Communities are critical for successful agroecosystems. In addition to increasing private profit, they provide contexts that support or discourage sustainability and processes that augment participation in the development of public goods. Further, communities are impacted by surrounding agroecosystems through the production of goods and services, as well as any changes in their production. These impacts, both physical and social, are highly interactive. It is all too easy to view the social impact as a residual category, both in terms of causes and effects of agroecosystems; however, social variables can be measured on different scales as vital components at different levels of agroecosystems. In this chapter, we will deal with community-level measures. An important part of community, which influences the context, processes, and impacts, is social capital. Social capital can be an individual, community, state, or even national characteristic. In order to understand agroecosystems and measure social impacts, social capital is usefully conceptualized at the community level.

Behaviors and decisions that impact agroecosystems are embedded in communities. A general understanding of the intersection between individual and firm decision-making becomes valuable as we identify the social system that impinges upon and is conversely affected by biological and physical systems.
Why Do People Do What They Do?

For communities and agro-ecosystems, it helps to frame a social model of behavior in terms of social control. Visually, social control is a pyramid, with a base that is comprised by a recognizable democratic formula, where social control simply conforms to norms. At the top of the pyramid is the use of coercion and force, which serves best as a threat and is rarely implemented; this formula corresponds to an old military adage related to using the least possible force in each battle in order to win the war. (See Fig. 1.)

On one side of the pyramid are positive sanctions, with negative ones on the other. Society works best when positive sanctions are used. Yet without the possibility of negative sanctions, positive sanctions are not as effective in enhancing society-approved behavior.

At this point, it is important to note that sustainability of ecosystems is not necessarily defined as a societal good. In the past, nature has been viewed as an entity to be conquered, not worked with (Gasteyer and Flora 2000a, Merchant 1980, Vileisis 1997). Thus, when we look at social control and human behavior, we have to take into account that social control mechanisms can enhance the sustainability or support the deterioration of agroecosystems.

The best mechanisms of social control are those that are practically invisible. Individuals are socialized to do the right thing: societal norms regarding interaction with the land are internalized. The culture of the firm takes pride in being “green” and delivering on the double bottom line (environment and economy). Salamon and her
colleagues demonstrated how the attitudes of the family of origin – winning the prize for conservation versus obtaining the prize for the highest yields along with the pride of getting the biggest machinery first – influence how farm managers design and manage agroecosystems (Salamon et al. 1998). Their careful ethnographic research has documented how community, which in many farming areas is coterminous with ethnicity, determines purpose of the farming. As an example, Salaman contrasts communities dominated by “Yankee Farmers” compared to those of “Yeoman Farmers” (Salamon, 1993). In dealing with different types of agroecosystems, the assumption of USDA-based programs is that people will “do the right thing” to meet society’s expectations, meaning either conservation or maximum production, if they know how. Teaching them how to “do the right thing” is the sole purpose of these programs. Of course, when those values are not shared, when the individual or firm does not want to conform, all the education in the world will not bring about change in management of the agroecosystem.

When socialization disconnects from current societal norms or incomplete internalization has occurred, e.g. the individual or firm is drawn to deviate from the norm because of short term profits or a vision of an alternative future, the next level of social control is activated: peer pressure. Because human judge their self-worth by the worth attributed to them by significant others, this can be very powerful. Initially, many farmers were hesitant to pursue no-till farming, fearing they may be labeled “bad farmers”. Integrated Pest Management (IPM), which is based on threshold densities of pests, has had difficulty being adopted because of traditional zero tolerance for weeds in many rural communities. Accordingly, gaining respect or avoiding ridicule helps convince people and firms to execute tasks that might not be internalized.
In small, static communities, where everyone knows everyone else and where the
land operator is the landowner, norms that define a “good” agroecosystem are relatively
easy to enforce. What one does is equal to what one is, and both are extremely visible –
unlike the office worker who is known more by what that worker consumes (Barlett
1993). Yet when ownership is separated from management, and when what serves the
public good is not internalized and is viewed by the dominant culture as in conflict with
private profit, the next level of social control comes in: economic sanctions. For changes
in agroecosystems to occur, groups that present alternative reflections of the individual or
firm are critical (Meares 1997, Hassanein 1999).

