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# SAMBIO INSTITUTIONAL STUDY<sup>1</sup>



# **SAMBIO INSTITUTIONAL STUDY<sup>1</sup>**

by

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## EXECUTIVE SUMMARY

This study was conducted with the view of clarifying the institutional landscape in Samar with respect to biodiversity and mining, from which the Samar Island Biodiversity Foundation (SIBF) may draw its options as to how to link with other institutions and groups in the Island to best achieve its objectives.

This study analyzes the institutional arrangements on managing biodiversity and mineral resources in the Philippines, but focusing on Samar. It looks at arrangements prescribed in key Philippine legislation on biological and mineral resources and environment and on certain government-civil society linkages that have had precedents in the country and elsewhere. It looks at protected area and mineral development as alternative land uses of a forest reserve. The purpose of the study is to provide local stakeholders of Samar's biodiversity, particularly the SIBF, with a compass for locating optimal opportunities for linkaging. The arrangements being recommended are intended to complement the other recommendations of SAMBIO.

The study finds that while the State has consistently been the principal and ascendant legal authority over biodiversity and mineral development in the Philippines (and so, also, in Samar), civil society, local communities and private sector institutions do have some crucial roles to play – which are mandated by law—and, if played right and combined with extra-legal and socially-determined influence, could countervail government powers to determine how resources are to be developed and used. Government (mainly DENR and LGUs) seem to have the stronger legal capacity to influence the sway of the decisions on what to do with biodiversity and mineral resources, but their decisions are vulnerable to a determined civil society, local community and private sector push to influence the decisions. Civil society organizations like SIBF and local residents and businesses in Samar have a distinct space to influence biodiversity and mining decisions in the island. And this is because they have the opportunity allowed them by law, and the tradition to organize and undertake autonomous initiatives to influence government decisions.

The results of the study suggest that the following factors are crucial to SIBF's success and sustainability:

1. Local communities and residents in Samar – especially those involved in and supporting SIBF – will realize more long-term benefits from biodiversity than from mining. This, in order for them to find sensible reason to continue investing on biodiversity conservation rather than quickly trade biodiversity for mining.
2. The benefits that Samareños gain from biodiversity are real: i.e., they are practical, visible and of material or cultural value to them. Unless this happens, it would seem that biodiversity might remain a matter of romance and civic responsibility to them rather than something that they may want to invest on in terms of time and effort.
3. For itself, SIBF will need excellent linkaging skills. This is particularly important if it were to maintain – as would seem best for it – a wide, highly differentiated, mix of linked institutions from various sectors in all three provinces in Samar which, in all probability, would be coming to SIBF with a cocktail of interests and agenda. SIBF must

be able to coalesce the interests and agenda into a single collective action and effective collaboration, with a minimum reference to province-based priorities.<sup>3</sup>

4. SIBF should be able to set up and maintain a linkage arrangement with different sectors in the three Samar provinces, particularly with those that offer it (and to them) the least transaction costs to meet common objectives. It is important that SIBF gains a wide range of sectoral adherents but always remembering that such situations will perforce increase the diversity of institutional interests that it needs to coalesce; thus, the structure of the arrangement would be critical.

Thus, it is recommended that SIBF works for:

1. Bringing about high long-term biodiversity *benefits* to Samar residents;
2. Seeing to it that the benefits are *real*;
3. Lowering the *transaction costs* to its members and constituency (when undertaking collective action under its auspices);
4. Keeping an effective *organizational development* program that will allow it and its members and constituency to possess good linking skills; probably crucial would be its organizational skills on membership development, conflict management, staff sensitivity, and public education and information. (These seem all necessary before SIBF engages itself fully in SIBP.)
5. Sustaining a recruitment, staff development, and members' education program that (a) paces the expansion of its linkages (and hence its costs) with the expansion of its involvement in SIBP, and yet (b) ensures that it has the needed technical skills and organizational wherewithal to meet its commitments to SIBP.

Please see *Appendix A* for two options to achieve (1).

See *Appendix B* for options to achieve (2).

*Appendix C* are options to achieve (3).

As to (4) and (5), it is recommended that SIBF either engages the services of competent Organizational Development (OD) professionals, or include among its members local (or even regional and national if none exist in Samar) NGOs, POs, academic institutions or persons that have these skills.

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<sup>3</sup> The SIBF must be able to present itself as a Samar-wide institution, with a Samar-wide purpose.

## SAMBIO INSTITUTIONAL STUDY

### 1. BACKGROUND

SAMBIO is a project to identify options for building local capabilities in Samar Island to protect its biodiversity. One concern of the project is to provide the stakeholders of the island's biodiversity with a clear technical basis for assessing the worth of Samar's biota in face of its rich mineral potentials. More specifically, the project is expected to provide an objective basis for the government and the residents of Samar to decide on how much of an existing forest reserve there (the 360,000 ha Samar Island Forest Reserve, or SIFR) may be developed instead for bauxite (a mineral found in the SIFR whose quality and quantity are deemed of high economic value and is probably the largest deposit in Asia).

The dilemma is not without basis. Each choice has a serious justification. Samar is among the most economically-depressed provinces in the Philippines and bauxite mining would be a boon to the local economy. It offers direct material rewards to local residents and to the local economy and one which is less likely to be disrupted by severe weather that often hit the island (the Regional Disaster Coordinating Center of Region 8, Eastern Visayas, recorded 12 typhoons that directly hit the area in the last 10 years; in general, about 19-21 typhoons hit the country every year, mostly from the east, of which 5-7 are severe).<sup>1</sup> Meanwhile, Samar's biodiversity is probably among the most valuable in the country if not the world. Madulid (in another paper in this project) reports that Samar has at least 406 of the endemic plant spp in the Philippines (of which 40 are found only in the island) and hosts 197 spp of birds (34% of the country's total), 39 spp of mammal (23% of total in the country), 25 spp of reptile and 12 spp of amphibians (of which 10 and 5, respectively, are endemic to Samar).<sup>2</sup>

While the dilemma continues to remain unresolved, a number of NGOs in the island have formed a non-profit coalition (the Samar Island Biodiversity Foundation, or SIBF) for the purpose of consolidating civil society-led local efforts to promote the biodiversity option, or to protect it if the mining option were taken. Its core organizations include the Samar Center for Rural Education and Development, Inc. (SACRED) of Northern Samar, the Tandaya Foundation of Western Samar, and the Eastern Samar Development Foundation, Inc. (ESADEF) in Eastern Samar.

This study was conducted with the view of clarifying the institutional landscape in Samar with respect to biodiversity and mining, from which SIBF may draw its options as to how to link with other institutions and groups in the island for it to best achieve its objectives.

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<sup>1</sup> Environmental Management Bureau 1996. *Philippine Environmental Quality Report, 1990-1995*.

<sup>2</sup> The Philippines is considered among the "hotspots" of global biodiversity; it has among the world's highest biodiversity and yet among the most threatened as well (Oliver & Heaney 1997, *The Philippine Red Book*; Department of Environmental & Natural Resources, Philippines, and the United Nations Environment Programme 1997, *Philippine Biodiversity*).

## 2. OBJECTIVE OF THE STUDY

This study analyzes the institutional arrangements on managing biodiversity and mineral resources in the Philippines, but focusing on Samar. It looks at arrangements prescribed in key legislation on biological and mineral resources and environment in the Philippines and on certain government-civil society linkages that have had precedents in the country and elsewhere. It looks at protected area and mineral development as alternative land uses of a forest reserve. The purpose of the study is to provide local stakeholders of Samar's biodiversity, particularly the SIBF, with a compass for locating optimal opportunities for linking. The arrangements being recommended are intended to complement the other recommendations of the project.

## 3. FRAMEWORK

This study is anchored on three assumptions about the nature and morphology of environmental institutions, and on two others about the nature of institutional arrangements and the effectiveness of institutions involved in arrangements:

1. Institutions are either *statutory*<sup>3</sup> or *customary*<sup>4</sup> organizations<sup>5</sup> and bodies of regulation that guide and direct the conduct of human individuals and groups.
2. Institutions may be *statist* (deliberate creations of government such as organizations like the DENR and LGUs and regulations like NIPAS Act, Mining Code, AFMA, Local Government Code, and Forestry Code), or *non-statist* (not created by the government but may be based in part or in whole on State law; e.g., SIBF as an organization, or its Articles of Incorporation and by-laws that govern its conduct).
3. Institutions could be *formal* (having prescribed structures like DENR and LGUs, or, in the case of regulations, having prescribed meanings and clear scopes and methods of the application of the regulation such as the Articles of Incorporation and by-laws of civil society institutions),<sup>6</sup> or *non-formal* (no rigid structures like neighborhood lending associations, or regulations like the internal understanding among groups on how to resolve conflicts among their members).

"Institutional arrangements" refer to a combination of organizations and regulations linked for a common cause. Linkages prescribe the flow of organizational resources and assets across institutions, for them to meet their common ends. In the case of protected areas and natural resource management, institutional arrangements refer to how different organized groups (like local community associations, civil society organizations and government) collaborate and coordinate themselves to effect a better protection of an area or better regulation of access to and use of a resource. These efforts may be variously identified as partnership agreements, networking, collaborative undertakings, cooperation, or co-management schemes.

The effectiveness of institutions (their ability to achieve their aims) is boosted by the extent of its linkages. It rises also according to the efficiency of the flow of resources between them. Efficiency implies costs (financial and institutional); it climbs as the number of

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<sup>3</sup> Created on the basis of formal laws and regulations of the State.

<sup>4</sup> Products of tradition in a community (where "community" refers to groups whose members derive from among themselves the satisfaction of their different needs).

<sup>5</sup> Groups whose members seek to achieve a common end.

<sup>6</sup> For brevity, CSIs; includes service, labor and religious organizations, NGOs, POs, media and academe.

institutions comprising an arrangement goes up. Thus, effectiveness is directly related to extent of linkages but when costs exceed the benefits from the linkages, it will decline. (It is defined by an inverted Kuznets' curve of extent of linkages against costs.)

Consequently, an assessment of alternative institutional linkages – for the purpose of determining their potential at ensuring the effectiveness of a local Samar institution like SIBF – shall need to include four (4) activities:

1. An *inventory* of actual and applicable statutory, non-statutory, statist, non-statist, formal and non-formal organizations and regulations comprising the institutional landscape of natural resources management in Samar.
2. A *review* of institutional arrangements in other parts of the world which may be applicable as a model for SIBF.
3. An *assessment* of the strengths and weaknesses of institutions and institutional arrangements that have potentials for ensuring the effectiveness of SIBF, under different scenarios of resource-use in Samar, now and in the future.
4. An *assignment* of anticipated benefits and costs (to SIBF) of alternative institutional arrangements that it might choose to engage in and maintain.

