

Appendix 1. Detailed results from the interviews.

PRESENTATION OF NARRATIVE GROUPS

The narrative groups can be distinguished according to their key imperatives and the actors who most frequently adopt a respective narrative (see table 2).

A1.1 Biodiversity Protectionists

The Biodiversity Protectionists are interested in strengthening and improving conservation policies and project implementation. This line of argumentation is derived from the conservation movement which emerged in the 1980s, when many environmental non-governmental organizations (NGOs) appeared and many protected areas were created. With a strong expansion of protected areas in this time, those NGOs used international funds to initiate conservation projects in and around those areas. According to an NGO founder:

In this, we appeared in the year '82 as a group of young people. We had almost all graduated in biology and had the motivation to spread the concept of conservation of nature farther than just parks. In reality, since the beginning of our organisation, the subject of parks has always been seen as an instrument for conservation.

Members of this group are mainly working in national conservation NGOs or governmental institutions, such as the environmental ministry, the national conservation agency SERNANP, or regional conservation agencies.

The Biodiversity Protectionists primarily **see biodiversity**, landscapes and unique ecosystems as having intrinsic value, which need to be conserved. In contrast to the Biodiversity Capitalists they reject the notion of biodiversity as a mere resource:

The organic law of natural resources says that biodiversity is a natural resource. And In my opinion biodiversity is not a natural resource.

Since their formation in the early 1980s, the Protectionists have criticised the orientation of Peruvian development. They see road construction, especially in the Amazon region, the expansion of large monocultures, the intensified extraction of primary resources and the

uncontrolled migration of Andean people into the Amazon region as problematic. Instead they call for an ecosystem approach, as developed by the CBD. Instead of developing and advocating an alternative model for development, they focus their interventions on the improvement of conservation projects and the conservation of biodiversity hotspots.

This perspective primarily situates biodiversity as outside of human socio-economic systems. Rather, proponents demand biodiversity hotspots to be conserved in independent protected areas. Recently, they have complemented their focus with a call for more intervention in buffer zones around the parks in order to reduce the pressure on these areas. An NGO representative stated:

We are also working a bit more in the buffer zones, in the surroundings to avoid pressure on the area. By applying economic incentives we support the management committees. We are also supporting the creation of management tools, such as the management plans ['Planes maestros'], the plans of financial sustainability, ZEEs or the touristic use plans- all the tools that SERNANP needs to better manage the protected areas [SERNANP (Servicio Nacional de Áreas Naturales Protegidas) is the abbreviation for the Peruvian Conservation Agency].

Conservation projects in Peru are **strongly connected to the international level**. NGOs and Ministries receive support from the international level to finance conservation and capacity building projects, such as the development of the biodiversity strategy financed from the international level. Additionally, many policies are developed as a response to international commitments, such as the CBD or as part of free trade agreements. Most interviewees applying a Biodiversity Protectionist rhetoric work in these areas.

Biodiversity Protectionists view the attitudes towards conservation of **local actors** and representatives from other political sectors as part of what needs to be changed in order to meet conservation goals. Frequently they claim that "*people don't understand*" or are ignorant of the function and value of biodiversity. In their projects, they aim at educating local people. A representative of a national NGO working in the protected area "Pacaya Samiria" noted:

In Pacaya Samiria they have formed a management committee, and they are the ones who keep guard so that no outsiders enter to fish paiche, because paiche belongs to them and the lagoon is in the surroundings of their community. We have taught them how to fish, how to do this, how to do that, and now we are helping them get paiche out to markets where it can be sold for a good price [note: Paiche (Arapaima) is a large sweet water fish, widely distributed in the Peruvian Amazonia].

The diversity and complexity of ecological systems is a **value** that Protectionists feel needs to be protected. They call for more "**academic knowledge**" of domestic biodiversity and have difficulties in accepting traditional and other knowledge or valuation systems on an equal level. The fact that most proponents are biologists might influence this.

Highlighting the intrinsic value of biodiversity, substituting ecosystems and the value they generate for other forms of capital is not an option to Protectionists. Instead they criticise how governments in the last decades have been selling the country to foreign investors and subjecting the land to industrial booms. The current strategy of economic development of the Amazon region was described by a government official:

There is no sustainability at all in this process, and instead it fragments ecosystems, affects species, divides populations, animal populations, human populations, and in many aspects [...] acculturates people because by selling development as roads and other things while in reality there are other visions. There is no ecosystemic vision, no landscape vision.

