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**INCIDENCE OF NATURAL RESOURCES ENDOWMENT
ON A LOCAL DEVELOPMENT PROCESS:
CASE STUDIES IN TWO CANTONS OF COSTA RICA**

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Abstract:

Local development in Costa Rica has been mainly related to municipalities, but less attention has been paid to understand the local development itself and the factors that explain it. Adapting the capitals framework approach, we compare two neighboring cantons, Hojancha and Nicoya, both with similar high amount of resources endowment but with different pattern of development. We found different integration levels of all capitals by social actors in both cantons, with different outcomes in natural resources conservation, ecosystem services provision and social welfare. We conclude that local development is determined not only by the availability of the natural resource endowment but also by a good articulation amongst human, social, political and cultural capitals. The formulation of a locally shared and integral long term view of the territorial development is a key factor that any policy for local development should seek.

Keywords: Path of development, local resources, stakeholders' participation, territories, Costa Rica.

INCIDENCE OF NATURAL RESOURCES ENDOWMENT ON A LOCAL DEVELOPMENT PROCESS: CASE STUDIES IN TWO CANTONS OF COSTA RICA

1 INTRODUCTION

As a response to centralized paradigms of development, local development (LD) arose at the beginning of the 80's decade as concept related to a successful transformation of territories, at productive, institutional and social level, resulting from a dynamic interaction amongst different social actors (Vásquez-Barquero, 1988; Buarque, 1999; Vázquez-Barquero, 1999; Cardenas, 2002). The main hypothesis behind LD is that within a given territory there are certain amount of natural and economic resources, human capacities, institutional settings, and cultural and social values, with a certain potential for development. Therefore, these so-called "developing assets" may be integrated into a certain productive structure, labor market, entrepreneurship capacity, knowledge level, physical infrastructure, and social and political systems (Vásquez-Barquero, in Pérez and Carrillo, 2000).

LD is considered a participatory decision-making process aimed to raise socio-economic conditions, at local or territorial level. Certain level of consensus amongst clue social actors is expected, in order to define the type of pursued development and those strategies and actions to achieve it. Hence, local development is considered as an endogenous social process aimed to bring up social welfare and sustainability to a certain territory. Regarding sustainability, an important factor is the safety provision of ecosystem services, for driving a continuous development process. We understand as ecosystems services as those physical assets and effects resulting from conservation and reproduction of the natural resource base. This implies as well the implementation of socially-agreed strategies, in order to balance the use and conservation of a given a stock of land, water and forest in a certain territory.

In Costa Rica, local development has been mainly related to municipalities, as they are the major authorities inside a territory, at canton level¹. However, in a highly-centralized country like Costa Rica, the political-institutional process to strength capacities of local governments has been performed over the past years under changing conditions and rhythms, yielding a rather unstable relationship between the central power and the periphery. Despite of certain process of political-institutional "decentralization" has been implemented in the country over the past 30 years, the building up of local governments' capacities is still incomplete and have passed through different stages and limitations, with different outcomes.

On the other hand, less attention has been paid to the understanding of local development process itself, which is shown by a given pattern of development. Besides, there is also a poor understanding on the driving factors behind that type of development, such as the combination of spatially located resources, actors' participation, and local institutions and values. This proposed analysis should yields important elements to explain how a certain combination of endogenous forces and physical assets availability derives in specific social and economic outcomes.

The objective of this communication is to understand why certain territories are failing to implement successful dynamics of progress and development, while having important

¹ A canton is political-administrative distribution of a territory, divided by districts. A given territory can encompasses one or more cantons.

amount of resources. By adapting the capitals framework approach developed by Flora et al. (2004), we compare two neighboring cantons of the Península de Nicoya, namely, Hojancha and Nicoya. Both cantons show a local economy mostly based on agricultural and forestry activities, while have a similar amount of natural resource endowment, but with different pattern of development. We focus our analysis to understand under which socioeconomic and institutional conditions certain territories can drive up a successful development pattern, and which is the role played by ecosystem services in this endogenous outcome.

The rest of the paper is organized as follows. In the second section we made a revision of the last definitions of local development, while we define ecosystem services and the role played within the capital framework approach. The third section describes the methodology. In the fourth section we indentify the existing pattern of development in both case studies, while analyze the role played by ecosystem services in those patterns, and its interaction with other capitals. In section sixth we finish by providing new insights to strengthening successful endogenous development.