#### 4. METHOD

1. **Activity 1** involves reviewing the principal legislation on natural resource management in the Philippines<sup>7</sup> and the institutional practices on biodiversity conservation and mineral development in the country. OUTPUT: *A description of the institutional landscape on biodiversity and mineral resource governance in the Philippines, as specified by law.*
2. **Activity 2** includes a review of literature on institutional arrangements involving local organizations, biodiversity conservation and mineral development in other countries. OUTPUT: *A description of institutional arrangements on biodiversity conservation and mineral development in three countries other than the Philippines.*
3. **Activity 3** involves doing a SWOT Analysis of three alternative patterns of linkages that SIBF might pursue. The three patterns are combinations of the models from the Philippines and elsewhere discussed in Activities 1 and 2. The analysis is conducted under three assumed scenarios of resource management of the SIFR (biodiversity only, mining only, or a mix of both). OUTPUT: *SWOT Analysis of 9 institutional arrangement scenarios for SIBF.*
4. **Activity 4** involves assigning scales on the potential benefits per costs to SIBF of each of the institutional arrangement scenario indicated in Activity 3. It uses the SWOT Analysis as basis for a scale: <1=below unity, 1=unity, >1=above unity. OUTPUT: *A tabulation of the scales of potential costs and benefits to SIBF of each of the 9 institutional arrangement scenarios indicated in Activity 3.*

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<sup>7</sup> Mainly the NIPAS Act of 1992, Mining Code of 1995, PD 705 (Forestry Code), Local Government Code of 1991, AFMA, CBD and WTO Agreements (the last two are deemed parts of the laws of the country). References are made to the National Biodiversity Strategy and Action Plan (NBSAP) and regulations on biosafety and bioprospecting which are relevant to the biodiversity-mining governance context of Samar. IPRA is not included because there are no indigenous peoples in Samar.

## 5. RESULTS

### 5.1 *Institutional landscape on resource governance in the Philippines.*

**Tables 1-7** are the organizations and salient regulations covering their structure, functions and funding, of institutions stipulated in the indicated legislation.<sup>8</sup> **Table 8** lists the salient provisions of NBSAP, Executive Order 149 (on Bioprospecting) and Executive Order 430 (on Biosafety). **Table 9** summarizes the features of four paradigmatic cases in the Philippines where government, civil society, ODA sources and the private sector have collaborated to undertake natural resource governance in a local community.

**Figure 1** shows the key linkages which, based on the preceding tabulations, comprise the institutional landscape on natural resource governance in the Philippines. It begins with the Constitution, the fundamental law of the land, which accords legal legitimacy to all institutions in the country (statist and non-statist).

### 5.2 *Institutional arrangements on national, sub-national and community biodiversity conservation and mineral development in three countries.*

**Table 10** is a summary of institutional arrangements on biodiversity and natural resource governance in three countries (Costa Rica, Malaysia and India). Each involves different combinations of CSIs, government and private sector institutions and linkages.

### 5.3 *SWOT Analysis of institutional arrangement scenarios for SIBF.*

**Table 11** shows the comparative strengths, weaknesses, opportunities and threats of three patterns of institutional linkages that SIBF might develop, under three scenarios of resource management of SIFR.

### 5.4 *Potential costs and benefits to SIBF.*

**Table 12** shows the comparative ratings of costs-to-benefits to SIBF if it were to pursue any of the three linkage patterns shown in **Table 11**.

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<sup>8</sup> The details of the regulations (and of their Implementing Rules and Regulations which are included in this review) are not discussed; a separate legal assessment is being done in this project.

**Table 1**  
**Organizations and their Regulations in the NIPAS Act of 1992<sup>9</sup>**

Governance Level	Organizations	Regulations on Structure, Functions and Funding
National	<ul style="list-style-type: none"> <li><input type="checkbox"/> Congress</li> <li><input checked="" type="checkbox"/> Office of the President</li> <li><input type="checkbox"/> DENR Central Office</li> <li><input checked="" type="checkbox"/> DBM</li> <li><input type="checkbox"/> POs/NGOs</li> <li><input checked="" type="checkbox"/> Private sector<sup>10</sup></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Pass laws to designate/disestablish PAs<sup>11</sup> (s 5e; s 7) &amp; develop energy resources (s 14)</li> <li><input type="checkbox"/> Provide funding for PAWDs (s 10)</li> <li><input checked="" type="checkbox"/> Proclaim establishment/disestablishment of PAs (s 5 &amp; 7)</li> <li><input checked="" type="checkbox"/> Submit draft establishment/disestablishment laws &amp; reports to Congress (s 17)</li> <li><input type="checkbox"/> Create Protected Areas &amp; Wildlife Division in Reg'l Offs where there are PAs; designate PA Superintendent &amp; regulate energy exploration (s 10, 14; IRR c IV)</li> <li><input type="checkbox"/> Identify, delineate, mark and undertake public processes and consultations to prepare sites for designation as PAs (s 5-8 of the Act; IRR ch. III)</li> <li><input type="checkbox"/> Administer PAs through NPPSC, subject to required participation by entities listed in the Act: LGUs, POs, NGOs, academe, other national agencies; incl. fixing fees and fines in PAs (see s 10-15; IRR ch IV &amp; VI)<sup>12</sup></li> <li><input type="checkbox"/> Prescribe rules for developing PAs (s 14); occupancy in PAs (s 13; IRR ch VII-VIII)</li> <li><input type="checkbox"/> Administer IPAF through IPAF-GB (ch. X IRR) &amp; PAMBs (s 16; IRR ch. X s 36)</li> <li><input type="checkbox"/> Appoint member of PAMBs (s 11)</li> <li><input type="checkbox"/> Prepare President's report to Congress (s 17; IRR ch VI s 33)</li> <li><input checked="" type="checkbox"/> Release funding for PAWD personnel (s. 10)</li> <li><input type="checkbox"/> Participate in PA policy &amp; plan formulation (see s 5, 10-15; IRR ch IV &amp; VI)</li> <li><input checked="" type="checkbox"/> Bid to construct facilities (s 10); support financing PA devt (s 10f, 16; IRR s 58 e)</li> </ul>
Sub-National	<ul style="list-style-type: none"> <li><input type="checkbox"/> DENR Regional Office</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Chair and represent DENR in all PAMBs in the region (s 10)</li> <li><input type="checkbox"/> Enforce DENR &amp; PAMB policies/rules (IRR ch VI s 34)</li> <li><input type="checkbox"/> Give technical direction, monitor, guide PAMBs (IRR ch VI s 35-36)</li> <li><input type="checkbox"/> Administer PAWD; supervise PA Superintendent &amp; performance of his/her tasks including integrating DENR-NGO roles in PA (IRR ch VI s 38)</li> </ul>
Local and Site	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> DENR Prov'l &amp; Com Offcs</li> <li><input type="checkbox"/> PAMB</li> <li><input checked="" type="checkbox"/> NGOs/POs</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Maintain records/info on local PAs (s 5 [c]); assist DENR Secretary (IRR ch III)</li> <li><input checked="" type="checkbox"/> Administer local PA enforcement officers of DENR (s 18); represent DENR (s.10)</li> <li><input type="checkbox"/> <u>Structure</u>: Chaired by RED; members are 1 rep of autonomous region (if applicable), PDO, 1 rep each of municipalities &amp; barangays with territory in PA, 1 rep each of IP communities in PA, at least 3 reps from local NGOs/POs (incl. church &amp; civic orgs), 1 rep from non-DENR NGA involved in local PA mgt (s 11; IRR c V s 19)</li> <li><input type="checkbox"/> <u>Functions</u>: Develop plans, approve activities, delineate/demarcate boundaries, issue rules &amp; regulations, ensure implementation of plans &amp; activities, control &amp; regulate constructions, &amp; monitor persons &amp; entities doing work in PA (s 11; IRR ch V s 18); report &amp; submit recommendations to NPPSC &amp; IPAF-GB (IRR ch V s 18g).</li> <li><input type="checkbox"/> <u>Funding</u>: IPAF (s 16; ch X s 61 IRR); OPC but no compensation of members (s 11)</li> <li><input checked="" type="checkbox"/> No specified structure or funding; function is to support the dev't of local PAs by cultivating community relations, participation in park planning, resolving conflicts, and developing the basis for issuance of tenure instruments in PAs (IRR ch VI s 43)</li> </ul>

<sup>9</sup> Excluding sections on Indigenous Peoples.

<sup>10</sup> Includes firms and other business or commercial entities including ODA and DFI sources.

<sup>11</sup> Includes: Strict Nature Reserves; Natural Parks; Natural Monuments; Wildlife Sanctuaries; Protected Landscapes and Seascapes; Resource Reserves; Natural Biotic Areas; and Other Categories established by law, conventions or international agreements of which the Philippines is a signatory; (Section 4 c-k).

<sup>12</sup> Includes ensuring the proper development and implementation of PA Management Plans and Manuals.