The **principal policy strategy** pursued by Protectionists focuses on reducing pressures on protected areas. They call for more awareness raising activities and political regulation. In relation to the creation of the Ministry for the Environment a civil servant commented:

An environmental policy, a printed agenda - that was how we articulated the topic [biodiversity conservation] to the different actors. That was how we worked [in the time before the creation of the Environmental Ministry]. When we turned into the Ministry for the Environment we all thought this was the optimal opportunity to apply sanctions.

Because one thing is to coordinate and another one is to say "stop! until here no more".[...] And that is what now is expected from the Environmental Ministry regarding biodiversity.

Accordingly, protectionists also call for a strong Ordenamiento Territorial (OT) that takes into account processes of population development and migration, oil and forest concessions and other land-uses when defining areas for conservation.

[note by the author: Ordenamiento Territorial (OT) is defined in the RESOLUCIÓN MINISTERIAL N° 135-2013-MINAM as “the participative political, technical and administrative process of organized occupation, sustainable use, promotion of localization and sustainable development of the human settlements and of economic and social activities and physical development, based on the identification of potentials and limitations, taking into account environmental, economic, socio-cultural, institutional and geopolitical criteria”. Zonificación ecológica y económica (ZEE) is the technical process of land-use categorization based on ecological and economic information. (DS N° 087-2004-PCM). ZEE serves as a technical input to the OT process.]

A1.2 Biodiversity Traditionalists

Proponents of this paradigm perceive economic changes and globalisation as the roots of biodiversity loss. According to an NGO representative, current development paths are seen as problematic, since they do

‘not resolve the issues of values, spirituality and joint models of living. We have to find other ways. I don’t know if the way of the communities is the only way, but for now that is my proposal.’

Instead Proponents think that the **indigenous, local population** knows best how to conserve their biodiversity and demand more support for local, autonomous conservation measures. Members of this group are mainly from indigenous organisations, or local NGOs, but also working in other national governmental or non-governmental organisations where they focus on their areas of expertise and interests.

Biodiversity is seen as integrated into cultural systems and production practises. As traditional people are part of their land, their land is part of them. Applying this narrative, a proponent explains:

Who has made biological diversity possible in Peru? Technicians or indigenous people? Everything we have seen until now, everything of plant diversity, all that hasn't been a gift from nature, it is an expression of the work of the indigenous people.

As such, proponents blame international **stakeholders**, such as the World Bank and cooperation organisations as well as international corporations for biodiversity threatening activities, such as agricultural expansion, monocultures and fossil fuel extraction. On the contrary, traditionalists follow a very political perspective on the biodiversity problem and criticise the process of privatisation that led to a redistribution of land from many small farmers to a few big enterprises. Some proponents even blame international conservation NGOs of converting indigenous lands into international conservation areas and thereby expropriating local people.

Despite their rejection of the projects run by international enterprises or development organisations, traditionalists frequently refer to international legislation as supportive of their goal. Examples are the article 8j of the CBD on traditional knowledge and the article 391 of the Andean community for access to natural resources is frequently referred to in lines of argumentation.

Migrants from the Andes are frequently blamed by Amazon natives and indigenous federations and other actors for their practises of extensive deforestation through the conversion of rain forest into cattle pastures and agricultural land. Here an example from an indigenous representative:

A bit of change is evident in how, in some places, people have begun to gain an understanding of the importance of conservation. Because it is true that those areas you see over there are deforested areas because of the people, the family of the Andes. When there was this project of this road into the jungle that is often talked about, people came without an idea of conservation. They came with an idea of cutting trees.

Traditionalists refer to culturally grown **value and knowledge systems** for the human nature relationship. As such, they enable the traditional life styles that offer for example nutritional security, as a Shipibo explains:

The people of the Shipibo, they lived happily, sawing Yucca, sawing banana, sawing mais, sawing sugar cane, fishing in the lagoon, all that existed in the community. You didn't have anything to eat? You seized the fishing hook and went to fish [...] In their farm they had an abundance of Yucca, an abundance of banana, they had everything. The problem now is that the people do not think about producing with the soil, they think first of all in more money. I buy, I don't sow! For that reason I need money every day.

As can be taken from this quote, some traditionalists do not only fear the direct impacts of globalisation, but also ideological changes that bring insecurity and dependencies. This is criticised, by an NGO member:

I don't care about individualism. I am annoyed about the dependence for eating, for bathing, to dressing, for everything. Just to be another part of a global market. It is important to fight for autonomous communities that can be interdependent among themselves; the few communities that remain like this remain in the Amazonia and in the Andes.