Economic sanctions around agroecosystems are quite contradictory in the 2002
Farm Security and Rural Investment Act (Farm Bill). On the one hand, maximum
production of a few crops is highly rewarded economically, as Federal programs reduce
both natural and economic risks through emergency programs and a variety of
mechanisms that alter loan prices and loan deficiency payments. On the other, there are
economic rewards in terms of cost sharing and direct payments for farmers who are good
stewards and provide ecosystem services. But as positive sanctions that promote
production encourage the very practices that the conservation payments try to discourage,
the result is generally one of little net gain. In fact, the dollars invested in support
payments far exceed those dedicated to conservation measures. However, communities
around agroecosystems can provide positive sanctions, such as property tax breaks or
direct payments, to encourage farmers to produce public goods through changing land
use. Accordingly, communities of interest are willing to pay higher prices for crops
produced in agroecosystems viewed as healthier for the planet.
Negative economic sanctions also impact agroecosystems. Confined Animal Feeding Units (CAFOs) that have manure spills can be fined. Landowners and managers whose ditches are filled by erosion can be charged for cleaning them out. The Environmental Protection Agency, accustomed to working with firms where management and ownership are separated, has had great success with industry by using negative economic sanctions. Indeed, after protesting loudly that requirements were far too costly to possibly implement, many firms beat the time line established by the Federal government to clean up air and water, discovering that pollution is waste that costs money and cuts into profits, which aggravates stockholders (Schultze, 1999; Richards 1997; Richards and Pearson 1998). Thus negative economic sanctions – the threat of serious fines – combined with outcome-based (as opposed to design-based) standards led to creativity and innovation by industry to protect ecosystem health (Carpentier and Bosch 1999). Sometimes the market itself imposes negative economic sanctions on ecosystem management practices seen as harmful to the agroecosystem. For example, McDonald’s has implemented strict standards for raising chickens, causing poultry growers, as part of a more intensive agroecosystem, to lose their market unless their practices changed.

Finally, there are the sanctions of force. Planning and zoning are examples of such sanctions that influence agroecosystems. Certain activities can be done in certain places, and are forbidden in others. In many states, there is serious debate around the traditional exemption of agriculture from planning and zoning, especially as agricultural production practices become more concentrated and more industrial (Tweeten and Flora 2001, Committee to Review the Role of Publicly Funded Research on the Structure of
Agriculture. 2002). Some states and counties have imposed moratoria on the construction of CAFOs, an example of using the strongest sanction possible in the case of agroecosystems.

By understanding the norms and the sanctions which influence different levels of agroecosystems, we can predict the level that change will have to be made in mechanisms of social control – voluntary (internalization, peer pressure, and positive economic sanctions) or involuntary (negative economic sanctions and any force).

Since the norms, their enforcement, and willingness to change are critical in influencing the forms that agroecosystems will take, it is important to assess the degree to which communities at various levels are open consideration of alternative agroecosystems, new ideas, and systems interactions. Social capital is a useful tool for such analysis.

### Social Capital and Context

Social capital involves relationships among individuals and groups. Those relationships can vary as to the degrees of mutual trust, reciprocity, shared norms and values, common goals and sense of a shared future. Moreover, those relationships can be very dense and internally oriented within the community (or segments of the community), which we refer to as **bonding social capital**. Conversely, they can reach out beyond the “comfort zone” to different kinds of people and groups in different places. That is referred to as **bridging social capital**. Communities can vary in both (see Fig. 2 and 3). When both are low, people are atomized, with little interest in the public good. When bridging capital is low and bonding capital is high, there is often great internal
factionalism and resistance to both compromise and change. When bridging capital is high, but bonding capital is low, a small group often controls the community, resulting from their particular outside connections that allow them to reward loyal factions of the community. When both bridging and bonding capital are high, there are high possibilities of internal collaboration, participation and openness to constantly improve the collective condition. Flora and Flora (1993) describe this as “entrepreneurial social infrastructure” (ESI).