**Table 2**  
**Organizations and their Regulations in the Mining Code of 1995<sup>13</sup>**

Governance Level	Organizations	Regulations on Structure, Functions and Funding
National	<ul style="list-style-type: none"> <li>■ Congress</li> <li>□ Office of the President</li> <li>■ DENR Central Off/Secretary</li> <li>□ MGB</li> <li>■ Courts</li> <li>□ DTI/BOI</li> <li>■ DOLE</li> <li>□ Private sector</li> <li>■ MAB<sup>14</sup></li> </ul>	<ul style="list-style-type: none"> <li>■ Receive list of mineral agreements from President (s 29, 36)</li> <li>□ Establish and approve the modification or reversal to public domain, mineral reservations, as recommended by the DENR Secretary (s 5, 7)</li> <li>□ Final authority to award rights to develop &amp; utilize minerals in reserved lands other than mineral reservations (s 6)</li> <li>■ Change Mines and Geosciences Bureau (MGB) from staff to line unit (s 100)</li> <li>■ Act as "primary government agency responsible for the conservation, management, development, and proper use of the State's mineral resources" (s 8; IRR s 6) – in reservations, watersheds, &amp; lands of public domain (s 8); timber or forestlands (s 18; IRR s 14); water, sea bottom, &amp; subsurface from shore to 200 naut miles EEZ (s 3 ai); &amp; landward incl. submerged lands in lakes, rivers &amp; creeks (s 3 aj; IRR s 3-6)</li> <li>■ Enter into mineral agreements on behalf of government (s 8; IRR s 6b)</li> <li>■ Promulgate rules and regulations to implement the Act (s 8; IRR s 6), incl. creating MGB Regional Offices as needed (s 10) &amp; reviewing existing mineral reservations for modification or reversal to public domain (s 7; IRR s 21g)</li> <li>■ Recommend to the President the establishment, modification or reversal to public domain, sites for mineral reservations (s 5, 7; IRR s 28); and rights to do mining operations in reserved lands other than mineral reservations (s 6)</li> <li>□ Has "direct charge" over administration and disposition of mineral lands &amp; resources (s 9; IRR s 7); includes recommending to [DENR] Secretary sites to be declared or developed as mineral reservations, or contracted for exploration and development (s 5); also enforce environmental standards in mining areas (with EMB s 27, 67-71)</li> <li>□ Issue/cancel permits for industrial sand &amp; gravel extracting (s 47)</li> <li>□ Conduct research, recommend granting mineral agreements, enforce bonds, &amp; deputize police, barangay, NGOs or any person to police mining activities" (s 9)</li> <li>□ Receive 10% government share of royalties &amp; revenues from mining, for projects &amp; administrative expenses to explore &amp; develop mineral reservations (s 5; IRR s 216)</li> <li>■ Adjudicate conflicts over mineral rights; determine penalties (s 101-111; IRR s 211)</li> <li>□ Regulates mineral trading (s 54) &amp; granting incentives (s 83, 90; IRR s 222-229)</li> <li>■ Clear and grant work permits to foreign mining personnel (s 59)</li> <li>□ Apply for and enter into mineral agreements (s 15-52; IRR s 12, 70-103)</li> <li>■ Resolve mining conflicts (as listed in s 77) per process set in s 78-79 (IRR s 207-211)</li> </ul>
Sub-National	<ul style="list-style-type: none"> <li>□ MGB Office Reg'l</li> </ul>	<ul style="list-style-type: none"> <li>□ Receive proposals for mineral agreements (s 29; IRR s 53)</li> <li>□ Verify caves for guano permits (s 51; IRR s 83)</li> <li>□ Conduct safety inspections, day or night; require remedies (s 66-67; IRR s 142-176)</li> <li>□ Determine necessity of tree cutting in mining areas, with Forest Mgt Bureau (s 72)</li> <li>□ Receive fees, charges; also bonds for private property damages in mining areas (s 76)</li> <li>□ Organize &amp; recommend their designation by the DENR Secretary, a panel of Arbitrators to adjudicate conflicts on mining in the region (s 77; IRR s 201206)</li> </ul>
Local and Site	<ul style="list-style-type: none"> <li>■ P/C MRB<sup>15</sup></li> <li>□ Governor/City Mayor</li> <li>■ LGUs</li> <li>□ NGOs/POs</li> <li>■ Pvt entities<sup>16</sup></li> </ul>	<ul style="list-style-type: none"> <li>■ Regulate small-scale mining (per RA 7076) &amp; quarrying, commercial sand &amp; gravel extraction, &amp; gathering guano &amp; gemstone (s 42-43, 45, 46, 48-52; IRR s 70-103)</li> <li>■ Structure &amp; funding prescribed in RA 7076</li> <li>□ Issue/cancel permits for small-scale mining (per RA 7076) &amp; quarrying, commercial sand/gravel, guano, gemstone gathering (s 42-43, 45, 46, 48-52; IRR s 70-103)</li> <li>■ Participate in EIA &amp; other approval processes on mining activities (s 70; IRR s 8, 9)</li> <li>■ Municipal treasurers to collect occupation fees per s 86 of Code (s 87; IRR s 219)</li> <li>■ Receive allocations from government shares from mining revenues as per s 290 &amp; 292 of Local Gov't Code (s 82, 88; IRR s 219-221)</li> <li>□ Participate in EIA &amp; other public approval processes on mining (s 70; IRR s 9), &amp; in "ensuring that contractors/permittees shall observe all the requirements of environmental protection" (s 70; IRR s 9, 177-200)</li> <li>■ Invest on mineral exploration, development, extraction and transport (s 20-56; IRR s 128); stress on having satisfactory environmental record (s 28; IRR s 12, 70-103)</li> <li>■ Must assist in developing its community &amp; promoting general welfare &amp; development of science and mining technology (s 57; IRR s 112, 134-141).</li> </ul>

<sup>13</sup> Excluding sections on Indigenous Peoples.

<sup>14</sup> Mines Adjudication Board as stipulated in section 79 of the Code.

<sup>15</sup> Provincial (or City, if chartered) Mining Regulatory Board

<sup>16</sup> Includes local and foreign investors (s 39; IRR s 32) and small-scale mining coops (per s 5 & RA 7076)

**Table 3**  
**Organizations and their Regulations in the Forestry Code (PD 705)<sup>17</sup>**

Governance Level	Organizations	Regulations on Structure, Functions and Funding
National	■ Congress	■ No references, mainly because the Code is a Decree; but under present conditions, it shall be Congress that determines the national budget that may be used to implement the Code; also, to amend it (Constitution, 1987)
	□ Office of the President	□ May establish forest reserves & reservations in any land of the public domain for the national park system, to preserve critical watersheds, "or for any other purpose," or modify boundaries of existing reserves & reservations (s 18)
	■ DENR	□ May establish, on recommendations of DENR & NEDA, "wood industry import-export centers in selected locations" subject to rules of FMB (s 29 & EO 192 <sup>18</sup> )
		□ Appoint FMB Director & Assistant Directors (s 6; EO 192); adjudicate appeals (s 8)
		■ Exercise direct control, supervision, review of FMB (s 7; EO 192; s 44-45)
□ FMB	■ Set rules & regulations to implement the Code, per recommendations of FMB (s 9); include ensuring multiple use of forests (s 2a, 19) & their protection, development and rehabilitation using sustained yield mgt practices (s 2d, 3z, 18-19, 33-80); stress wildlife protection (s 55, 69, 71-72)	
■ Courts	■ "Study, devise, determine & prescribe the criteria, guidelines & methods for the proper & accurate classification & survey" of public lands, incl. determining those "not needed for forest purposes" (s 13)	
Sub-National	□ DENR Office	■ Reserve sites for experiments & research (s 18)
		■ Impose charges & fees (s 65-67)
Local and Site	■ Barangays □ DENR FOs ■ Pvt sector <sup>19</sup>	■ May deputize police, barangay officials & pvt entities to enforce the Code (s 80)
		□ Exercise jurisdiction & authority over forest & grazing lands, & all reservations incl. watersheds (s 5, 3, 14, 44-49) & non-operational mineral reservations (s 48)
		□ Administer technical, research, enforcement & administrative svcs (s 10-12)
		■ May exercise powers to prohibit & issue certiorari (s 8), eviction of unlawful forest occupants (s 69), & penalties for violations (s 80)

<sup>17</sup> Excluding sections on Indigenous Peoples.

<sup>18</sup> Superseded the Code re structures of DENR and Bureau of Forest Development referred to in the Code.

<sup>19</sup> Includes foreign sources of ODA (e.g., DFI) and DFI

**Table 4**  
**Organizations and their Regulations in the Local Government Code of 1991<sup>20</sup>**

Governance Level	Organizations	Regulations on Structure, Functions and Funding
National	■ Congress	■ Sets national budget as basis of internal revenue allotment for LGUs (s 284-288) ■ Review Code every five years (s 521)
	□ Office of the President	□ As head of national government, ensure that decentralization improves performance of LGUs and quality of community life (s 3m)
	■ LMB/DF/NSO	□ Exercise general supervision over LGUs (s 25); appoint vacancies if needed (s 45(1))
	□ NGAs/GOCC	■ Involved in determination & delineation of LGU boundaries (s 7a-c) □ Must coordinate with each other & consult LGUs when undertaking projects and programs affecting natural resources (incl. forestry, biodiversity & mining) & the environment (s 25b, 26); no projects/programs to be implemented in an LGU area unless LGU consultation is done per procedure set in s 2c & 26 (s 27)
	■ Courts	■ May nullify, void or affirm results of local initiatives, recall & referendum (s 127)
Sub-National	□ NCA Regl Off	□ Undertake mandate of NGAs (s 25-27)
Local and Site	■ LGUs	■ Promote general welfare in their jurisdictions: preservation & enrichment of culture, health & safety, balanced ecology, self-reliant S&T, public morals, economic prosperity & social justice, employment, peace & order, & comfort & convenience of citizenry (s 16-17, Bk III s 384-468); do governance per rules/procedures in Bk III ■ Exercise general supervision & control of police consistent with RA 6975 (s 28) ■ Maintain inter-LGU relations, collaboration & cooperative undertakings (s 29-33) ■ Promote & may fund & do cooperative arrangements with POs/NGOs (s34-36) ■ Full disclosure of financial/ business interests required of sanggunian members (s 51) ■ Must have a multisectoral Local Development Council in which not less than ¼ of its members are representatives of NGOs operating in LGU jurisdiction (s 106-108); LDCs are to plan, program, appraise, coordinate & prioritize local socio-economic & investment undertakings (s 109) ■ Collect local taxes & charges; manage debts; appraise properties; do credit financing; budget LGU financial resources; enter into contracts (Bk II s 128-383)
	□ LGU Voters	□ May recall elected LGU officials (s 69-75) □ May effect initiatives & referendum (s 120-126)
	■ NGOs/POs	■ Participate in LDCs (s 109) ■ Undertake collaborative undertakings with LGUs (s 34-36)
	□ Pvt sector <sup>21</sup>	□ Enter into contracts with LGUs (Bk II)

<sup>20</sup> Excluding sections on Indigenous Peoples.

