proposed project or process were implemented. The resulting compositions and distribution of the resulting community capitals are then assessed on predetermined critical success factors, such as indentified in the NCRCRD and other studies, and the three tenets of sustainability determined earlier. The three tenets of sustainability can be satisfied in the following manner

1) Intergenerational equity

    a. Intergenerational equity would be evidence though increases in total stocks of community capitals allowing for a greater production capacity for future generations.

    b. Given the complementary nature of the capitals capital framework, increase in the total stocks cannot be at the expense of particular stock. The variability between amounts of the different stocks should also decrease. Balance counts.

    c. Any perceived deficiencies in one or more particular community capital identified in phase one should have been mitigated.

2) Intragenerational equity

    a. Intragenerational equity would be evidenced by increases in bridging social capital.

    b. There should a transformation of political capital to become more inclusive of community residents.

    c. There should be greater awareness of cultural capital.

    d. There should be increases in Human capital

3) Protection and conservation of natural resource base.

a. The should be no decrease in natural capital (strong sustainability)[1]

b. (or) Any decrease in natural capital should be offset by increase in built capital (weak sustainability)

The three phases of the RSDEM model can be extended to become as assessment tool for implemented projects by comparing the resulting stocks of community capitals after a project implementation to what was determined in phase three of the RSDEM. By doing so there are two possible outcomes. The first is that the resulting community framework stocks match to what was anticipated; validating both the project outcomes and the RSDEM process. The second possibility is that they do not match. This suggests that either the project outcomes where not met or that the model did not accurately portray reality. If the resulting community capitals are more favorable that what was anticipated, the project can be deemed successful but the RSDEM model must be analyzed for deficiencies. If the resulting community capitals are less favorable, then the project outcomes are suspect and both the project and the RSDEM model should be analyzed. Results from further analysis of the RSDEM model should be integrated into the model for future use so the model will can value over town.

SUSTAINABLE DEVELOPMENT AND FORT KENT, ME

The usefulness of the RSDEM model has not been tested and it is anticipated the model may be used in conjunction with the comprehensive planning progress currently being initiated in the rural community of Fort Kent. The following proposed scenario will show how the community capitals framework, appreciative inquiry and the RSDEM model can help Fort Kent becomes more sustainable and engage in successful community, economic and sustainable development projects. Part of the methodology being suggested for this scenario is taken from *Using Community Capitals to Develop Assets for Positive Community Change* published in CD Practice and written by Mary Emery, Susan Fey and Cornelia Flora, all from the North Central Regional Center for Rural Development. (Emery, Fey, & Flora, Using Community Capitals to Develop Assets for Poistive Community Change, 2006) The methodology suggested here differs from the NCRCRD strategy since it is specific to Fort Kent, has sustainable development and not community development as its core and uses the RSDEM model as an assessment tool. The contributions of the NCRCRD methodology to this work is recognized and appreciated.

[1] It is important to note that there is no distinction in the community capitals framework between renewable natural resources and nonrenewable natural resources.

Fort Kent, ME is a rural community situated at the confluence of the Fish River and the St. John River in the northernmost region of Maine. Logging was the reason for establishing the community as the two rivers was the major transportation highway for the logs to travel from the forests to the mills situated along the Fish and St. John Rivers. Early in the 1800's, the area where the town is located was contested territory between British Canada and the United States, both nations wanting exclusive access to the softwood timber in the area to build ships. Fort Kent was established by the United States as a fort overlooking the junction of the two rivers to prevent Canadian loggers from entering the area. The boundary dispute between the two nations was settled in 1842 by Webster-Asburton which designated the St. John rRver as the boundary, making Fort Kent an American town.

The forest industry remains a key contributor to the economics of the town along with potato farming. Agriculture and forestry where the major employers in the community into the 1970 but today the major employers in community are the Northern Maine Medical Center, NMMC, and the University of Maine of Fort Kent, UMFK. Both farming and forestry in the area have become industrialized and human labor has been replaced by large machinery in those enterprises. There are active secondary markets supporting the forestry and farming industry with the sale and support of machinery and large trucks. Fort Kent also supported a textile industry for many years but the industry has become a victim of globalization and cheap overseas labor

The population of the community, as in many rural communities, is shrinking and ageing. The young men in the community go work in the woods, join the military, learn a trade or pursue a college education after graduating high school. Those that pursue a college, many at the University of Maine at Fort Kent, either return to Fort Kent to work in a family owned business or leave for the urban centers of Bangor, Portland and Boston. Many of the young women graduating from high school pursue higher education, to a much greater degree than the young men. There is little economic opportunity for uneducated young females as both the woods and farming industry are exclusively male. A common scenario in the community is that a young educated female will marry a young man working in the woods and seek a job at either NMMC or UMFK. Her job provides the benefits for the family and his job provides the higher income with little to no benefits.