ESI, as the community context for sustainable agroecosystems, is based on three major components:

1. The legitimacy of alternatives
2. Internal and external networks
3. Ability to mobilize resource

When ESI is high, the community and its members are able to separate means from ends. For example, instead of saying, “we need a new water treatment facility,” the discussion starts with: “We have water quality problems in terms of unhealthy levels of nitrate. What are different ways we can reduce nitrate levels?” Framing a question around the main issue, rather than presenting a ready-made “solution,” allows for consideration of ecosystem services and the cost-effectiveness of building a nitrate removal plant versus rewarding land managers and land owners who reduce the use of nitrogen fertilizer and introduce barriers to the flow of nitrate to surface water in order to change their agroecosystem.

In order to get multiple perspectives on issues, it is important to have communications and linkages both inside and outside the group and community. When
sources of knowledge on sustainable agroecosystems are not available from traditional
knowledge sources, links to alternative sources are particularly important. Kroma and
Flora (2001) reveal that when extension and input dealers did not have the information,
new networks were needed, both formal and informal. These networks are two-way, as
knowledge is both gained and shared. Further, forming new value chains for marketing
both new agricultural products (instead of just commodities) and for marketing
agroecosystem services is a critical role that will lead to the greater connectivity required
for more sustainable agroecosystems.

Ability to mobilize resources is critical for agroecosystem enhancement. Change
can occur from asset deterioration or from investment in the asset to create new
resources. The first land managers who sought innovation for more sustainable
agroecosystems found it difficult to attain credit and technical assistance to make the
“risky” shift. Off-farm people did not understand the new systems and therefore did not
support them. New alliances that supported alternative resource flows, including
establishing machinery sharing arrangements and seed exchanges for heirloom varieties,
are ways that agroecosystems are enhanced. The ability to mobilize non-farm interest in
recognizing and rewarding public goods and service production has been a powerful
force for conservation since the turn of the 20th century.

A national study of rural communities found ESI predicted community self-
development: community members and firms working together in public-private
collaborations for economic development through local initiatives (J. Flora, et al. 1997).
C. Flora found that local innovation in agriculture was related to level of ESI (Flora
1995). High ESI does not necessarily lead to more sustainable agroecosystems. Indeed,
when the connections are with high input networks, the results will be the opposite.

Farmers will ignore the indicators of ecosystem deterioration, such as the fact that no one drinks the water from the local water supply heavily laced with atrazine, because the entire community views farming row crops to the waters edge as an acceptable practice (strong internal networks), and cultural practices are supported by the commodity buyers and the input suppliers (single, strong external networks).

**Processes to Build Sustainable Agroecosystems**

Engaging in behavior to change a local situation, whether by an individual or organizations, requires *discovering* that

- The current situation is problematic
- The current situation is related to human activity and
- Alternatives to current behavior and its consequences are possible.

Once that has happened, individual, community and institutional actors can engage in mobilizing resources to bring about change. Awareness of a threatening situation at an international, national, or even state level may not lead to awareness of local issues and alternatives nor lead to local action. Discovery, learning, and engagement are intrinsically social activities. However, if discovery, learning and engagement are not widely present within a local area, action related to improving ecosystem health, while at the same time dealing with issues of social equity and economic vitality, is unlikely to be sustainable.

If social capital can serve to either enhance or detract from agroecosystem health, what can be done to promote social capital to enhance the agroecosystem? We have conducted a meta-analysis of participatory natural resource management strategies
proposed by both practitioners (in their manuals) and by theorists (in their scholarly
publications). From this, we derived eight basic processes that both build ESI and healthy
agroecosystems.