<sup>21</sup> Includes foreign sources of ODA and DFI

**Table 5**  
**Organizations and their Regulations in AFMA 1997<sup>22</sup>**

Governance Level	Organizations	Regulations on Structure, Functions and Funding
National	<ul style="list-style-type: none"> <li>■ Congress</li> <li>□ Office of the President</li> <li>■ DA</li> </ul>	<ul style="list-style-type: none"> <li>■ Through AFMA Congressional Oversight Committee (ACOC), review SAFDZs &amp; monitor AFMA implementation (s 9, 114-115)</li> <li>■ Approve standards of Nat'l Centers of Excellence (NCEs; s 79)</li> <li>□ Through DBM, ensure budget for AFMA (s 77, 79, 112)</li> <li>■ Identify SAFDZs within the nature of protected areas for agric'l &amp; agro-ind'l dev't to ensure that lands are efficiently &amp; sustainably used for food &amp; non-food production &amp; agro-industrialization; consult LGUs, other NGAs, NGOs, &amp; organized farmers' &amp; fishers' groups (s 6)</li> <li>■ Designate productive ARCs in SAFDZs to serve as model farms; coordinate with LGUs &amp; other NGAs (s 7)</li> <li>■ Through BSWM, map network of areas for agric'l &amp; agro-ind'l dev't in all cities &amp; municipalities in appropriate scale; coordinate with NAMRIA &amp; HLURB (s 8)</li> <li>■ With DAR, DTI, DOST, concerned LGUs, organized farmers' &amp; fishers', pvt sector &amp; communities, establish &amp; delineate SAFDZs; in coordination with the ACOC &amp; DAR, review SAFDZs for productivity, improvement of farmers' &amp; fishers' quality of life, &amp; efficiency &amp; effectiveness of support services provided in Act (s 9)</li> <li>■ Formulate/implement AFMP; consult farmers' &amp; fishers' groups, pvt sector, NGOs, POs, other NGAs &amp; Congress Comms on Agriculture; include admin of Comp Agri Loan Fund, rationalization of agri credit guarantee schemes, &amp; coordinating with Land Bank, &amp;, with DOF, review agri programs of all banks (s 13, 19, 21, 24, 25)</li> <li>■ With PAGASA, devise method of regularly monitoring &amp; considering effect of global climate change, weather disturbances &amp; annual productivity cycles, to forecast &amp; formulate AF production programs (s 15)</li> <li>■ Develop capability to monitor AFMA in support of ACOC (s 18)</li> <li>■ W/ DENR, NIA, LGUs &amp; Irrig Assns, develop/improve irrigation systems (s 29-36)</li> <li>■ Establish nat'l marketing assistance program (s 40), information network (s 41-46)</li> <li>■ Develop support infrastructure with concerned agencies &amp; LGUs (s 50-58)</li> <li>■ With DTI &amp; BFAD, establish Bu of Agric'l &amp; Fisheries Product Standard (s 61-64)</li> <li>■ With CHED, DECS &amp; TESDA, establish a Nat'l Agri &amp; Fisheries Educational &amp; training System (s 66-78, 104-107)</li> <li>■ With DOST, enhance national R&amp;D system for agric'l &amp; fisheries (s 81, 84)</li> <li>■ Do &amp; support LGU extension (s 94-95)</li> </ul>
	□ DENR & Other NGAs	<ul style="list-style-type: none"> <li>□ Identify watersheds that serve existing &amp; potential irrigable areas &amp; recharge of key aquifers; jointly w/ DA, preserve/rehabilitate them (s 12, 27); ensure environmental protection of SAFDZs (s 19)</li> <li>□ Undertake services supportive of AFMA (s 7-13, 16, 18-19, 21, 24-25, 27, 30, 33-36, 41, 44, 46, 50-51, 53-55, 57, 61, 64, 66-79, 81-85, 99-101, 104-109)</li> </ul>
Sub-National	<ul style="list-style-type: none"> <li>□ Reg'l Boards</li> <li>■ DA/NGA Reg'l Offices</li> <li>□ Higher Institutions</li> </ul>	<ul style="list-style-type: none"> <li>□ Consult participating enterprises in Rural Industrialization &amp; Industry Dev't Program before issuing wage orders (s 101)</li> <li>■ Undertake specified regional AFMA programs (s 4)</li> <li>□ Participate in establishment of NCEs in Agri/Fishery education (s 69); dev't of Nat'l Integ. Agri/Fishery Educ/scholarship programs (s 76-78); support DA training (s 95)</li> <li>□ Participate in dev't of guidelines to evaluate R&amp;D institutions (s 84)</li> </ul>
	<ul style="list-style-type: none"> <li>■ DA/NGA FOs</li> <li>□ LGUs</li> <li>■ Pvt sector<sup>23</sup></li> <li>□ NGOs/POs &amp; farmers/fishers groups</li> </ul>	<ul style="list-style-type: none"> <li>■ Undertake specified provincial, municipal, barangay activities (s 4)</li> <li>□ Help id/establish/delienate SAFDZs &amp; model farms (s 6-7, 9); pass land use/zoning ordinances (s 10); commit 10% of MOOE for prov'l agri/fishery institutions (s 71)</li> <li>□ Commit budget to support irrigation (s 31); develop infra/other services (s 46, 99)</li> <li>□ With farmers/fishers, id priority (&amp; give priority to) farm-to-market roads (s 52) &amp; water supply systems (s 55); manage public markets (s 58); do mktg missions (s 101)</li> <li>■ Help formulate AFMP (s 10); help rationalize credit guarantees (s 25)</li> <li>■ Assist dev't/operation of NIN (s 43, 45); &amp; agri/fishery R&amp;D (s 82); training (s 91)</li> <li>□ Help id/establish/delienate SAFDZs (s 6, 9, 44); help formulate AFMP (s 13)</li> <li>□ "Viable NGOs" may participate in mgt of Comp Agri Loan Fund (s 21)</li> <li>□ Participate in dev't of agri/fishery R&amp;D (s 82); training (s 91)</li> </ul>

<sup>22</sup> Excluding sections on Indigenous Peoples. IRR sections are the same as those in the Act.

<sup>23</sup> Includes cooperatives.

**Table 6**  
**Organizations and their Regulations in the Convention on Biological Diversity<sup>24</sup>**

Governance Level	Organizations	Regulations on Structure, Functions and Funding
National	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Senate</li> <li><input type="checkbox"/> Office of the President</li> <li><input checked="" type="checkbox"/> DENR-PAWB</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Ratify/revoke treaty; allows CBD to become law (Constitution of the Philippines)</li> <li><input type="checkbox"/> As head of State and chief executive officer of the Phil government, ensure that:               <ol style="list-style-type: none"> <li>1. The Philippines "exercises sovereign right" to exploit its own resources "pursuant to the country's environmental policies" but without causing env'l damage to other States (Art 3)</li> <li>2. Apply CBD provisions in the country (Art 4)</li> <li>3. Cooperate with other countries on mutual interests on biodiversity (Art 5)</li> <li>4. Cause actions in the country to pursue its CBD commitments to biodiversity conservation, sustainable use, fair &amp; equitable sharing of its benefits, &amp; appropriate access to genetic resources (Art 1 &amp; 6-19)</li> <li>5. Ensure financial support for country's compliance to CBD, including initiatives to obtain funding from developed countries which are parties to CBD (Art 20-24)</li> </ol> </li> <li><input checked="" type="checkbox"/> As country's official representative to CBD, shall act as primary government agency to assist the President in ensuring national compliance to CBD</li> </ul>
Sub-National	<input type="checkbox"/> None specified	<input type="checkbox"/> None specified
Local and Site	<input checked="" type="checkbox"/> None specified	<input checked="" type="checkbox"/> None specified

<sup>24</sup> Excluding sections on Indigenous Peoples.

**Table 7**  
**Certain Organizations and their Regulations in the WTO Agreements<sup>25</sup>**

Governance Level	Organizations	Regulations on Structure, Functions and Funding
National	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Senate</li> <li><input type="checkbox"/> Office of the President</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Ratify/revoke treaty; allows Agreements to become law (Constitution of Philippines)</li> <li><input type="checkbox"/> As head of State and chief executive officer of the Phil government, ensure that the country complies with the following provisions of the Agreements:</li> </ul> <p><u>Agriculture</u></p> <ol style="list-style-type: none"> <li>1. Tariff reductions on non-agric'l products to be done in 5 stages; first stage on date WTO enters into force; subsequent stages every January thereafter; i.e., unless set in the country's schedule; can be given flexibility but only under certain tight conditions; tariffs to be eventually reduced in certain timeframes except least developed countries which need not reduce theirs.</li> <li>2. Country to adopt less trade-distorting domestic &amp; rural support policies; commitments &amp; concessions annexed to Marrakech protocol to be used as primary means for widening market access, limit local support for agri'l exports or to improve export competitiveness.</li> <li>3. Some leeway may be allowed on trade commitments &amp; concessions to net food importing countries &amp; least developed parties.</li> <li>4. Use special safeguards to protect country from import surges or currency dives.</li> <li>5. Special treatment allowed for traditional staples</li> <li>6. Domestic support for agriculture having minimal impact on trade ("green box" policies) can be excluded from tariff reduction commitments.</li> <li>7. Reduce export subsidies &amp; quantity of subsidized exports, but subject to certain conditions pertaining to developing &amp; least developed countries, &amp; to further negotiations.</li> </ol> <p><u>Sanitary &amp; Phyto-sanitary Measures</u></p> <ol style="list-style-type: none"> <li>8. Countries have rights to ensure food safety for their citizens &amp; to protect the health of their plants &amp; animals; may adopt regulations to these ends, but only to meet ends &amp; not arbitrary or unjustifiably discriminatory to trading partners; they must be transparent &amp; published; SPS measures are encouraged to be based on int'l standards &amp; guidelines; otherwise, if above int'l standards, countries must show need for them; equivalent measures also encouraged; certain conditions are to be observed in case of food aids, grants for basic foodstuffs, &amp; for agric'l devt.</li> </ol> <p><u>Trade-Related Intellectual Property Rights Agreement</u></p> <ol style="list-style-type: none"> <li>9. Country to treat nationals of other parties &amp; rights on their intellectual works, the same treatment accorded to Filipinos; any advantage extended to a national of one party must be extended to all nationals of other parties.</li> <li>10. Intellectual property rights cover copyrights, trademarks &amp; service marks, layout designs, geographical indications, industrial designs, patents, trade secrets, &amp; anti-competitive practices in contractual licenses.</li> <li>11. Set procedures &amp; remedies under Philippine laws to ensure that IPRs will be effectively enforced in the country.</li> </ol> <p><u>Technical Barriers to Trade Agreement</u></p> <ol style="list-style-type: none"> <li>12. Country ought not to use testing &amp; certification procedures for barring trade, except where necessary to protect human life &amp; animal &amp; plant health.</li> </ol>
Sub-National	<input type="checkbox"/> None specified	<input type="checkbox"/> None specified
Local and Site	<input checked="" type="checkbox"/> None specified	<input checked="" type="checkbox"/> None specified

<sup>25</sup> Relating only to sections that are pertinent to the objective of this study: i.e., Agriculture, SPS, TRIPS, and TBT Agreements. References to provisions are from *GATT-WTO and the Philippine Environment: Policy Safeguards to Ensure an Environment-Friendly Competitiveness in World Trade* by Malayang et al. 1996 c.f. GATT Secretariat 1993.