Fort Kent in a civically engaged communities with many fraternal social organizations, the most active being the Lions Club, the American Legion and the Veteran of Foreign Wars. There is social stratification by the fraternal organization as the business and professional people join the Rotary, mid-management and trades people join the Lion Club and the lower socio-economic strata

participate heavily in the veterans' organizations. There is some mobility between the socio-economic classes and upwards mobility is achieved through education or entrepreneurial success. Downward mobility also exists and many community members participate in more than one organization afflicted with differing class structure. The culture of the area supports individuals who associate down the socio-economic ladder, maintaining ones prior associations after moving up the ladder is generally met with favor There is only one active female civic organization and that is Business and Professional Women Club and it has women business and civic leaders among its members. The only organization that actively recruits younger members is the Lion's Club.

Currently there are many indicators that Fort Kent is facing more difficult times ahead. A key indicator is raising property taxes, which for some community members has doubled within the last five years. The reason for the increases is twofold; there is a shrinking tax base and an increase demand for public services and infrastructure. The largest component of the municipal budget is for primary and secondary education. The number of students in the school is decreasing but the costs are rising. There are reconsolidation efforts underway but the debate about which school the close and which towns to consolidate are radically polarized. The budget for the school system is developed separately from the municipal budget and is controlled by the local school board. Membership on the school board is generally more contested than a seat on the town council. The flowing table 3 shows Fort Kent's tax commitments for the last 20 years.

Year	County	Education Commitment	Debt Payment	Municipal, Etc. Commitment	Total Tax Commitment	Overlay	Total Deductions	Total Appropriations	Mil Rate	Interest Rate
1990	99,802.04	740,574.00	11,598.35	712,892.43	1,565,648.88	782.06	898,227.34	2,463,094.16	25.9	12
1991	107,794.50	750,854.82	0	811,769.18	1,676,969.54	6,551.04	972,173.05	2,642,591.55	26.8	12
1992	101,786.90	776,152.08	0	637,336.47	1,515,367.00	91.55	925,405.74	2,440,681.19	15.1	10
1993	102,766.95	779,180.52	0	677,353.70	1,559,416.66	115.49	957,140.08	2,516,441.25	15.2	10
1994	124,304.08	786,945.63	0	660,235.21	1,587,393.11	15,908.19	921,604.83	2,493,089.75	15	8
1995	131,243.75	872,430.64	0	762,131.73	1,842,613.71	76,807.59	961,495.43	2,727,301.55	16.5	10.75
1996	132,482.77	1,019,247.51	15,999.57	800,289.83	1,996,547.27	28,527.59	968,794.35	2,936,814.03	17.9	9.5
1997	130,553.75	1,120,385.44	15,355.00	764,201.16	2,044,996.28	14,500.93	1,000,285.71	3,030,781.06	18.5	9.5
1998	124,824.00	1,177,108.04	59,426.52	694,622.39	2,146,084.58	90,103.63	1,012,160.35	3,068,141.30	18.5	8
1999	116,324.00	1,224,893.80	57,710.36	760,000.61	2,165,650.11	6,721,34	1,186,186.29	3,345,115.06	18.5	8
2000	119,400.00	1,344,664.77	55,994.20	730,310.01	2,301,432.49	51,063.51	1,295,842.35	3,546,211.33	19.3	8
2001	127,879.95	1,457,758.08	54,251.40	797,258.98	2,459,741.40	22,592.99	1,332,663.70	3,769,812.11	20.3	8
2002	147,929.45	1,473,939.30	85,766.68	845,343.43	2,619,542.38	66,563.52	1,345,847.36	3,898,826.22	20.8	6.75
2003	160,352.06	1,525,575.48	209,394.45	770,507.31	2,707,360.58	41,531.28	1,373,987.71	4,039,817.01	20.8	7
2004	164,099.55	1,616,499.08	249,010.01	855,042.08	2,889,767.14	5,116.42	1,385,644.94	4,270,295.66	21.8	6.5
2005	169,136.35	1,678,173.78	264,230.50	944,641.47	3,068,249.56	12,067.46	1,463,489.97	4,519,672.07	23.8	7.75