Furthermore, traditionalists argue against predominant knowledge and valuation systems in media and political discourses that do not permit the communication of traditional knowledge. Values, spirituality and cultural interconnections make socio-ecological systems **unsubstitutable** for other forms of capital or development. However, some traditionalists mainly focus on the legitimate share of benefits for communities in economic development and participation in decision making processes.

As biodiversity is part of their socio-ecological systems, proponents of this paradigm also find traditional practises of indigenous and local people to be the most suited **political strategy** for conservation. Accordingly, NGOs and governments from different levels should help empowering and strengthening the communities in their institutional organisation and in the realisation of conservation activities. This will require responsibility from local people as described in the statement of an indigenous person:

The thing would be, every one of us, as citizens, as indigenous, as community members put our hands to our chests and say "stop this now", at least I have to sow a tree, at least I have to take care of the water, at least I have to take care of my environment to be able to live better, both for me and for my children [...]. That means that the institutional part, in this case regional governments, municipalities, NGOs, have to be a complementary to what each community member wants to do. If it is about reforestation, give me some funding, logically to be able to strengthen his working capacities, but our vision has to face the future, No more felling trees, but reforest them.

Regarding advances of conservation, proponents point to innovative conservation modalities, such as the creation of community conservation areas. As a result of long negotiations between local communities, indigenous organisations and the responsible governmental institutions, a co-management of protected areas could be achieved. However, the lack of funding for administration and implementation of conservation policies is seen as an important challenge. It appears that traditionalists are against a binding OT (land-use planning) process on higher political levels. Instead they prefer to maintain autonomy on the community level.

A1.3 Biodiversity Pragmatists

The Pragmatists see biodiversity policy as an incomplete process of institutional development. While they consider the orientation and legal basis for biodiversity protection in place, they see problems in policy implementation and instruments for coordinating different interests. As an NGO conservation expert stated:

You have very young institutions both at the national and at the regional level [...] that are not yet done consolidating their competences and their area of activity. The institutions are still very weak. And you can see that in the conflicts - mostly over mining projects. Environmental issues arise in parallel due to a lack of credibility of the institutions that are not able to solve the problem.

Proponents of this paradigm do mainly work in national political institutions, national NGOs or media. Feeding on years of experience in the area of conservation, they see mainly the political

arena, not the economic arena or single projects, as responsible for bringing about changes in biodiversity practise.

When asked to define or **situate biodiversity**, they generally quote official, legal documents and their definitions. According to the variety of international and national policies, they acknowledge different integrated and protected area approaches to conservation. However, they blame flaws in the implementation and the coordination of actors for insufficient achievements. An NGO representative demands that conservation policies must fit local situations to be effective:

*An opportunity I have seen for Andean agriculture is the organic production and exportation of native products. What we have in the Andes are very small extensions of three to five hectares, no more - and often less than that. But you'll find a very high cultivated biodiversity. On one "chacra" [, a small farm] you'll find 200 species of potato, 50 species of "mashua", five species of maize, ten species of quinoa in only one hectare, in one area of cultivation only. And the vision of the central government is focused on [the cultivation of] monocultures in bigger extensions, which collides with the vision of the Andean agriculture. And this almost "anti-cultural" vision is what creates more poverty [note: Mashua (*Tropaeolum tuberosum*) and Quinoa (*Chenopodium quinoa*) are native Andean crop species].*

Despite the plurality of **different stakeholders** in the political arena, Pragmatists point to the central, national government as responsible for coordinating those interests and communicating transparent and coherent political orientations. As part of this challenge, an employee of a governmental conservation agency points to the importance of transparent communication:

The other problem we have is our language. The language we use to convince our fellow citizens, our political citizens, has always been a very technical language that wasn't very well understood. That marks the difference here. The language used in the Rio conventions, such as the decisions of the Conferences of the Parties, the Convention of Biological Diversity, is more straightforward.

More than focussing on specific **value or knowledge systems**, Pragmatists call for the development of mechanisms to coordinate different interests and political responsibilities, potentially in a land-use planning process (as part of OT). This rational coordination of interests needs to be based on knowledge generated in studies:

There is growth, there are services, the country has to offer, such as health, education, and a lot of things for which we have to sacrifice a certain amount of resources. [...] The country has to do a land-use categorisation. Even though there are metal reserves, I still won't dig holes all along the Andes. And even though we have biodiversity we won't install protected areas everywhere. That is also a barbarity. This needs a study, an analysis. Well, you have a car, you have internet, you have metals - where did that come from? Out of the air? No, it comes from the mines and in this aspect you need to have a balance.