1) Context specificity

Contemporary, industrial agroecosystem management is often based on technologies
and methods that can be applied in many places simultaneously. For example, specific
agricultural technologies, such as hybrid seeds or conservation tillage, were widely
distributed to farmers as improvements with relatively little adaptation to the local
ecological, economic, and social context. While these technologies improved the quality
of life for some farmers, they also contributed to ecological and social problems by
Management Practices are assumed to be goods in themselves, rather than useful in
context. Some programs measure success by the presence of BMPs, rather than by the
actual ecological conditions achieved. This mechanistic worldview has perpetuated
industrial agriculture (Keller and Brummer 2002), where the local is overcome and
dominated, rather than promoted and adapted to.

Participatory approaches often emerge out of an effort to create development
processes deeply rooted in the local context and recognize the uniqueness of place.
Communities carry out activities, such as transect walks, where community members
traverse the various ecosystems and microclimates of their community or farm, to
understand the ecological/environmental, social, and economic aspects that make up their
community. Together, the community and outside experts identify issues, propose
solutions, and evaluate actions based on an understanding of the local context. Outside
technology may be brought in, but is adopted based on, rather than in spite of, the local
class context (Savory 1999, Pretty and Chambers 1994).

2) Involvement of diverse perspectives

Agroecosystem management tends to address problems from a narrow range of
options. It has been assumed that the only people to be involved are land managers. For
example, in designing irrigation systems, only those who practiced irrigated agriculture
were included. But water affects everyone. In Victoria, Australia, when other
stakeholders in the watershed were consulted, including mothers’ groups, housing
organizations, city officials, and recreation and sports clubs, the way the irrigation system
was designed changed radically, because shifting water use affected everything.

Often, citizens in farming communities believe they must choose between preserving
the environment and economic well-being. One either has large industrialized hog
confinement operations, or the whole industry moves elsewhere. The debates engage the
polar voices, without consideration of the alternatives between all or nothing.

Alternatives to such zero sum thinking (if you win, I lose) are not developed, and other
voices that may present less stark alternatives are excluded from the discussion. By
seeking perspectives of unconventional participants in decision making, the community
may develop other options that allow for solutions that serve multiple interests, rather
than trading off one for the other (see Freire 1970, Chambers 1983, Habermas 1979). For
example, by including elected city officials, county planners, and sports groups in
discussions about agroecosystems in the context of the county or watershed systems, new
perspectives can be gained.
Including diverse perspectives is more than having several different folks at the table who each make their case. It requires an open process where community members meet and identify major concerns and existing community assets. They then identify possible solutions for those concerns, using local assistance as much as possible. Numerous methodologies, such as cognitive maps, have been developed to facilitate group inquiry into problems and possible solutions (see Slim and Thompson 1995, and Rocheleau 1994).

3) Collective vision and focus on outcomes

When place is central to the discussion and diverse perspectives are presented that address the conditions of place, it becomes possible to develop a shared vision of what a better place would be – the desired future conditions (Lightfoot and Okalebo 2001).

A necessary component of empowering communities to approach development and management as a long term learning process involves encouraging communities to imagine desired outcomes, rather than outputs. Conventional development has been based on the construction of outputs--the physical results of activities, infrastructure and events. For instance, the attempts to alleviate poverty in the 1960s often involved the construction of infrastructure, such as roads and sewer systems. While these outputs produced countable products for the dollars spent, they often did not affect the social structures in persistently poor communities that kept poor people marginalized, disenfranchised, and impoverished. By deciding on desirable outcomes as a first stage of the project, activities can be designed, evaluated, and amended according to those outcomes, furthering the achievement of project goals (Engel 1997; Flora 1998).

4) Monitoring
Both practitioners and academics are developing monitoring systems that are applicable at the community level. Monitoring depends on community agreement on social, economic, and environmental goals, as well as on desirable outcomes of activities. These negotiated outcomes are generally built from a community visioning process, often present in strategic plans. Based on these, the community then participates in a process of developing indicators and a framework for monitoring the community’s activities, assessing whether the activities and their outputs lead toward the desired outcomes.