2006	187,920.00	1,619,423.34	292,161.67	854,578,98	2,992,493.08	38,409.09	1,513,748.29	4,467,832.28	22.8	7
2007	194,484.71	1,515,801.90	458,180.29	771,307,63	2,998,114.18	58,339.65	1,685,270.90	4,625,045.43	22.3	7
2008	207,694.00	1,603,125,00	428,215.00	701,792.78	2,971,711.67	30,884.89	1,822,308.86	4,763,135.64	14	7
2009	213,575.00	1,798,758.00	186,045.00	877,885.28	3,077,684.38	1,421.10	1,702,488.29	4,778,751.57	14.4	6
2010	212,901.30	1,948,355.00	228,870.00	1,161,739.10	3,619,536.53	67,671.13	1,418,424.90	4,970,290.30	16.4	7

Table 3 Fort Kent tax Budget

Fort Kent's increased tax liability has more drivers than just the education budgets and includes debt serving for bond issues to improve roads systems and diminishing state and federal support. The shrinking tax base has been caused by industry leaving the area. The largest property owners in the town are NMMC and UMFK, both have been purchasing properties adjacent to main facilities and taking them off the tax rolls. Many incoming commercial property developers are asking for property reductions or tax abatement in order to place a new facility within town limits. There has been an exodus of households to adjacent towns that have lower tax labiality. All these indications and the exodus of youth suggest that Fort Kent is on an unsustainable path. Fort Kent is also beginning the process of creating a new comprehensive plan by engaging a local community development consultant.

Instead of using the technical assistance model and engaging with consultant to help create a new comprehensive plan, Fort Kent should engage with UMFK's Center for Rural Sustainable Development. Implementation of the community capitals framework, appreciative inquiry and the rural sustainable development evaluative model could assist Fort Kent in producing a new comprehensive plan enabling sustainable development. The process should be spearheaded by UMFK's Center for Rural Sustainable Development, CRSD, which was established to assist the local region in sustainable development. The appreciative inquiry model is well suited to being applied in Fort Kent due to the high degree of social and human capital in the community. The process for developing the comprehensive plan should follow the six steps of the AI model concurrently with the three steps of the RSDEM model. A possible scenario with associated actions items is given the next few paragraphs.

The first phase of the process, **Define**, would be a series of open informative meetings and workshops throughout the community to help the community members understand the concepts involved in the Community Capitals Framework, Appreciative Inquiry and Sustainable Development and to allow community members to articulate community issues. Conversations

should be held to determine the key personnel in the community that are involved in each of the community capitals. See figure 5 for possible members for each community capital. These meetings and workshops would be organized by the CRSD and would use UMFK faculty and students as the facilitators. The intent is to build human capital through an educative process and build bridging social capital by engaging academics, students and community members in a common discussion.

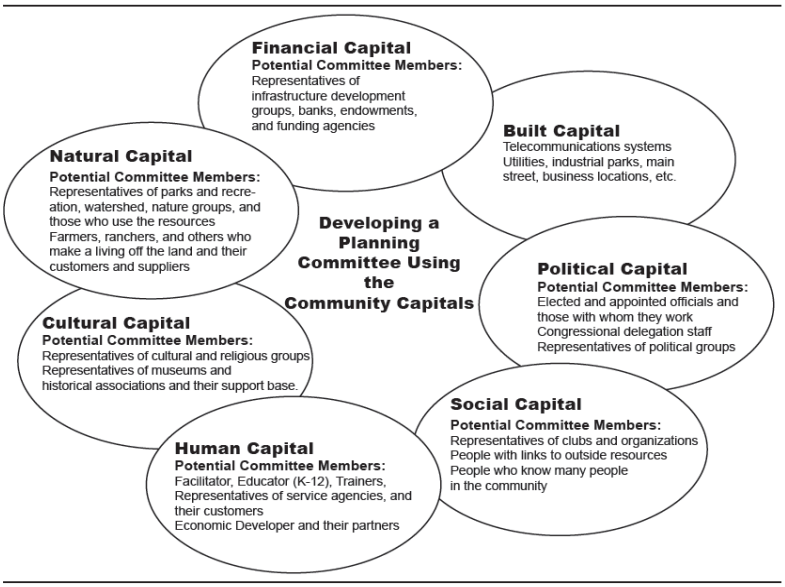

FIGURE 5 COMMUNITY CAPITALS TEAMS

(EMERY, FEY, & FLORA, 2006, P. 6)