2 NATURAL RESOURCES PROVISION FOR LOCAL DEVELOPMENT

The concept of “*development*” has been largely confused with economic growth, meaning the GDP *per capita* as the major and almost unique expression of development. Therefore, over the last 20-30 years, under the economic liberalization paradigm, the notion of *welfare* was entirely associated with the economic welfare of a society. Moreover, in many developing countries the economic liberalization paradigm was implemented in the form of rather centralized public policies (as a heritage of the former State-oriented view of development), which in many cases turned out to be inefficient and/or inconvenient with local needs. More recently, alternative approaches focus more on the effects of human capacities and locally-collective initiatives on the configuration of the development pattern in a given area. Therefore, the so-called *local development* (LD) arises as an alternative view to these traditional economic-oriented and State-oriented visions of development.

LD refers to a complex social endogenous process composed by several dimensions, namely economic, institutional, environmental, social-cultural, and politics. It is endogenous because its configuration and performance is specific to certain type of social actors, and the interactions they perform on a certain territory (Cárdenas, 2002). Buarque (1999) also defines LD as an endogenous process performed by social actors operating into small territorial units, whose take decisions, produce economic dynamism, and improve the social conditions of population. Vásquez-Barquero (1988) suggests how a combination of economic growth with a structural change process derives in a better general welfare of a local society. He points out at least three required dimensions: (1) an economic dimension, which refers to those actions performed by local entrepreneurs in order to organize the production factors and transform them into competitive products and services; (2) a socio-cultural dimension, which means that a local institutional base must exist in order to make possible economic activities; and (3) politic-administrative dimension, which implies that local territorial policies should provide a favorable economic environment at the territory, protection against external threats, and define a clear pathway of development. Therefore, LD has a strong endogenous character, since the economic growth and structural change are both outcomes of the mobilization of human capacities and physical resources inside the territories. LD is an endogenous force capable to transform traditional productive structures into innovative and efficient ones, able to insert them into dynamic markets of products and services (Vásquez, 1999. En Acuña y Cordero, 2007).

LD does not mean an isolated form of decision-making that is disconnected somehow of the State policy of development. Conversely, LD should be an important input in the formulation of the developing strategy of a country. Hence, LD can be regarded as an expression of the “bottom up” approach, where the national developing strategy is fed by several inputs from

the territories. An important part of this process the role played by the natural resource base and the derived ecosystem services in this “bottom up” configuration of a developing strategy at different spatial levels.

The concept “*ecosystem services*” (ES) has recently attracted the attention of researches, policy-makers, and officials in the international cooperation community. However the term is not new and usually is confused with “*environmental services*”. According to Meral (2011), the evolution of both concepts has three parts: a first period between 1970 and 1997, where appeared several works on the relationship between human activities and its impact on the environment. A second period started with the article “*The value of the world’s ecosystem services and natural capital*” (Constanza et al., 1998), and the third period from 2005 to nowadays, with the arise of the so-called “*Millenium Ecosystem Assessment*” (MEA). At the end of the second period, a debate started on the conceptual foundations of ES and the forms to calculate its contributions to economic activities. Hence the concept was mediatized and started a discussion on the usefulness for the decision-taking process (Mora et al., 2012). This period of discussion ended up with the MEA works of 2000 and 2005 and now is a current issue amongst researchers, actors in public and private organizations, and policy-makers.

According to MEA (2005), ES refers to the provision of certain benefits from natural ecosystems. These benefits are categorized as *provision services*, *regulation services*, *basic services*, and *cultural services*. The relationship between ES and LD starts with the recognition by local actors of the provision of ES by local ecosystems. Here ES is a useful way to categorize the relationship between human activities and natural resources with certain potential for the development of these human activities. In specific, the ES approach is useful to visualize how a natural stock produces certain services that may be useful for certain type of social actors. Hence, in the endogenous process of LD a clue part is the recognition of these services and the assessment of the quantity and quality of them, for the generation of economic growth and structural change. Finally, the mere presence of these services is not enough to provide a better social welfare, but its incorporation into a locally defined strategy that allows a continuous flow of these services.