Accordingly, Pragmatists do not stringently believe in the **unsubstitutability** of biodiversity, but want to coordinate interests of sectors, who are each managing their responsibilities in independent mechanisms as shown in the following quote:

But the OT is also a planning tool of the central government to be able to balance this whole issue of using natural resources and also to put brakes on the [political] sectors [...]. Thus, to have only one map that aggregates the visions of the sectors would be most appropriate. However, in the government we have, every ministry has its own map.

The Pragmatists see contradictions in current sectoral policies and call for practical instruments, such as general land-use planning, standardised Environmental Impact Assessments and greener regulations for the approbation of governmental funds. As a key **political strategy**, stronger institutions shall help to implement and enforce policies, acknowledge land titles and give a clear orientation both for conservation activities and for exploitation and investment.

A1.4 Biodiversity Localists

Similar to Pragmatists, Localists thrive for the coordination of interests on the local level as well as the practical elaboration of policy instruments and the enforcement of regulations. However,

having experienced developments of deforestation and degradation, ecological limits and limited territory is central to their perspective. In order to advance in these aims, they see land-use planning as a central tool to biodiversity policy:

What I want is quality of life. What I certainly want is production - but I work applying my territorial approach. In other words, there has to be equilibrium between the economic, the social, the productive, the environmental and the politically institutional. If I don't have equilibrium, I am simply outdated. And the only thing that will offer me this equilibrium is the backbone, which is OT.

Proponents are mainly regional and local politicians and civil servants, representatives of local NGOs and park managers among others.

Localists **situate biodiversity** as the biological aspect critical to the functionality of ecosystems. Protected areas and other conservation efforts are not only instruments to protect biological variety; they also provide ecosystem services as a basis for local quality of life:

The areas of conservation don't have to be regarded solely as areas to conserve biodiversity.[...] But to conserve biological diversity, to conserve forests as an essential part of this whole ecosystem that in the end provides water, food and many things the people need to live.

While many different interests of different political and economic **stakeholders** collide in local land-use conflicts, proponents see inclusion and participation as key to effective policies. Transparent perspectives on land-use and political orientation are a crucial prerequisite to motivate actors to invest, as stated by a representative from a local government:

We need an articulated policy from the ministries and associations of producers [...], including the civil society. Because if they are not determined that biodiversity is important, it does not help to talk and develop policy objectives [...]. I think that participation of the population is key in this whole process.

With their understanding of different ecosystems and their geographical diversity, Localists call for the collection, organisation, and mapping of **knowledge on biodiversity**. The ZEE is seen as an important prerequisite that serves as a basis for OT [see section A1.1 for an explanation of ZEE]. A civil servant from Arequipa states:

To conserve biodiversity we need to manage the territory and we need appropriate information to do so, to have a categorisation of the territory, and as part of this categorisation we can prioritise conservation issues.

Due to the rapid increase in the extraction of natural resources in Peruvian regions, proponents of this paradigm point to the urgency of improved regulations:

I honestly think that if we don't do anything now, in ten years from now we'll have to put tanks in front of the reserve, in the whole border - war tanks to prevent that people enter... because the pressure and peoples' necessity for territories and water will be that strong.

Thus, Localists regard biodiversity as crucial for the provision of ecosystem services, as a limited resource and as **unsubstitutable**.

To date, regional and local policies are dominated by an orientation towards expansion and extraction as explained by an employee of a regional government project:

The priority of the governor is not to [ecologically] recover the territory, but to execute construction projects. And that is because it is easier to get something out of it - do you understand - to receive an economic benefit from the project for me as governor, as manager.

Local conservationists strongly criticize this perspective as unsustainable and short sighted. Instead they propose clear territorial projections that allow actors to act inside transparent limits and regulations. In the future land-use is likely to change due to mining or oil extraction projects, thus land owners will be reluctant to invest in economic projects on their territories. Therefore,

Localists regard integrated and participative land-use planning and management as principle **political strategies** for effective biodiversity conservation.

A1.5 Biodiversity Capitalists

Proponents of biodiversity as inputs for development follow the predominant growth ideology which takes extractivism as a given. They emphasise the necessity of mining and the expansion of agricultural production and infrastructure. The Ministry for Economy and Finances (MEF) allocates funds according to cost benefit analyses based on monetary values. Accordingly, proponents believe that if biodiversity policies want to be effective, they have to be adapted to this logic, as argued for by the former Minister for the environment:

Have in mind that everything has to be oriented economically. It passes through the wallet. Because, if you don't have economic numbers, the Ministry for Economy won't give you money. That I learned VERY WELL. Why did they increase the budget of the protected areas in the Ministry for the Environment? Because it could be demonstrated that there is ecotourism, that tens of thousands of tourists come to visit. It is profitable, it creates local jobs etc. When I demonstrated with SERNANP that the National Reserve Paracas leaves at least 12 million Dollars per year in the Pisco province as benefits for the local population, hotels and restaurants, tourist guides, boats etc, the ministry for Economy and Finance said "Wow, that is good. It produces revenue".