Whether the monitoring is performed using locally developed indicators or those available through academic or agency databases depends on the availability of appropriate information, how that information is going to be distributed, and the purpose of monitoring. For some communities, local indicators, such as a wade-in sampling systematically done on an annual basis to check with turbidity, are more effective in spurring community action than scientific indicators (see Gasteyer and Flora 2000). Other contexts (such as large urban areas) require the legitimacy of monitoring using scientifically accepted indicators and experts implementing them (Hart 1999; Innes and Boherman 1999, Innes 1996, Flora 1998, Andrews 1996).

5) Systematic learning through negotiating evidence

Moving toward the future vision of the agroecosystem not only requires a collective definition. It is critical that there is constant learning and adaptation to new insights and constantly changing conditions by all stakeholders. Communities develop a process for understanding the local economic, social, and natural system and analyzing how actions and policies impact that system. By establishing processes that encourage constant learning and adaptation, communities debunk the myth of the silver bullet that solves
problems in perpetuity. For example, “Guarantee us a price for our single crop and get
the government out of our face,” is a “silver bullet” proposed by some farmers regarding
management of their monocropped agroecosystem. In contrast, communities engaged in
continuous learning are more apt to actively address important issues, as well as to
develop a systematic approach to measure the impacts of those actions. Community
members are prone to value their own insights and knowledge systems if they are assisted
in developing an efficient way of learning about the ecological, social, and economic
system in which they live—and evaluating actions in reference to those systems.
Ultimately agroecosystem management should be about empowering communities to
improve their quality of life through better investments in their natural resources.
Through developing a systematic learning approach, community members potentially
develop the tools for ongoing analysis of the management of natural resources, rather
than having to depend on outside experts (Pretty and Chambers 1994, Hincliff, et al.
Conventional development involves decisions made by a small group within the
community, usually in collaboration with outside experts (sometimes scientists) who
interact with other development experts or researchers, but not with others in the local
community. Many participatory approaches, in contrast, explicitly attempt to widen the
circle of decision making to involve more of the community. Group inquiry involves an
open forum where community members meet and identify the major issues of concern
and existing community assets. Concerns and assets serve as the base for a process of
identifying possible solutions for those concerns, using local tools as much as possible.
Many of the approaches to participatory development emphasize that community
development and management of natural resources imply a commitment to long term
management, rather then quick fixes and immediate technical solutions to existing
problems. It has been necessary, then, to design approaches to participatory development,
planning, and natural resources management that are based on long term, sustained
learning and action. Often, this involves activities that reward accomplishments by
members of the local community. For instance, the project might involve organized field
visits to local farms where the owners are trying innovative approaches. Other initiatives
might also develop, and an action step is to publish the indicator frameworks developed
by the community as a way to monitor progress toward shared goals. Community
learning sessions are a constructive way for community members to learn from each
other about the history, ecology, and society they live in. In other cases, experts train
residents of the community in research techniques so they can carry out future research of
interest. This is all done in order to empower the community in long-term development

6) Neutral facilitators

While empowerment of local citizens is critical for sustainable agroecosystems, many
approaches also recognize that external facilitators (either from non-local government
agencies or non-local non-governmental organizations) can play a key role in shaping
agroecosystems at the community level. These neutral agents can provide technical and
scientific knowledge, but also an essential outsider’s view that will illuminate certain
factors or patterns in the community. They can provide alternatives to the local
assumptions about how to manage natural resources, and economic, social system
options. They may also have the freedom to challenge existing social hierarchies, taboos, and power structures—allowing for future local processes that are more inclusive and participatory. Some of the literature on participatory approaches has explicitly tried to outline the appropriate role for external agents in community development and the points in the process where they should be more or less dominant (Rocheleau 1994; Chambers 1983; Engel 1997).

7) Participatory Contract

Projects develop a participatory contract to ensure that the rights and responsibilities of community members, researchers, and outside managers are transparent and explicit. All members of the initiative sign an agreement that clearly states their action plan and expectations for reimbursement (monetary or in kind) for their efforts. The contract also specifies when each party is empowered to terminate the agreement. In this way expectations of what the process will produce are clear from the beginning of the initiative (Pretty 1994).