3 THE CAPITALS FRAMEWORK APPROACH AND LOCAL DEVELOPMENT

The community capitals framework approach was developed by Flora C. and others in 1992 to understand the function of rural communities in United States. For these authors, the starting point was the idea of “community” defined as the social space where individuals gather, discuss, and try to find solutions for their common problems (Flora C. et al., 2004). In these sense, the communities have different types of resources that can be consumed (renewable and no renewable), preserved (not able to be consumed), and transformed into new products. Hence, these resources that can be transformed into new products are defined as “capitals” (Flora C., quoted by Emmery et al., 2006).

Capitals can be divided into two groups: human and material capitals. In the first group we can find the human capital, which refers to all human capacities, aptitudes, abilities, knowledge, health level and values, which enable a certain community to define developing objectives and design a certain strategy to achieve them. Cultural capital is the second in this first group and refers to the members’ community behavior in terms of a cosmovision of live, expressed in values, traditions, history, symbols, celebrations, and believes. Social capital is the third one in this category and has to do with the social networks and collective identity, which are expressed in formal and informal institutions that regulate the community life (Sampson et al., 1997; Coleman, 1988; DFID 1999; Flora et al. 2004). The last capital is the politic capital that means the distribution of power amongst individuals and groups of individuals, which is expressed in the capacity to influence in the decision-making process at community level.

The second group of capitals is composed by natural, physical and financial capital. Nature capital is composed by the natural resource base (land, water and forest) and the derived ecosystem services inside the territory where the community lies (DFID 1999; Flora et al. 2004). Physical capital is composed by basic infrastructure and productive assets. Financial capital refers to the financial resources and flows available in a community for the investment and consumption (DFID 1999; Lorenz quoted by Emery y Flora 2006).

The capitals framework is useful to understand how a community is functioning with respect to its development and welfare objectives, and the assigned role to the available stock of natural resources in pursuing such objectives. A given community living inside a territory may have certain amount and quality of material capitals, but their efficient use mostly depends on the proper combination with the other four capitals. This framework allows evaluating a specific developing strategy, or path of development, the achieved goals, and indentifying what actors actively reproduce or not the capitals inside a community (Flora et al. 2004).

We choose two neighboring cantons of the *Península de Nicoya*, namely *Hojancha y Nicoya*, both with similar resources endowment, but with different paths of development. As stated before, the amount and quality of the natural resources stock is not the unique condition for achieving a higher local development, but the way this natural capital is integrated with the other six capitals. We focus our analysis on how the natural resource stock in both cantons yields ecosystem services that can be incorporated into different productive structures by different social actors. In the case of canton of Nicoya, it shows a fairly good endowment in productive assets, natural resources stock and human capacities. The production structure is composed by activities like commerce, tourism, agriculture and livestock production, in most cases under extensive production systems and low technology use. According to the “*Plan de Desarrollo Humano Local, cantón de Nicoya*”, the canton is not generating enough employment for its growing population, thus, there is continuous flow of migrating population to other more dynamic cantons or to San José (the capital of Costa Rica). On the other hand, during the 70's Hojancha passed through the collapse of the former extensive livestock production system, which yielded a local economic depression and high degradation of the natural resources base. This collapse was the starting point to look for different and more sustainable scenarios of development. According to Paniagua (personal communication, 2010), after the crisis of the 70's a social platform emerged amongst local social actors, NGO's and others actors, for discussing the new type of development. This process yielded a first Integrated Rural Development Program, focusing in the conservation and reproduction of natural resources.

We made a survey at the end of the year 2011, in order to understand why two cantons with similar conditions show different performances in development. In this survey we consulted different clue local actors of public, private and social organizations. We chose a non-sampling method because our objective was to address perceptions amongst clue actors on the goals and failures of followed path of development. We designed a structured questionnaire with variables separated into seven categories, which correspond to the seven capitals. On each variable, the interviewed actor had to respond by choosing among 0 to 10 levels, where 10 was the highest qualification and 0 the lowest. In this sense, the interviewed actor could express the intensity of his/her perception on the base 0 to 10, and by comparing the present situation with a past situation. This past situation was previously defined as the years 80-83, where major changes were implemented in the canton of Hojancha.