**Table 8**  
**Salient Provisions of the NBSAP and the Regulations on**  
**Bioprospecting and Biosafety in the Philippines**

Policy/Regulation	Statutory Basis	Salient Provisions
Biodiversity protection	National Biodiversity Strategy & Action Plan (NBSAP) <sup>26</sup>	<ul style="list-style-type: none"> <li>■ Based on CBD &amp; country assessment of biodiversity situation</li> <li>■ Divides the country into 15 biogeographic regions (Samar is in region H)</li> <li>■ Proposes 6 strategies to conserve Philippine biodiversity:               <ol style="list-style-type: none"> <li>1. Expand &amp; improve technical &amp; popular knowledge of the characteristics, uses &amp; values of Phil biodiversity</li> <li>2. Enhance &amp; integrate existing &amp; planned biodiversity conservation efforts, with emphasis on in situ activities</li> <li>3. Formulate an integrated policy &amp; legislative frameworks for the conservation, sustainable use &amp; equitable sharing of the benefits of biodiversity</li> <li>4. Strengthen national capacities for integrating &amp; institutionalizing biodiversity conservation &amp; management in the country</li> <li>5. Mobilize &amp; undertake an integrated information, education &amp; communication (IEC) system for biodiversity conservation</li> <li>6. Advocate for stronger international cooperation on biodiversity conservation and management</li> </ol> </li> <li>■ Divides the biodiversity sectors of the Philippines into five: Forests, Wetlands, Marine ecosystems, Protected Areas, and Agricultural ecosystems</li> <li>■ DENR-PAWB is the National Biodiversity Unit of the Philippines</li> <li>■ Refers to 2 forest biodiversity conservation methods:               <ol style="list-style-type: none"> <li>1. <u>In situ</u>: maintenance of sites: e.g., Mt. Apo (for <i>P. jeffreyi</i>) &amp; Mt. Iglit-Baco (for <i>B. mindorensis</i>).</li> <li>2. <u>Ex situ</u>: botanical gardens, gene banks, seed banks, zoos, wildlife sanctuary, captive breeding</li> </ol> </li> </ul>
Bioprospecting	EO 247 <sup>27</sup>	<ul style="list-style-type: none"> <li>□ Regulates prospecting – discovering, exploring, collecting &amp; describing, with intent to use – of all biological &amp; genetic resources in the public domain, includes natural growths on public lands.</li> <li>□ Covers foreign &amp; local entities: individuals, organizations, groups (gov't/pvt)</li> <li>□ Exempts traditional use ("customary utilization of biological &amp; genetic resources by the local community and indigenous people in accordance with written or unwritten rules, usage, customs and practices traditionally observed, accepted and recognized by them" – DENR Manual)</li> <li>□ For bioprospecting to be legal/allowed, it has to be covered by a Research Agreement between Philippine Government &amp; applicant; 2 types: Academic Research Agreement (ARA) &amp; Commercial Research Agreement (CRA); both require applicants to undergo application process managed/enforced by Inter-Agency Committee on Bio-logical &amp; Genetic Resources (IACBGR); ARA is more flexible than CRA; all private persons/commercial firms (local/foreign) are presumed to have commercial motives.</li> <li>□ Prior Informed Consent by indigenous people, local community, PAMB or pvt land owners, is necessary in all bioprospecting; involves fully disclosing "the intent and scope of the activity, in a language and process understandable to the community" before bioprospecting begins (DENR Manual)</li> <li>□ IACBGR is composed of representatives from DENR, DOST, DA, DOH, DFA, Phil science community, National Museum, NGOs, and POs</li> </ul>
Biosafety	EO 430	<ul style="list-style-type: none"> <li>■ Recognizes the need to study &amp; evaluate existing laws, policies &amp; guidelines on biotechnology &amp; related matters, to ensure its effective utilization &amp; the prevention of possible pernicious effects on the environment</li> <li>■ Creates National Committee on Biosafety of the Philippines, with 10 powers: id/eval potential hazards in genetic experiments &amp; intro of new spp &amp; GMOs; review laws; formulate/review policies/guidelines on risk assm't /supervise their implementation; work with quarantine agencies; assist in dev't of tech'l expertise/facilities for quarantine &amp; risk assm't; recommend dev't/promotion of research on risk assm't; publish results of internal deliberations; hold public deliberations; assist in dev't of laws &amp; rules; &amp; call upon public agencies to assist in its functions.</li> </ul>

<sup>26</sup> From DENR-UNESCO 1997, *Philippine Biodiversity: An Assessment and Action Plan*. DENR-PAWB.

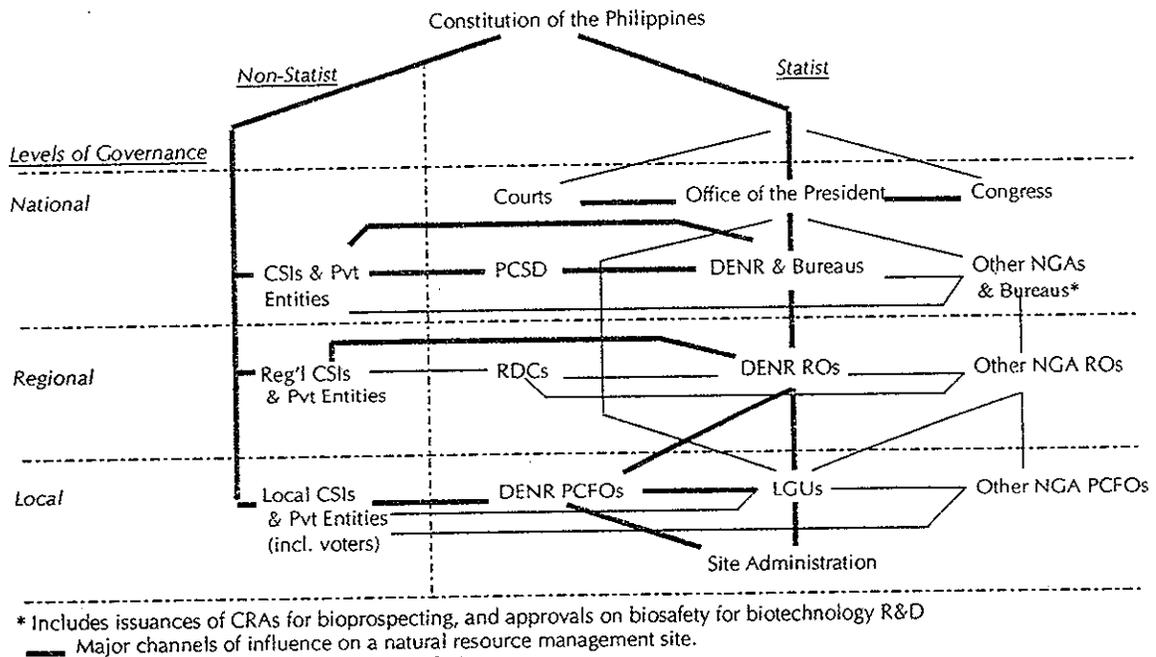
<sup>27</sup> From EO 247 (1995) and DENR 1996, "Regulating Access to Biological and Genetic Resources in the Philippines: A Manual on the Implementation of Executive Order No. 247"

**Table 9**  
**Salient Features of Paradigmatic Situations of Government, Civil Society and Private Sector Collaboration on Natural Resource Governance in a Local Community in the Philippines<sup>28</sup>**

Paradigm	Organization	Features
Collaboration among CSIs in a community	Cebu Bishop-Business Conference (CBBC)	A church & citizens' voluntary organization. Self-funded. Had been in existence prior to Ayala Land, Inc., (ALI) proposing to develop a portion of Cebu's watershed for housing & a golf course. BBC is opposed to it. It would rather that the area be kept intact to serve the water needs of Cebu (which is heavily dependent on wells). In 1995, it linked with other CSIs in the city who were similarly opposed to ALI. They formed the <i>Cebu Uniting for Sustainable Water Movement (CUSWM)</i> to promote citizen-based integrated water resource management & land-use planning for the watershed. Among its members are prominent families with extensive business interests in shipping & real estate. BBC, with CUSWM, have so far successfully blocked ALI's plans. This, by mainly asserting citizen rights to review, support or oppose dev't projects in their community through extensive media coverage of its advocacy & representations in NGA/LGU & RDC deliberations.
Collaboration among members of a community	Community Marine Management Committee, Apo Island, Negros Oriental	Apo island hosts a diversity of marine resources. It has 120 households composed of 720 individuals. Seventy-five percent earn from municipal fishing. Like other islands, Apo is threatened by uncontrolled use of its marine resources. In the 1970s, dynamite fishing, coral destruction (from "muro-ami") & use of "tubli" (or poisonous extracts from certain trees) were rampant. It's southwest reef was being destroyed by careless boat anchoring. With initial help from Silliman Univ. (mainly with community organizing & education) residents began practicing community-based resource management, involving themselves in caring for the sea around them. Two organizers from Silliman lived in Apo for 2 years beginning 1984. A marine sanctuary was established in 1985 managed by the residents through a Marine Management Committee (MMC). It guards against reef-destructive activities & is linked with the police & Coast Guard. Because it has no legal authority to charge fees, it has a donation scheme for visitors in the area (swimmers, divers). Since the sanctuary was set up, fish catch had improved; residents now have an education center & consumers' coop. Silliman phased out in 1992 & DENR came in. It registered the MMC as a local association & introduced livelihood projects. It declared the island a protected seascape; its PAMB is composed of MMC, LGU, & Silliman representatives.
Collaboration among LGU, NGA & CSIs	Puerto Princesa Underground River Park	Park was previously the St. Paul Subterranean River Park, all entirely within the city of Puerto Princesa. PAMB organized in 1992, but in 1993 City entered into an agreement with DENR to take lead in PAMB. Mayor named Co-Chair & Chair (DENR) became deliberately scarce (unable to attend meetings); thus, City became <i>de facto</i> lead & so was able to infuse Park with LGU staffing & funding; CSIs in PAMB became joint managers of Park. Park was declared by UNESCO as an International Heritage Park in 1999.
Collaboration among LGUs, ODA, Busi-ness, & CSIs	Marine Conservation Project in San Salvador Island (MCPSSI), Masinloc, Zambales	Aims to encourage island residents to lead in marine resource mgt through education, community organizing & involvement in establishment of a municipal marine park. Initial study of local resources done by a US Peace Corps Volunteer in 1988 who also prepared a proposal to establish the park. Netherlands Embassy responded to proposal & funded a Haribon Foundation (an NGO) effort to make it happen. MCPSSI launched in Dec 1988, with additional support from a corporate NGO, Jaime V. Ongpin Foundation, Inc., (JVOFI), & other gov't agencies (DENR & DA-BFAR). MOA signed by Masinloc Municipality, JVOFI, Haribon & local DA on Apr 4, 1989, to pursue the project after the initial Netherlands funding. JVOFI is known to residents because of the local operation of Benguet Mining (the corporate mother of JVOFI). JVOFI provided funds for training in env'l mgt, grants/loans for env'l projects, networking with NGAs, & for agroforestry & marine conservation initiatives among residents.

<sup>28</sup> Focus on features that are pertinent to the objective of this study; from "Watershed in Limbo: The Case of the Kotkot-Lusaran-Manangga Watershed Area in Cebu" and "Community and Marine Resources in Apo Island, Philippines" both by Afuang et al., 1998 in *Social Theory and Environment (For the Distance Education Student)* by Malayang 1999; also from personal information and "Masinloc, Zambales: Marine Conservation Project in San Salvador Island" by Mayor Jesse Edora in Municipal Training Project Module on Environmental Management by UPGRADE Consultants, Inc., 1997.