8) Evaluation in the context of community

Often participatory approaches involve evaluation both by the end users and the researchers or technical managers of the development or management initiative. This allows community members to voice opinions about the initiative, whether it accomplished anything important for the community, and what would make the process more useful in the future. Comparing the community and outside agents’ perspectives on the project may also illuminate differences in perception and lead to improved interactions between these groups in the future (Guite and Thompson 1999; Slim and Thompson 1995).
Impacts of Agroecosystems on Communities

Just as the influences that impact agroecosystems exceed the individual experiences of land managers or the firms that hire them (Smith 1998), those impacts are relatable to four capitals in a community, watershed, or region: human, social, natural, and financial/built capital (Flora, 2001).

The impacts of agroecosystems are measurable, and like the processes involved, measurement is best accomplished through community participation in order to ensure that the measures are meaningful to the stakeholders whose decisions, directly and indirectly, impact land use. There are many ecosystem impact measurement tools (Flora, et al. 1999; Hart 1999; NCRCRD 1999; Toupal and Johnson 1998).

We have found that for research and for agroecosystem development, using a menu for precise measures with general indicators around the four capitals is useful and parsimonious. The secret of using indicators is to remember that each indicator represents only a piece of the desired outcome. Such indicators must be 1) meaningful 2) linked to human action; 3) relatively easily measured, and 4) not chosen based on the ease of their measurement.

We found that these basic sets of indicators are inclusive enough to give a holistic picture of impacts and outcomes.

1) Increased use of the knowledge, skills, and abilities of local people (human capital)

Does the agroecosystem encourage the identification of the skills, knowledge and abilities of local people? Does it encourage an increase in the skills, knowledge and
ability of local people? Does it facilitate recombining the skills, knowledge and abilities of local people? Or does the agroecosystem in essence de-skill local people, depending on experts and outside interventions to solve problems or even make it function?

2) Strengthened relationships and communication (social capital)

An agroecosystem can increase the flow of information within the community, watershed or region, or it can decrease it, as knowledge and technologies are privatized and individual solutions are sought. New networks within the community can form in response to the opportunities of an agroecosystem’s multiple functions, or they can deteriorate as the single production function is stressed. Agroecosystems can stimulate new connections outside the community with civil society groups, including environmental and recreational organizations, and market groups, including specialized distributors. They can encourage single linkages to Congress to ensure subsidies for the few crops that have traditionally been grown in the area.

3) Increased flexibility, innovation, and adaptation (social capital)

Agroecosystems can encourage innovation, as they constantly respond to changing conditions, or they can increase rigidity as farmers seek to replicate conditions of an idealized agrarian past. Diverse agroecosystems encourage flexibility in response to market and environmental changes, whereas large monocultural systems resist change at all levels. Agroecosystems that are static can encourage a victim mentality – that everyone (particularly the government and the liberal press) is out to get us and always blames us for everything – or a cargo cult mentality, waiting for someone to build a factory or guarantee them a price and thus solve the local problems.
4) Sustainable, healthy ecosystem with multiple community benefits (natural capital)

Agroecosystems can be a catalyst for communities planning and acting in concert with the environment, or they can be the reason to “tame” nature. Agroecosystems can provide a place for groups with different uses of land to find common ground – or they can be a source of constant conflict for the community. Additionally, agroecosystems can be used for multiple community benefits or they enrich a few firms or farmers only.