We interviewed 70 persons, 34 in Hojancha and 36 in Nicoya. The selection of these actors was done on the base of their important role, now or in the past, in the definition, design and implementation of developing strategies in each case. Therefore, we interviewed people related to the local government, commercial chambers and similar organizations, local universities, local water provision boards, local development associations, local public officials, tourism chambers, and NGO's.

4 THE DEVELOPMENT PROCESS AND COMMUNITY CAPITALS

As stated before, the style of local development is an outcome of the combination of community capitals, according to a view of development (policy implementation) and a certain strategy (decision-making process). This derives in a specific local productive structure aimed to yield a certain level of welfare. In this sense, both cantons have followed a development process over the past decades, where the articulation of different available capitals has taken place, under different strategies. Based on perceptions of interviewed people in Hojanca and Nicoya, we compare the current situation of community capitals in both case studies.

The natural capital has been of clue importance for Nicoya and Hojanca, and the main source of inputs for its primary activities (agriculture and livestock production). Conversely this capital has been the most degraded over the past decades in both cases. During the 80's and 90's years both cantons' economies relied on extensive livestock and staple crops production systems, which yielded a strong reduction of ecosystem services provision (Méndez, J., personal communication, 2011). In Hojanca the provision of water was strongly reduced up to the point that affected the structure and amount of inhabitants in this canton. This problem mobilized social actors to organize and look for actions to revert the lack of water provision. Thus, a coalition of Government organizations (like MINAE²), international cooperation officials and local actors yielded two important outcomes: (1) the implementation of an Integrated Rural Development Project, with a strong environmental protection component; and (2) the creation of the Monte Alto protected reserve, in the upper part of Nosara river watershed. This protected zone meant a 60% of forest recovery and a water provision for the main aqueduct in Hojanca, which cover almost 1 300 beneficiaries.

The creation of this protected area was possible by summing up efforts from MINAE, a German NGO named Tropica Verde, and the local Pro-Reserve Monte Alto Foundation. This foundation has been the "hub actor" by looking and coordinating all these environmental efforts amongst actors inside and outside the canton. Besides, as a consequence of these efforts to protect the water provision, there have been other environmental friendly production projects and eco-tourism initiatives. On the other hand, although in Nicoya the degradation of water has not been as serious as in Hojanca, it has been implemented also a watershed protection project in the rivers Potrero and Caimital, which meant water provision for half the population of Nicoya and 55% of Hojanca.

Following the local development approach, human capital represents the intellectual side behind a given combination or articulation of all remaining capitals. Data from the last national census (2011) for both cantons shows an increasing trend in the population growth, where Nicoya has 50.825 inhabitants and Hojanca only 7.197. In both cantons half of the population concentrates in the central districts. Most of the population is young (0-30 years), which means a large potential in labor availability. However, both cantons recorded a high emigration flow to other parts of the country between the years 2000-2006. Although nowadays the immigration/emigration balance is stable, the lack of opportunities employment stimulates young people to look for a better future outside the canton.

Unlike Nicoya, Hojanca shows a large part of its population originated from the Central Valley, which marks a big difference with respect to the rest of cantons inside the Península de Nicoya that bear the so-called Chorotega culture. This can be explained by the relatively recent process of colonization in Hojanca. However, its cultural capital is well regarded as: (1) high entrepreneurship, with predominance of small family enterprises, (2) with a medium and long-term vision on the future, and (3) high level of organization at different levels and focusing on economic, cultural, productive and environmental issues. On the other hand Nicoya is a well exponent of the Chorotega culture, which is rooted by an ancestral corn-based food culture and extensive livestock "*haciendas*". Despite of people from Nicoya

² MINAE is the Ministry of Environment and Energy

considered themselves as hard working people, they also lack of strong social organization and a common view of development. In their own words, the “*hacienda*” culture³ made people too passive for taking their own decision and address a specific problem or challenge.

As stated before, the high concern on environmental issues in Hojanca after the collapse of water provision during the 70's, gave pass to a social mobilization and the articulation of these social movements with external actors. Therefore, the canton has achieved important environmental goals and its own view of development. The creation of the Monte Alto protected reserve and the Pro-Reserve Monte Alto Foundation are two icons of this social capital. Besides, there are three important networks that promote different productive and social initiatives, in coordination with cooperatives and local associations. These three networks are: (1) the Council for the Development of Local Districts (COSEL); (2) the Interinstitutional Commission for Local Health Surveillance (CILOVIS); and (3) the Cantonal Forum. In Nicoya social organization is less visible. According to interviewers, the distance and a poor coordination amongst district organizations is one of the main drawbacks, yielding inefficient efforts for addressing problems. By replicating the experience in Hojanca, internal and external social actors created the NICOYAGUA foundation, which is aimed to promote watershed conservation projects. This foundation achieved the creation of the watershed protected reserve for the rivers Nosara and Caimital, which is an important source of fresh water.