**Figure 1**  
**Key Linkages Comprising the Institutional Landscape**  
**on Natural Resource Governance in the Philippines**  
 (specifically biodiversity conservation and mineral development in a forest reservation)



**Table 10**  
**Salient Features of Three Institutional Arrangements on Biodiversity**  
**and Natural Resource Governance in Three Countries**

Country	Institution	Arrangements
Costa Rica	Instituto Nacional de Biodiversidad (INBio) <sup>29</sup>	A scientific inst'n with social orientation; non-profit, for public good. <b>Mission:</b> promote awareness of value of biodiv, to achieve its conservation & use to improve quality of life. <b>Program:</b> generate know-ledge on biodiv; communicate, promote biodiv info to respond to different nat'l, int'l users; support spiritual, social, & econ dev't of Costa Rican society "in equilibrium with env't". <b>Activities:</b> biodiv inventory; <sup>30</sup> search for sustainable uses of biodiv & promotion of these uses; <sup>31</sup> organization, admin of biodiv info; transfer/dissemination of biodiv knowledge. <b>Style:</b> innovative, organized, participatory, multidisciplinary; extend influence, effectiveness through strategic alliances with nat'l, int'l sectors.
Malaysia	Sahabat Alam Malaysia <sup>32</sup>	A grassroots community NGO established in 1977; focuses on env't-dev't issues. <b>Mission:</b> assist & support communities in controlling the effects of ecological threats on local livelihoods. <b>Program:</b> community work, networking. <b>Activities:</b> assisting farmers' & fishers' communities whose crops were destroyed by pests & pollution, or whose fisheries face depletion; also plantation workers affected by toxic chemicals; coordinator of Asia-Pacific People's Env'l Network (APPEN), an informal coalition of over 300 NGOs in the Asia-Pacific region that collects & disseminate info on env't-dev't concerns, promote reg'l collaborations; investigate, report, make representations on issues. <b>Style:</b> collaborative; emphasis on community partnerships.
India	Dhamala Hill Resource Management Society in Haryana <sup>33</sup>	Comprised by 105 households of different castes registered as a gov't-recognized local organization in 1983; small to medium farmers (lands < 5 ha); most collect firewood. <b>Mission:</b> forest protection & farm production. <b>Program:</b> protect 260 ha of "shamlat" uncultivated lands (a village commons) with the government providing assistance in terms of two dams built by the Forest Department to irrigate the farms of 100 households; water shared equally by all villagers; major source of income is grass. <b>Activities:</b> all villagers mobilized to do forest protection & farming; an Executive Committee of 9 (3 women) regulate the resource use of villagers: all are entitled to collect grass & pay the Society Rs 200/yr; Society also subcontracted pisciculture in the reservoirs to a private firm & gets Rs 28,000/yr. <b>Style:</b> over-all management by villagers is passive (they merely restrain themselves from illicit tree or grass removals), but there is considerable social pressure against offenders (violation of rules may lead to social boycott); seems effective: tree cover improved; social tension low even if multicaste.

### SWOT Framework

SIBF seeks to influence<sup>34</sup> biodiversity conservation in Samar. More specifically and immediately, it wants to promote biodiversity conservation in the SIFR, whether or not a

<sup>29</sup> From <http://www.inbio.ac.cr/en/inbio/inbio.html>. Costa Rica is in the Neotropics which host more species than any tropical region of the world; the country has 6% of the world's described biodiversity.

<sup>30</sup> Focus on Conservation Areas; on arthropods, plants, mollusks, fungi; done with "parataxonomists" (members of nearby communities who receive 6-mo intensive course on basic biology & ecology; taxonomy; evolution; collection & preservation techniques; information management, administration & equipment maintenance, "and everything else they need to know to conduct a specific and essential part of the National Biodiversity Inventory." Course is taught by INBio staff & national & international instructors. Parataxonomists bring their collections to INBio monthly. Technicians label, process & prepare the material for taxonomic identification by curators, who work within a larger network of national & international experts.

<sup>31</sup> INBio does bioprospecting in wild protected areas in collaboration with the Ministry of the Environment and Energy (MINA) and academic and business sectors, both local and international, e.g., Universidad de Costa Rica, Universidad Nacional, Escuela Agrícola de la Región del Trópico Húmedo, Instituto Tecnológico de Costa Rica, & Strathclyde, Düsseldorf, Cornell & Lausanne Universities, Univ. of Massachusetts, Bristol Myers, Squibb, Merck & Co., Ecos-La Pacifica, Indena, Givaudan Roure, among others. Research includes collecting plants, insects, microorganisms & fragrances; INBio's lab develops extracts from samples. The extracts are analyzed for pharmacological, agro-industrial and biotechnological uses.

<sup>32</sup> From *Southeast Asia Regional Consultation on People's Participation in Environmentally Sustainable Development, Volume II: National & Regional Reports* (1991) by the Asian Cultural Forum on Development. Asian NGO Coalition for Agrarian Reform & Rural Dev't, Asian Alliance of Appropriate Technology Practitioners, Management Inst. for Social Change, & Wahana Lingkungan Hidup Indonesia.

<sup>33</sup> From *The Saga of Participatory Forest Management in India* by N. C. Saxena; published by the Center for International Forestry Research, 1997.

<sup>34</sup> "Influence" is assumed to be a function of: (1) having the authority (legal or moral) to shape decisions; (2) the reach of authority (spatial and sectoral); and (3) the ability to enforce authority. It is assumed that (3) is inversely related to physical distance of the holder of the authority from the site of enforcement.

portion of it, or its entirety, is devoted to mining. Thus, SIBF seeks to establish linkages that shall improve its influence on how biodiversity conservation shall proceed in SIFR. SIBF seeks to understand its SWOT with respect to its potential to influence biodiversity conservation in the SIFR if it were to establish certain patterns of linkages under three scenarios of resource management in SIFR: biodiversity conservation only, mining only, or a mix of both. This analysis focuses on what would be SIBF's SWOT in terms of potential ability to influence how much biodiversity conservation will occur in the SIFR, if it were committed to either or both biodiversity conservation or mining.

**A. Biodiversity Only**

**Table 11**  
**Strengths, Weaknesses, Opportunities and Threats of Three Patterns of SIBF Institutional Linkages Under Three Scenarios of Resource Management of SIFR**

Linkage Pattern	Strengths	Weaknesses	Opportunities	Threats
All CSIs & local communities	<ul style="list-style-type: none"> <li>Local &amp; people-centered</li> <li>More local stakeholders on SIBF;<sup>35</sup> good IK base</li> <li>High local representation in future benefit-sharing</li> <li>SIBF influence anchored on good local grounding &amp; proximity to resources; good cultural &amp; historical bases of actions</li> <li>Good legal basis</li> </ul>	<ul style="list-style-type: none"> <li>Low access to tech'l personnel &amp; financial resources</li> <li>Too exposed to local politics &amp; agenda</li> <li>Low access to information on "force factors"</li> </ul>	<ul style="list-style-type: none"> <li>Good CSI leadership &amp; network in Samar; committed to biodiv.</li> <li>Local knowledge on biodiv is extensive</li> <li>Political leaders in Samar are sensitive to citizen pressures</li> <li>Good local history of CSI/LC collaboration &amp; mutual support</li> <li>Supportive legislation</li> </ul>	<ul style="list-style-type: none"> <li>NGAs have history of disregarding local CSI/LC advocacy</li> <li>High differentiation of CSI leadership across 3 provinces</li> <li>Group priorities not yet clearly unified</li> <li>Poverty</li> <li>Continuing resource destruction &amp; loss</li> <li>Insurgency (which limits local actions)</li> </ul>
Mix CSIs, local communities & govt (LGU/NGA)	<ul style="list-style-type: none"> <li>All of the above</li> <li>Co-mgt schemes likely</li> <li>Gov't-local partnership is high and robust</li> <li>High legal, political &amp; local legitimacy</li> <li>Good legal basis</li> <li>Wider access to local &amp; technical knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Wide variation of constituent &amp; inst'l interests; differences in dev't frameworks</li> <li>Driving forces differ</li> <li>Inst'l control systems differ widely</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Long experience on gov't-CSI-LC collaboration in Samar</li> <li>NGAs/LGUs tend to be sensitive to local CSIs in Samar</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Unclear congruence of priorities among gov't &amp; CSIs/LCs</li> <li>Serious distrust still exist between gov't &amp; CSIs/LCs (e.g., re political motives, graft &amp; corruption or commitment)</li> <li>Weak mechanisms for CSI participation in gov't decisions</li> </ul>
Mix CSIs, local communities, govt & pvt sector <sup>36</sup>	<ul style="list-style-type: none"> <li>All of above + availability of pvt sector funding</li> <li>SIBF gains from pvt sector mgt expertise</li> <li>Likelihood of good local funding access &amp; support</li> </ul>	<ul style="list-style-type: none"> <li>Wide variation of constituent &amp; inst'l interests</li> <li>Driving forces differ</li> <li>Inst'l control systems differ widely</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Law has sufficient incentives for pvt sector to partner with gov't &amp; CSIs/LCs on biodiv conservation</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Pvt sector groups, because of easier access to funds, may dominate the others</li> <li>Low pvt sector value for biodiversity</li> </ul>

<sup>35</sup> Local stakeholders are crucial to biodiversity conservation investments and efforts because unless done for direct commercial ends, they often do not offer immediate economic gains.

<sup>36</sup> Here assumed to be mainly composed of local business interests.

## B. Mining Only

Linkage Pattern	Strengths	Weaknesses	Opportunities	Threats
All CSIs & local communities	<ul style="list-style-type: none"> <li>Wider popular base for biodiversity advocacy in face of mining</li> <li>SIBF can be a good locus for consolidating local economic and ecological interests over mining (i.e., participation in EIA; Env'l Monitoring; Compliance Monitoring)</li> </ul>	<ul style="list-style-type: none"> <li>Low access to tech'l resources to influence mining activities</li> <li>Too exposed to local politics &amp; agenda</li> <li>Low access to information on "force factors" on local mining firms</li> <li>CSIs/LCs hardly able to offer alternative livelihoods</li> </ul>	<ul style="list-style-type: none"> <li>Good CSI leadership &amp; network in Samar; committed to biodiv.</li> <li>Ecological agenda is strong among Samar CSIs/LCs</li> <li>Law allows CSIs/LCs to participate in mine dev't &amp; fiscalizing it</li> </ul>	<ul style="list-style-type: none"> <li>Mining companies have tendency to subordinate local popular interests to corporate aims</li> <li>Regulatory bodies tend to have weaker ears for env't groups in face of revenues</li> <li>LCs deprived shares of mining benefits</li> </ul>
Mix CSIs, local communities & govt (LGU/NGA)	<ul style="list-style-type: none"> <li>Wide popular &amp; govt'l base for biodiv advocacy</li> <li>Transaction cost for CSIs &amp; LCs to participate in legal processes is lower because of closer links with NGAs &amp; LGUs</li> </ul>	<ul style="list-style-type: none"> <li>High diversity of group interests; e.g., govt agenda must be part of CSI/LC advocacy</li> <li>Dev't frameworks differ</li> <li>High transaction costs to gain consensus</li> <li>NGAs/LGUs tend to favor mining</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Gov't env'l agenda of is complemented by strong similar agenda of Samar CSIs/LCs</li> <li>Long experience on govt-CSI partnerships in Samar</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Distrust w/ govt</li> <li>Local govt bodies may more heed orders from higher offices rather than their commitments to local linkages</li> </ul>
Mix CSIs, local communities, govt & pvt sector	<ul style="list-style-type: none"> <li>Higher local leverage to advocate for biodiversity in face of mining</li> <li>Wider local resource-base for supporting biodiv (can be crucial if funding for mining is high)</li> <li>Good sectoral checks &amp; balances on interests over mining &amp; biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>Too many sectoral interests &amp; dev't frameworks to be coalesced &amp; consolidated</li> <li>High likelihood that sectoral interests on biodiversity &amp; mining will oppose each other</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>High local awareness of impact of mining on biodiversity</li> <li>Pvt sector/govt mining planners are sensitive to biodiv causes</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Nat'l political &amp; pvt sector leaderships presently tend to favor mining over biodiversity</li> <li>Conflicting local interests</li> </ul>