5) Appropriate diverse and healthy economies (financial and built capital)

Agroecosystems can increase community poverty, as for example monoculture cotton and soybeans has in the rich Mississippi Delta. Conversely, they can provide opportunities for poverty reduction, both through providing alternative income sources and healthy food for self-provisioning. Agroecosystems can contribute to local business diversity if they are distinct and small enough to be locally served. Alternatively, they can contribute to the decline of both agricultural and non-agricultural businesses in an area by using few locally-purchased inputs and selling outside the area. Agroecosystems can contribute to business efficiency by encouraging linkages to better market signals and more efficient ways of utilizing labor and capital – or they can be based on low wage labor and only respond to government price supports. Furthermore, agroecosystems can increase local residents’ wealth by retaining value in the area, or they can export the wealth through high volume, low value crops.
Conclusion

Social factors greatly influence the context under which agroecosystems evolve and are maintained, as well as the processes by which they remain static or are constantly changing. Agroecosystems, in turn, have impacts far beyond agricultural production and even the provision of ecosystem services. The ways they are organized within the context at the local and landscape levels impact how communities respond to constant change, assess opportunities, build on local assets, and work together.

Building bridging and bonding social capital between land managers and communities they surround can enhance sustainability. But unless ecosystem health is considered explicitly as an outcome, both bridging and bonding social capital can further separate humans from their physical and biological environment. Solutions that are technically sustainable, but do not engage the broader community, are much less likely to be widely implemented.

References


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http://www.ncrcrd.iastate.edu/Community_Success/about.html


Chapter 7 Study Questions

1. Using Figure 1 and its description at the beginning of Chapter 7, relay an experience that corresponds with the pyramid on some level. What was the outcome of that experience?

2. What are some possible positive impacts of social capital in a community? Negative?

3. Consider the impacts of sanctions, as well as social control mechanisms and internalized social behavior. Invent a fictitious community or use one you have been a part of, and explain how these forces operate in the community. The community needs to
stop farming crops so close to the water edge. Outline possible personalities or groups
that are part of the community, for example, how do some of the older residents ideas
mesh with younger residents’ outlook for the future? What could be possible outcomes of
having a discussion with different members of the community? Who has the control and
how is it disseminated? What are the desired outcomes? Is a neutral agent necessary?
4. Entrepreneurial Social Infrastructure does not always lead to sustainable
agroecosystems, which is further illustrated with an example on page 8. How can
ecosystem deterioration be stopped or turned around? How can people be motivated to
“do the right thing” without intruding on their “cultural practices?”
5. How would a discussion between an athletic coach and county planners be facilitated?
What multiple perspectives might be addressed?
6. How might neutral agents be received in a strong community with a lot of social
capital? It is possible that the agents’ alternatives to local assumptions could face
defensive reactions. How does one recognize an appropriate time to invite a neutral agent
to the table? How does one troubleshoot in these situations, if necessary?
7. What elements need to be in place for an agroecosystem to become sustainable?
Force

Economic

Social pressure

Internalization

Positive sanctions

Negative sanctions

Zoning

Physical punishment; Imprisonment

Earn more; Lower costs; New markets

Economic

Fines; Low price; High costs; Limited markets

Social pressure

Gain prestige; Ought to

Internalization

Wants to and knows how

Doesn’t want to; doesn’t know how

Laughter at

Lose respect

Figure 1
Fig. 2. Community social capital typology.

Figure 2. Community Social Capital Typology

<table>
<thead>
<tr>
<th>BRIDGING SOCIAL CAPITAL</th>
<th>BONDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Conflict with outside/internal factionalism</td>
<td>Inclusion (horizontal ties w/in community; diverse horizontal/vertical ties to outside)</td>
</tr>
<tr>
<td>Apathy; extreme individualism</td>
<td>Clientelism (internal &amp; external ties are mainly vertical)</td>
</tr>
</tbody>
</table>

Figure 3. Community Social Capital Typology and Change

**BRIDGING SOCIAL CAPITAL**

<table>
<thead>
<tr>
<th>Bonding</th>
<th>Community resists externally initiated change; or in-fighting negates community change efforts</th>
<th>Locally initiated change driven by community-defined goals, w/links to external resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wealthy solve problems with financial capital; the poor have few options</td>
<td>Community change dominated by local/extralocal “bosses” or “power elite”</td>
<td></td>
</tr>
</tbody>
</table>