The political capital refers to the pool of base organizations existing in each canton and their influence on formal and informal institutions for pursuing a specific development strategy. Table 1 shows the number and type of base organizations in each case.

Table 1: Types of Base organizations in Hojanca and Nicoya

Base organizations	Hojanca	Nicoya
Health	<ul style="list-style-type: none"> • Junta de Salud de Hojanca • Comités de salud • Cruz Roja 	<ul style="list-style-type: none"> • Cruz Roja
Local associations	<ul style="list-style-type: none"> • Asociaciones de Desarrollo • Asociación Centro de Promoción y Desarrollo Campesino • Asociación Semilla de Esperanza • Asociación de mujeres 	<ul style="list-style-type: none"> • Asociaciones de Desarrollo • Club de Leones Internacional • Club Rotario de Nicoya • Club Activo 20 – 30
Cooperatives	<ul style="list-style-type: none"> • Coopepilangosta R.L 	0
Foundations	<ul style="list-style-type: none"> • Fundación para el Equilibrio entre la Conservación y el Desarrollo • Fundación Monte Alto 	<ul style="list-style-type: none"> • FEDEAGUA • NICOYAGUA
Chambers	<ul style="list-style-type: none"> • Cámara de Ganaderos • Cámara de Turismo 	<ul style="list-style-type: none"> • Cámara de Comercio • Cámara de Turismo
Productive organizations	<ul style="list-style-type: none"> • El Centro Agrícola Cantonal de Hojanca 	<ul style="list-style-type: none"> • El Centro Agrícola Cantonal de Nicoya
Total	13	9

Source: own elaboration based on strategic plans of local governments in both cantons

In Hojanca we observed 14 types of active base organizations. According to interviewees' perceptions these organizations are well regarded as legitimate and important actors for

³ In “*haciendas*” the so-called “*mandador*” or “*patrón*” was the only person deciding on all the factors that affected the rest of the inhabitants of the “*hacienda*”.

pursuing development goals. In Nicoya, we observed less type of organizations and most are unknown for the large part of interviewed actors. If we take into account that Nicoya has a much larger territory than Hojancha (1.334 km² and 261 km², respectively) and more population, it has at the same time poorer social-political networks to address specific local problems and challenges.

The physical capital refers to that infrastructure that makes possible all economic and social activities. We focus on three types of infrastructure: (1) health, (2) Educational and (3) transportation/roads. Most of this infrastructure was built during the period 1950-1980, when there was implemented in Costa Rica a central State-oriented paradigm of development. Therefore, in the case of health and educational infrastructure most of the current⁴ facilities and services in both cantons are still an outcome of centralized national policies. In this sense, one of the major criteria to assign resources is the population level of coverage. Therefore as Nicoya has more territory and population than Hojancha, then it has more and higher diversity of health and educational facilities and services. For instance, Hojancha and Nicoya have both a network of public clinics specialized in preventive health programs, but Nicoya has the only large national hospital⁵.

Similar to the health coverage proportional for each canton, there is an extensive provision of primary education facilities in both cases. However Nicoya is the only one with installed secondary (public and private high schools) and superior facilities and services (private colleges and public universities). Hence, students from Hojancha must to follow their secondary and professional studies outside their canton (Nicoya or other parts of the country). Finally, Nicoya and Hojancha are well interconnected by four major paved roads and three unpaved roads. There is one main national route (n° 158), which is under the Government administration. The rest are local roads under both local governments' responsibility.