## C. Biodiversity and Mining

Linkage Pattern	Strengths	Weaknesses	Opportunities	Threats
All CSIs & local communities	<ul style="list-style-type: none"> <li>Widened local base for biodiversity advocacy</li> <li>High local involvement in decisions to balance mining &amp; biodiversity</li> <li>Good proximity to resource &amp; use of IK</li> <li>Strong legal basis</li> </ul>	<ul style="list-style-type: none"> <li>Restricted technical &amp; financial resources to advocate for mining-biodiversity balance</li> <li>High possibility of incompatible interests among members</li> </ul>	<ul style="list-style-type: none"> <li>Good CSI leadership in Samar; committed to biodiversity</li> <li>Funding is available for CSI/LC work on biodiversity in Samar</li> <li>Mining planners in Samar are sensitive to local biodiv causes</li> </ul>	<ul style="list-style-type: none"> <li>Low tech'l/financial support for SIBF</li> <li>Unclear local CSI/LC interests on mining &amp; biodiversity</li> <li>Uneven local funding for mining &amp; biodiv</li> <li>Resource loss, poverty, insurgency</li> </ul>
Mix CSIs, local communities & govt (LGU/NGA)	<ul style="list-style-type: none"> <li>All of the above</li> <li>Strong local locus for decision-making to balance mining &amp; biodiv.</li> <li>Strong legal basis</li> </ul>	<ul style="list-style-type: none"> <li>Diversity of interests of local sectors can be complicated by nat'l &amp; local govt interests</li> <li>Law vests different roles to govt &amp; CSI/LCs over mining &amp; biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Law favors collaboration by NGA/LGU &amp; CSI/LCs on mining &amp; biodiv conservation</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Unclear consensus on sectoral priorities on mining &amp; biodiversity by govt/CSIs/LCs</li> <li>Mining firms exert strong local influence</li> </ul>
Mix CSIs, local communities, govt & pvt sector	<ul style="list-style-type: none"> <li>All of the above</li> <li>Good odds to balance local investments for mining &amp; biodiversity</li> <li>Good precondition for co-mgt/co-investments</li> </ul>	<ul style="list-style-type: none"> <li>All of the above but here pvt sector interests may compound weaknesses</li> <li>Local pvt sector will tend to favor mining</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Law gives pvt sector wide opportunities to invest on mining &amp; biodiv conservation</li> </ul>	<ul style="list-style-type: none"> <li>All of the above</li> <li>Local pvt sector is apt to put less stress on biodiversity if faced with more immediate income prospects</li> </ul>

**Estimation Framework.** It is assumed that, *cet. par.*, SIBF's marginal costs will go up if it maintains linkages with more institutions. The ability of institutions to influence conditions and resource uses in SIFR is inversely related to the reach of its area of responsibility (i.e., the wider the reach then the lesser it can focus on SIFR). Thus, the marginal benefits to SIBF will decline if it maintains linkages with more institutions and the proportion of institutions with wider reach among its linkages goes up. (However, benefits will not entirely approach zero as linkages widen because SIBF is assumed to gain from being linked with institutions with wider reach, mainly by gaining marginal improvements in public perception of its legitimacy.) Further, it is assumed that the more that resource-use in SIFR favors biodiversity, the SIBF's benefits are bolstered.

**Procedure.** Following the framework, the linkages that are a mix of CSIs, LCs, NGAs, LGUS and the private sector are assigned the highest comparative benefit to cost value to SIBF (i.e.,  $B/C > 1$ ); those involving only CSIs, LCs, NGAs, and LGUs are assigned the lowest value ( $B/C < 1$ ); those involving only CSIs and LCs are assumed to be a unity ( $B/C = 1$ ).<sup>37</sup> Resource-use that stress only biodiversity is assigned the highest comparative B/C to SIBF (i.e.,  $> 1$ ); mining only is assigned the lowest value ( $B/C < 1$ ); mixed biodiversity and mining is assigned a unity ( $B/C = 1$ ). Linkage and resource-use values are multiplied to reflect the assumption that they exert a positive marginal effect on each other; i.e., they have a mutual positive impact on their over-all B/C to SIBF. The highest product of the two is assumed to indicate the mix of linkage and resource-use conditions that is likely to most favor the SIBF.<sup>38</sup>

Table 12  
Estimations of Comparative Costs-to-Benefits to SIBF If It Were  
to Develop Certain Patterns of Institutional Linkages

Linkage Pattern	Biodiversity Only ( $B/C > 1$ )	Biodiversity Mining ( $B/C = 1$ )	Mining Only ( $B/C < 1$ )
All CSIs & LCs ( $B/C = 1$ )	< 1	1	< 1
Mix CSIs, LCs, LGUs, NGAs ( $B/C < 1$ )	1	< 1	<< 1
Mix CSIs, LCs, NGAs, LGUs & Pvt Sector ( $B/C > 1$ )	>> 1	> 1	1

<sup>37</sup> Note: Among all the sectors involved, NGAs are assumed to have the widest reach of responsibility; hence, all else being equal, they are assumed to offer the most cost to benefit to SIBF. But in the case where the private sector is involved, it is expected that it can be an additional local counterbalance to NGAs; thus, where NGAs are involved, the linkages without the private sector is deemed less desirable than those with it; it is therefore assumed to offer the lower benefit to cost ratio to SIBF.

<sup>38</sup> In the operation, it is assumed that opposing inequalities cancel each other out; products of similar inequalities are assumed to have a higher magnitude than those which are a product of a unity and a similar inequality; higher magnitude inequalities are indicated by a double inequality.

## 6. DISCUSSION OF RESULTS

Several linking principles and modalities are revealed in the existing legislation on biodiversity and mining in the Philippines, and in the cases cited in the country and from elsewhere. Together with the results of the SWOT and Cost-Benefit Analyses, they offer a number of practical implications to SIBF which it might use to ensure its efficacy as a civil society intervenor in the SIFR.

### 6.1 *Legal Perspective*

The legislation prescribes three principles concerning institutional linkages on biodiversity and mining in Samar:

1. Primacy of the Constitution. All authority and mandate to regulate and undertake biodiversity and mining activities shall need to be anchored on the Constitution. All institutions involved (government, civil society, communities or private groups) shall need to observe Constitutional prescriptions on tenure and use of the two resources.
2. State sovereignty. The State has the ultimate tenure to the two resources, unless they have been alienated or assigned to others by the same. The law explicitly allows for multisectoral participation in managing the resources but their functions and roles are specifically prescribed; all are subject to the final arbitration and ruling by designated State agencies. Government (i.e., the President, DENR & Congress) has the principal (but not total) authority to determine how the two resources are to be developed.
3. Plurality of decision centers. There are to be three tiers of decision making on biodiversity and mining in the Philippines: local, sub-national (regions) and national. Of the three, the law prescribes more powers on local and national decision centers (i.e., LGUs and local civil society and communities on the one hand, and state agencies like DENR on the other); the fulcrum of influence over how biological or mineral resources are to be developed and used is determined largely by how the local and national centers are able to exert themselves and prevail on the other. Meanwhile, in each tier, the law prescribes four sectors to be involved in the decisions to develop and use the resources: government, civil society, local communities and private business groups. The law assigns different roles to each sector: i.e., regulatory and adjudicatory to government, social acceptability and ensuring equity to civil society, co-management to local communities, and investments to private groups.

The implications of these to SIBF are:

1. That if it has to establish linkages, the linkages must be based on clear and explicit legal grounds. Linkaging arrangements are best covered by legally recognizable instruments (e.g., Memoranda of Agreement) that spell out (a) clear expectations and obligations of the parties, and (b) the legal basis for each expectation and obligation. This must be done regardless of the institution that it links with, whether government (NGA or LGU), other civil institutions, local communities, or private sector groups.
2. Whenever it opts to be involved in conflicts over biological and mineral resources (how they are to be managed or how the decisions on them are to be made), it should do so

within the ambit of law and always recognizing that the resources are ultimately under the authority of the State. It must do this, however, with the clear recognizance (do a "balancing act" really) that State sovereignty is also the people's sovereignty so that, even if acted out by the government (as actions of NGAs and LGUs), they can be challenged through either the Courts or other legitimate media of public dissent. If it were to be involved in a dispute, it would need to consistently direct its actions at the DENR. It may go over the DENR (to the President or Congress), or *challenge* it (through the Court or media), but it must recognize that so far as the law is concerned, the DENR has the ultimate mandate to develop (or assign users of) the two resources.

3. Being itself a civil society institution, it has a clear and explicit legal recognizance to participate in certain decisions to manage and use Samar's biodiversity and mineral resources. It may present itself as either or both (a) a distinct NGO (and thus guided by what the law says are the roles and involvements of NGOs in biodiversity and mining), or (2) as an agency of local communities in the island (which would require that it has an assignment of being so by particular communities in Samar).

Failure to observe these principles may open SIBF and its actions to legal questions which, if it should happen, may erode its efficacy.

## 6.2 *Suggestions from Other Cases in the Philippines*

The linking experiences in Cebu, Negros, Palawan and Zambales suggest that there are probably four factors that promote successful civil society-based multisectoral linkages on resource management in the Philippines:

1. Intensive internal cohesion. The groups being linked must be internally strong (as organizations and how they are managed) so that they can sustain their involvement and ensure their interests in the collaboration. This is best exemplified by the CUSW in Cebu where each partner stands on its own (they draw strength from their own memberships) and so they are able to add to the over-all strength of the linkage. They are able to articulate their individual interests in the collaboration even under pressure from the outside and strain within the collaborating group. In Palawan where the city government is a major partner in the collaboration, it was its strength with respect to its ability to advocate for local autonomy on managing the underground river park, even against strong legal uncertainty, that won it its day. It was able to muster local resources and support to pursue an effective and credible program to manage the park, and won both local, national and international recognition of its success.
2. Extensive external participation. All three cases involved different sectors in their arrangement: government (both national and local), other civil society groups, local communities, and private businesses. In Cebu, those involved are mainly from the civil society sector, but powerful local businesses are among the members of one of the partners (the Cebu Bishop-Businessmen's Conference); the network maintains a close coordination with the local DENR and with the Cebu City government. In the case of Apo, both national and local DENR are involved in addition to the province of Negros Oriental and the municipality of Dauin; academe is among the civil society institutions involved along with the local barangay. In Palawan, the city of Puerto Princesa is a key player in the multisectoral linkage to protect the underground river park; local NGOs

and POs are active players as well, through the PAMB. The DENR plays a supporting but important role by allowing the arrangement to prosper. In Zambales, the barangay and the municipality of Masinloc and civil society groups are the key players in the linkages, but a private business institution (the JVOFI) provides critical funding and technical support.