The second phase, **Discover,** would be meetings with the personnel identified as involved in the seven community capitals to engage in an asset mapping exercise as described in the first step of the RSDEM. It is important to not the focus is on assets and not capitals; in the CCF assets only become capitals if they are engaged in producing more capitals. The identification of assets is an easier exercise for the community members and it also allows the team to determine if there assets available that are not being utilized. There are several documented methods for conducting assets mapping in community development and any of these established methods is sufficient for this process step. [2]

[2] See (Emery, Fey, & Flora, Using Community Capitals to Develop Assets for Poistive Community Change, 2006) Pages 10-12 for several good suggestions to do assets mapping.

Phase 3, **Dream**, is a visioning exercise, allowing community members to dream about the future of Fort Kent. One method of documenting community members' wishes is through interviews. The interviews can be conducted by UMFK students are by community members. The interviews would be given the asset mapping produced in step two and be asked "what you would like Fort Kent to look like, given the assets available". The answers would be collected and published for all community members to see. An opportunity to present new and alternative wishes should be allowed after publication. The phase allows community members to create a shared vision for the future of Fort Kent.

Phase 4, **Design**, would be conducted the community capitals planning groups utilized for phase two of this process. The members of the planning groups would try to determine implementation for the shared future vision of the community developed in the Dream phase. As these implementations are developed, the impacts to the seven community capitals will be evaluated utilizing the process developed in phase 2 of the RSDEM. After the capitals impacts and flows are indentified, the planning teams would engage in the third process step of the RSDEM. The results would evaluated based on the three tenets of sustainable development previously described and the critical success factors developed in the NCRCRD study (table 1). Based on the evaluation conducted in process step 3 of the RSDEM, specific implementations will be selected for actualization. The aggregated flows and impacts to the seven community capitals, determined by the RSDEM will be recorded for the selected implementations.

Phase 5, **Deliver,** develops the action plans for the selected implementations. The phase will be conducted by the same planning teams engaged with indentified experts. Specific performance indicators are created for each action plan to monitor progress as the action plan is performed. When the action plan is completed the documented performance indictors will be evaluated in the context of the anticipated impacts and flows to the seven community capitals.

Phase 6, **Debrief,** compares the predicted results from the RSCEM and actual results derived from the implementations. The results of the comparisons are make available to the community members and meetings will be held for each implementations to 1) celebrate successes, 2) discuss short-comings, 3) discuss how to improve the processes in the RSDEM and 4) determine when this process should be revisited.

The process described above for the town of Fort Kent will be lengthy and costly but will reap many benefits for the community. Hopefully there will be a funding agent to support this

effort. The benefits of this process include educating community members on how it can use internal assets to build sustainable practices which builds human capital, increased social capital by the interactions necessary for the process, a preserving and strengthen of cultural capital since the process in invested the values that the community holds and the stewardship of the natural capitals required for sustainable development. The increased social and human capital should foster intragenerational equity and the bridging social capital developed between community members and UMFK students will aid in developing intergenerational equity.

CONCLUSIONS AND FUTURE WORK

The are many positives elements in the Community Capitals Framework used in conjunction with Appreciative Inquiry for developing sustainable development in rural communities. This paper presented one possible methods, there are apt to be more. The process described in the RSDEM needs validation and refinement and it is hoped that after a few implementations the process would gain wider acceptance with rural communities. The qualitative nature and ease to implement interface with Appreciative inquiry should make the RSDEM easy to deploy. It will be harder to implement appreciative inquiry. Time and experience will tell. It is hoped that UMFK's CRSD will embark on the process with the town of Fort Kent and become the first validating implementation of process define in this paper.

The RSDEM model is useful for a community to gauge its sustainable development efforts but it is not useful as a town to town comparative assessment. It cannot determine whether town A has better sustainable development processes than Town B. Future work would be to create a rural sustainable development maturity model, RSDMM, which could be used for intercommunity comparisons. A RSDMM would use rural sustainable development critical success factors, RSDCSF, determined by communities that have used the community capitals framework in conjunction with appreciative inquiry and the RSDEM. By comparing a community to the RSDMM, a community could determine how far along it is on a sustainable development pathway.

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