The financial capital is the "fuel" for any productive activities and the availability of different options is determined by basically two conditions, namely interest rates and terms. Besides the current banking system that offers rather similar conditions, there are other semi-formal and informal moneylenders. In Hojancha there are four organizations that provide financial services with better conditions for small and medium-sized entrepreneurs. Amongst these organizations, the "*Centro Agrícola Cantonal de Hojancha*" (CACH) is perhaps the most active to finance different activities. By 1991 the Interamerican Bank for Development (IDB) granted to the CACH an amount of US\$ 500.000 that where 64% assigned to small private initiatives. The remaining 36% was devoted to create a local cash box for other community projects. In Nicoya there are four savings and credit cooperatives with their own money lending system. However, most of the interviewed actors consider that there is not a great difference between these cooperatives and the formal banking system. Hence, many small and medium-sized producers and entrepreneurs lack the requested collaterals for a loan.

5 COMMUNITY CAPITALS AND ACCUMULATION

Local development is an outcome of the combination or articulation of community capitals, following a certain strategy. An expected important outcome of local development is the accumulation or strengthening of these capitals. In this section we assess the evaluation of the functioning and accumulation of community capitals based on the perceptions of interviewed clue actors in both cantons. As stated in the methodology these clue interviewers

⁴ In the case of health services is determined by the Social Security System, while the educational services are determined by the Ministry of Education.

⁵ We do not take into account the presence of private health services (medicals, pharmacies, etc.) that are also conditioned by the potential demand

were selected on the basis that they influenced the development process in their own cantons. We focus mostly on the natural, cultural and social capitals because they are directly related to the ecosystem services. Because is expectable that regular stakeholders unknown and understand the definition of ecosystem services, we avoided to ask them directly on this issue. Instead, we defined several qualitative variables reflecting the evolution of each capital and made a relationship with a correspondent ecosystem services. Table 2 shows the considered variables for each capital and its correspondence with the ecosystem services.

Table 2: Assessing variables on community capitals and ecosystem services

Community capital	Assessing variables	Ecosystem services (MEA, 2005)
Natural	Use	Supply services (direct service)
	Availability	Supply services (direct service)
	Quality	Base and regulation services (indirect service)
Cultural	Protection	Regulation services (direct service)
	Importance for development	All services above
		Cultural services
	Local empowerment	Sense of identity, belonging to a place, cultural heritage
	Identity	Same as above
	Symbolic values assigned to natural resources.	Esthetic, inspiration and spiritual/religious
	Expectations towards changes	Education
	Expectations towards life	Esthetic, inspiration and spiritual/religious
Social	Sense of belonging	Sense of identity, belonging to a place, cultural heritage
		Cultural services
	Social networks	Sense of identity, belonging to a place, cultural heritage
	Legitimacy	Same as above
	Influence capacity	Education
	Values	Sense of identity, belonging to a place, cultural heritage
	External relationships	Education

Notes:

Supply services refer to the provision of water, food, fuel wood, fibers, medicines, bio-chemists, genetic resources.

Base services refer to soil formation, nutrient cycles, and production of raw materials.

Regulation services refer to regulation of: climate, air quality, control of pests and diseases, control of runoff water, water quality, soil erosion control, polinization, and control of other natural disasters.

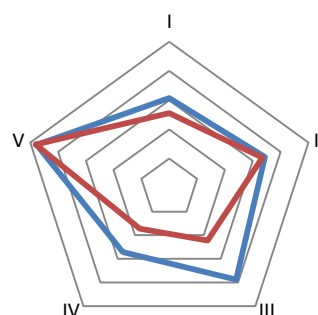
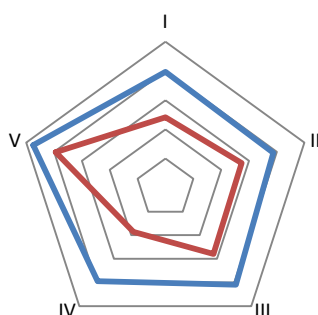
Source: Own elaboration, 2013.

Natural capital

The state of the natural capital is perceived much better off at the present than in the past, in both cantons (see Table 3).