Proponents of this group usually work in governmental organisations and ministries or in international cooperation organisations in Lima and dominantly have an educational background in economics.

Advocates do not **situate biodiversity** characteristics as part of local culture or social systems. Rather, they speak of "stocks of species", "natural resources" and "possibilities for economic development". Protected areas are framed as a pool of resources and possibilities for local and regional economic structures. Economic benefits, generated by those areas are used to justify conservation practises, as is displayed in the following statement from a civil servant working in the protected area agency:

Because we conserve in order to use. We do not conserve to just leave it there. We need a sustainable use of the resources. You know that in the Amazonia, the proteins for nutritional purposes is mainly produced with fish, fish from the rivers, most of which derive from protected areas.

Political institutions are expected to convince **stakeholders** to integrate conservation into their activities. Instead of questioning or confronting powerful industries with a strong impact on biodiversity, such as mining, fishery or agricultural lobby groups, or foreign investments, they call for the development of technical tools to incorporate conservation into existing processes. These instruments are mainly adopted from the international level. Primarily local mismanagement or illegal processes, such as illegal logging, informal mining or coca production, are mentioned as causes for biodiversity loss. A simple logic of ecological destruction as consequence of a utilitarian perspective is applied, as illustrated in the following quote:

"I have to cut down my trees, because that's what gives me the benefits and resources necessary to buy, let's say, a TV". Well, luckily the international community reflected on that and says: "well, of course that carbon capture and those trees should have a value, or conserving those trees should... let's create the REDD initiative or carbon credits or..." Now the task is to define how this money gets to the people...

Accordingly, it is assumed that people prioritise economic activities over conservation. A director of a regional governmental agency states:

How do I benefit from maintaining this park, forest, if I cannot drive from here to Pucallpa - if I do not have the [appropriate] life conditions of a province?

Proponents refer to a "Western logic of sustainability" that shall be used to promote a more sustainable form of development. Economic valuation mechanisms, developed at the international level, such as carbon credits and REDD (Reducing Emissions from deforestation and Forest Degradation), BioTrade or instruments linked to TEEB (The Economics of Ecosystems and Biodiversity) process shall be used to incentivise the population to engage in conservation activities.

The logic of biodiversity for growth implies that the **value of ecosystems** and its components can be expressed in economic terms. Conservation interests can be included and balanced with economic projects in accounting procedures of the Ministry for Economy and Finance. The following quote from a ministerial employee illustrates the equation of biodiversity with prosperity:

It is a fact that this effort of [economic] valuation enters national accounting procedures. Thus, the very state benefits by showing off a cleaner image and it appears much more stable with many more reserves. [...] Another is that comparative balances can decide if exploitation of other things shall be allowed or the forest conserved.

Proponents acknowledge that biodiversity is at risk, but they do not want to speak of ecological limits of economic activities. Thereby, they take a position of weak sustainability, which accepts the **substitutability** of natural capital by other forms of capital. Only little regulatory weight is given to planning processes, such as OT, as can be seen in a quote from the minister for environment:

First, Land-use Management is a planning tool to define the best use of the territory, but in a dynamic way, not a static one. Second, land-use management is a tool to coordinate, not to destroy. Hence, I feel that the political debate that exists in Peru between the national government and regional and local governments leads many to wrongly think that with OT would restrict land uses and say "I don't want this activity, or the other one."

Instead of integrating biodiversity conservation into a holistic perspective of development, **political strategy** of proponents prefer to develop individual political instruments and tools and therefore separate biodiversity policy from the general course of development. Consider the statement of the current environmental minister:

I don't think one should have to make the intent to integrate all those elements. What we have to do is make efforts to have them and use them in every decision to make it a good

one. We need OT, definitely. But to have OT, we need information and to have good information we need a good base line and therefore for example, environmental evaluation is a fundamental strategy. Until then, I think we need to have those instruments available to make the information well sustained. We should not try to integrate everything by force, we need to develop each of those instruments.

In order to integrate the conservation of biodiversity into economic development, efforts to value costs and benefits, sensibilisation and technological improvements should help to raise environmental awareness.