Table 3: Accumulation of Natural capital

NATURAL					
Hojancha			Nicoya		
Variables	Grade		Variables	Grade	
	Actual	Past		Actual	Past
I. Use	7.94	4.83	I. Use	6.14	5.11
II. Availability	7.75	5.48	II. Availability	6.87	6.70
III. Quality	8.18	5.58	III. Quality	7.76	4.45
IV. Protection	7.88	3.71	IV. Protection	5.42	3.44
V. Importance for development	9.50	7.88	V. Importance for development	9.53	9.61



Source: own elaboration, 2013

In the particular case of Hojancha, the five indicators were granted with higher marks than in Nicoya. As mentioned before, Hojancha suffered an environmental crisis at the end of the years 70's that was expressed as the degradation of two categories of ecosystem services: water provision (supply services) and soil formation and nutrient cycle (base services). The social mobilization and the creation of coalitions described before yielded specific actions for conservation and recovered of the natural resource base. Besides, there was a campaign amongst producers to use environmental friendly production systems for protecting the soil. Therefore the interviewees' perceptions in Hojancha are higher than in Nicoya, where "protection" and "use" are the highest ranked. In this sense, the natural capital and its corresponding direct ecosystem services are well regarded by local stakeholders as important for development. Stated otherwise, it seems in the stakeholders' view a strong bias in the "use" of ecosystem services for local development.

In the other hand, in Nicoya the perceptions suggest also a general improvement, but less enhanced than in Hojancha. The five ranked indicators suggest a type of steady state situation in Nicoya, where there is a certain improvement but not that critical with respect to

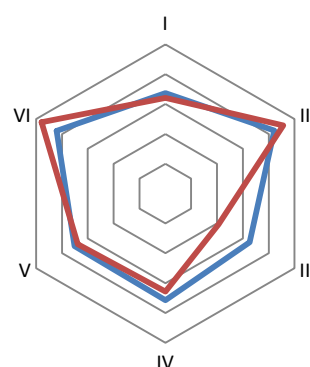
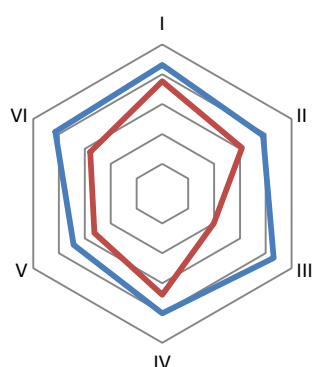
the past situation. Although the concern about the importance of natural capital for development remains almost the same, the bias here is protection plus quality. Hence, stakeholders in Nicoya care more for regulation services, in specific water quality.

Cultural capital

This capital is of crucial importance to integrate the others six capitals under a given view of development. Table 4 shows the evolution of cultural capital, where there are big differences between both cantons.

Table 4: Accumulation of cultural capital

CULTURAL					
Hojancha			Nicoya		
Variables	Grade		Variables	Grade	
	Actual	Past		Actual	Past
I. Local empowerment	8.63	7.53	I. Local empowerment	6.73	6.42
II. Identity	7.78	6.15	II. Identity	8.44	9.13
III. Symbolic values	8.62	3.97	III. Symbolic values	6.51	4.11
IV. Expectations towards changes	8.03	6.77	IV. Expectations towards changes	7.15	6.57
V. Expectations towards life	6.88	5.27	V. Expectations towards life	7.02	6.77
VI. Sense of belonging	8.27	5.58	VI. Sense of belonging	8.42	9.58



Source: own elaboration, 2013

In Hojancha is noted a general improvement in all five ranked indicators. In terms of ecosystem services, the two better ranked indicators have to do with "Sense of identity, belonging to a place, cultural heritage" and "Esthetic, inspiration and spiritual/religious". In the first place local empowerment, identity and sense of belonging suggest a mental change amongst different actors in this canton. It also suggests a constructed community identity for people from different origins outside the Península de Nicoya. In second place, this collective construction of identity has been complemented by better assigned values to the natural resource base, which means a different view on the "use" of these resources. Stated

otherwise, people in Hojancha seem to see the “utility” of natural resources, but under an esthetic and/or inspirational vision. Moreover, expectations to the surrounding world and life in general show an also better rank, which means a better off attitude, perhaps determined by a better educational level on environmental concerns. People in Hojancha consider themselves as organized and hard working community, with a vision of future. All these consideration may have determined the taken actions around the articulation of the remaining capitals and, thus, the type of development.

On the other hand, Nicoya shows a high ranked on assigned values to the natural resource base, but with slightly improvement in their collective attitude to the surrounding world and life in general, and a worsen off perceptions on own “Sense of identity, belonging to a place, cultural heritage”. This is important because although the symbolic values assigned to natural resources comes from a strong cultural heritage (even a pre-Columbian heritage), seems to be not enough to strength the local identity. Conversely, a weak empowerment and attitude to the world and life in general seem to concord to what people in Nicoya express about themselves: “we are too passive”. Hence, this kind of passive attitude may have paradoxically producing a negative effect on their sense of identity and belonging to a place. This of course may affect also the articulation with the remaining capitals.

Social capital

The social capital refers to the level of communication and coordination amongst people and their organizations inside a community. This capital is regarded as the factor that gives cohesion to a given community. We could relate cultural ecosystem services to this type of community capital. Table 5 shows the accumulation of social capital, where there are a better off situation in general for both cantons.

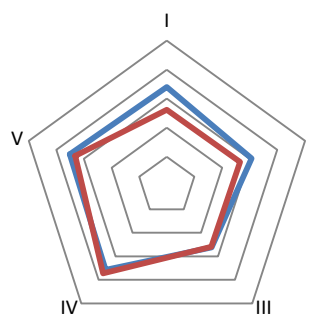
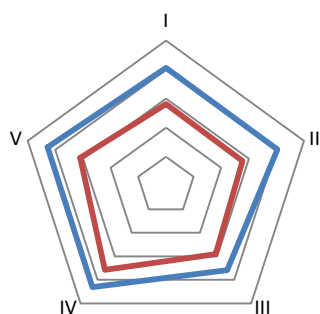
In Hojancha again shows the best outcome in all five indicators. Social networks and its image or legitimacy before the community are two best ranked indicators, which are linked to the ecosystem service “Sense of identity, belonging to a place, cultural heritage”. This is consistent with the previous outcomes about Hojancha, where social organizations have played an important role in driving major changes. Social organizations are important devises for people to discuss about a certain problem or challenge and work together to face them. Individual and collective efforts are in general more efficient inside a network of organizations. Social capital is the “star capital” in Hojancha, where there are several organizations and networks that performed well in specific tasks and commitments. Moreover, these organizations and networks have provided a social space to discuss the planning of the canton, evaluation of actions, mobilization of resources, coordination of activities, and resolution of conflicts⁶.

On the other hand, although Nicoya shows a slightly better ranked indicators in this capital (with the exception of IV indicator), most opinions point out the general sense that local organizations are stuck, with few communication mechanisms. The few articulated organizations seem not having a large influence capacity in the decision-making process. There is a common opinion that most organizations function insolated, thus, their actions and outcomes are perceived as of short scope. Therefore, these organizations are weakly regarded in terms of cultural ecosystem services, whit little level of impact and legitimacy.

⁶ Rodríguez E. Personal communication. 2011.

Table 5: Accumulation of social capital

SOCIAL					
Hojancha			Nicoya		
Variables	Grade		Variables	Grade	
	Actual	Past		Actual	Past
I. Social networks	8.13	5.63	I. Social networks	6.81	5.23
II. Legitimacy	8.07	5.55	II. Legitimacy	6.13	5.31
III. Influence capacity	7.19	5.82	III. Influence capacity	5.25	5.19
IV. Values	8.61	7.16	IV. Values	7.15	7.45
V. External relationships	8.56	6.21	V. External relationships	7.03	6.64



Source: own elaboration, 2013

6 CONCLUSIONS

We found a successful integration of all capitals by social actors in the Canton of Hojancha. In this case, we can observe an inversion of the degradation of natural resources, passing from a relatively scarcity of the natural resources in the 70s to a fairly provision of ecosystem services in 2011, which enable several productive activities (agriculture, forestry and tourism) and a general social welfare. A successful integration of social, human (actors' participation), political (leaderships and networks) and cultural (values) capitals, in special, has allowed overcoming outdated views of development and adopting a long term a new view of the future. Financial, physical and natural capitals have coordinated and integrated fairly well with the former four capitals and yield specific actions for strengthening local development.

On the other hand, in the canton of Nicoya, we found a lower integration of all different capitals by local actors. In spite a large natural resource endowment, the poor integration of social, human, political and cultural values, result in a slower reaction to external and internal challenges, and a more conventional –but insufficient- performance of local development.

We conclude that local development is determined not only by the availability of the natural resource endowment but also by a good articulation amongst human, social, political and cultural capitals. Hence, the formulation of a locally shared and integral long term view of the territorial development is a key factor that any policy for local development should seek.

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