3. Emphasis on local arrangements. In virtually all the cases, the stress is on linking local groups. In Cebu, the CUSW is composed of entirely local CSIs, community groups and private businesses, but together working closely with LGUs and the local DENR. In Apo, the mainstays of the linkage are the local barangay and its PO, the municipality of Dauin, the local DENR and academe. There is a heavier tilt toward the LGU in Palawan and Zambales, but the locus of the network is nonetheless local.
4. Sustained funding support. In all the cases, funding is assured; it may not be much (e.g., in Apo which relies on visitors' donations and in Cebu which relies on the contributions of its member organizations) but it's there when needed. It proved crucial in Palawan where without the sustained funding support from the city of Puerto Princesa, park facilities may not have been developed and maintained to the level that met national and international notice. In Zambales, funding from JVOFI (which came from private business earnings from mining) proved crucial to establishing the marine reserve as a biodiversity conservation project.

What these mean to SIBF is that:

1. It must keep itself always strong as an organization. If it were to be a long-term intervenor on resource management in Samar, and it is to be constituted by different groups, it must ensure that it is itself organizationally strong and sustainable and its member groups are strong and organizationally viable as well. Organizational development (OD) would seem to be a crucial activity of SIBF.
2. It must maintain extensive but mainly local linkages. As in the cited cases, it might be well for it to keep extensive linkages involving many sectors, but they must be mainly local. They must be more heavily composed of civil society, local community and private sector groups but with strong links to national and local government agencies.
3. It must ensure its financial sustainability and, among its options, is to get funding from mining to finance biodiversity. Together with OD, it must maintain a continuing stress on funding development. It must do this for itself and for its member organizations. It may seek earnings from mining and other resource development activities in Samar to finance its long-term work on biodiversity (i.e., to the extent that it would be consistent with its principles and purposes as in the case of the San Salvador conservation project in Zambales).

It would seem that if SIBF fails to do these (to "secure its flanks" as it were) – to ensure that its internal systems and organizational set-up is steady and resilient, the width and locality of its linkages are high, and its funding support is sustainable – it will likely become a weak and wobbly intervenor in Samar's biodiversity activities. It may not even last long, after SIBP.

### 6.3 *Suggestions from Elsewhere*

The linking experiences in Costa Rica, Malaysia and India suggest that successful civil society-based multisectoral linkages on resource management tend to be where:

1. The linkages are more local than national. Among the three cases, INBio displays the clearest gains in harnessing community-centered linkages to generate direct benefits from biodiversity. Its linkages extend to institutions outside the area of the resource (including firms and universities outside Costa Rica) but decision-making remains with the communities within or in the fringes of the resource area. In the case of India, local objectives to protect common lands are apparently being met with minimum outside support because the bulk of its organizational assets remain with the local community. In contrast, in the Malaysian case, the linking arrangement is national and regional and its clientele is spread across the country. It suggests a lower linkage efficacy because the high costs to maintain them and to deliver its services.
2. The linkages involve more CSIs, LCs and PBGs than NGAs and LGUs. In all three cases, the linkages are mostly CSIs, LCs and PBGs (e.g., INBio and Sahabat Alam), or mainly local community organizations in the resource area (e.g., in Haryana). In all three, NGAs and LGUs are involved, but mainly by giving space to the linkages.
3. Funding and support are driven more by local initiatives rather than by off-site sources. In all three cases, funding support is based on the initiatives of the linked institutions and they alone control their funds. In the case of INBio, it determines who it will deal with as customers and users of the biodiversity in its control. It decides on who will have access to the genetic information in its jurisdiction and it derives its funding from the revenues of its sale of access to the resources. In the case of Sahabat Alam, its funds are from among the organizations that constitute its network. In Haryana, much of the resources of the organization is from the labor of its members.

These tend to confirm the indications from the cases in the Philippines, that successful linkages over local resource utilization are multisectoral, heavier toward civil society and community groups, have some (but critical) links with national and local governments, have a mainly local membership, and have self-sustaining funding. What is emphasized in these cases, however, is that funding is in the control of the principal group.

### 6.4 *Suggestions from the SWOT Analysis*

The analysis indicates that SIBF will mainly gain strength from the organizational assets it can derive from its linkages. Linkages with civil society, local communities and LGUs will gain it public legitimacy and linkages with government agencies and private sector groups would gain it technical and financial support. Meanwhile, government and private groups tend to pose the most threats to it mainly because of their tendency to support mining. Thus, if SIBF tilts its concentration of linkages toward CSIs, LCs and LGUs, it will likely gain legitimacy but incur high costs to endow them with the technical and financial assets to be able to contribute to their collective efforts on biodiversity. On the other hand, if it tilts its linkages toward a concentration of NGAs and PBGs, it will likely gain technically and financially but will meet more internal resistance within the linkage arrangement because of the latter two's tendency to favor mining. The arrangement may lower SIBF's over-all

efficacy because both are apt to pose the greater bulk of the threats to its effectiveness. These suggest that it would be crucial to the over-all efficacy of SIBF if it's able to balance the composition of its linkages along these contraposing constraints.

### **6.5 Suggestions from Cost-Benefit Analysis**

The analysis indicates that respective of the breadth of its linkages, SIBF will be a winner if biodiversity were made the principal objective for managing the SIFR. But it will gain the *most efficacy* if biodiversity is emphasized and its linkages were highly multisectoral (involving NGAs, LGUs, CSIs, LCs and PBGs) and *mainly local* (it is linked with mostly Samar-based institutions). It would have the *least efficacy* – the most cost per benefit – if its linkages involve NGAs and LGUs and SIFR were developed mainly for mining.<sup>39</sup> It would seem that if the SIFR were managed for mainly biodiversity purposes, SIBF will gain the most net benefits if it pushes for linkages with CSIs, LCs, NGAs, LGUs and PBGs in all three provinces in Samar. But if mining were emphasized, it is best that it minimizes its linkages with NGAs and LGUs so that it would be better able to pursue its biodiversity agenda, when, expectedly, the two will favor mining.

#### **6.5.1 Implications of the Results**

It is clear that the State has the principal and ascendant legal authority over biodiversity and mineral development in the Philippines and so, also, in Samar. Civil society, local communities and private sector institutions have some role to play – so far as the law is concerned – but they could be crucial and, if played right and combined with extra-legal socially-determined influence, could countervail government powers to determine how the resources are to be developed and used. Government (principally DENR and LGUs) seems to have the stronger legal capacity to influence the sway of the decisions on what to do with the resources, but their decisions are vulnerable to determined civil society, local community and private sector push to influence the decisions.

The results show that civil society organizations like SIBF and local residents and businesses in Samar have a distinct space to influence biodiversity and mining decisions in the island. And this is because they have the opportunity allowed them by law and tradition to organize and undertake autonomous initiatives to influence the decisions.

The institutional landscape indicated in the results show the following distribution of major powers over the SIFR and its biodiversity and mineral resources; they tell of how the ability to influence resource-use decisions are aligned so that when combined in different ways and intensity of exertion across and among a combination of their holders, they either boost or subvert the exercise of the power of the others:

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<sup>39</sup> It would seem that as shown in the SWOT analysis, both national and local governments can be expected to actively pursue mining development and if SIBF were thus closely engaged in linkage arrangements with them, it would incur a lot more costs than benefits with respect to pursuing its emphasis on biodiversity.

Summary of Powers over Biodiversity and Mining  
in the Philippines and in Samar

1. *Constitution* – defines the scope and limits of institutions and legislation on biodiversity and mining in forests in the Philippines and Samar.
2. *Congress* – can review, adopt and amend statutes upon which policies on biodiversity and mining are based; ratify treaties on biodiversity and industry including mining.
3. *President* – approves, directs, or accords final authority to biodiversity and mineral development nationwide; executes treaties.
4. *Courts* – can declare biodiversity and mining statutes, policies or actions of the State and of individuals either null, void or allowable.
5. *DENR* – gives or provides the technical and legal basis for the President's actions on biodiversity and mineral development in the country; gives technical assistance to Congress in aid of legislation.
6. *DENR Bureaus* – produce the basis for DENR actions and submissions to the President and to Congress, on matters relating to biodiversity and mineral development anywhere in the country.
7. *DENR Regional Offices* – approve all site actions by DENR field personnel in a specified area; approve reports to Bureaus and to the DENR Secretary.
8. *DENR Field Offices* – implement DENR directives in actual biodiversity and mineral development sites like SIFR.
9. *LGUs* – may facilitate, influence or impede government, civil society or private sector actions in a forest reserve in its jurisdiction (e.g., the SIFR).
10. *Civil Society Institutions* – may influence, facilitate, assist or impede government or private sector actions and policies but (unlike LGUs) with little limits on the venue of their efforts; they may exert actions through the Philippine Council for Sustainable Development, the Regional Development Council, or other vehicles of political expressions and influence like the Courts and the media.
11. *Private entities* – as citizens, can act on officials through elections and political influence; as investors, can undertake projects in biodiversity and mining sites like SIFR, that might influence local biodiversity and mineral development programs.

The results suggest that the following factors are crucial to SIBF's success and sustainability:

1. Local communities and residents in Samar – especially those involved in and supporting SIBF – will realize more long-term benefits from biodiversity than from mining. This, in order for them to find sensible reason to continue investing on biodiversity conservation rather than quickly trade biodiversity for mining.

2. The benefits that Samareños gain from biodiversity are real: i.e., they are practical, visible and of material or cultural value to them. Unless this happens, it would seem that biodiversity might remain a matter of romance and civic responsibility to them rather than something that they may want to invest on in terms of time and efforts.
3. For itself, SIBF will need excellent linking skills. This is particularly important if it were to maintain – as would seem best for it – a wide, highly differentiated, mix of linked institutions from various sectors in all three provinces in Samar which, in all probability, would be coming to SIBF with a cocktail of interests and agenda. SIBF must be able to coalesce the interests and agenda into a single collective action and effective collaboration, with a minimum reference to province-based priorities.<sup>40</sup>
4. SIBF should be able to set up and maintain a linkage arrangement with different sectors in the three Samar provinces, particularly with those that offer it (and to them) the least transaction costs to meet common objectives. It is important that SIBF gains a wide range of sectoral adherents but always remembering that such situations will perforce increase the diversity of institutional interests that it needs to coalesce; thus, the structure of the arrangement would be critical.

## 7. PRESENT PROSPECTS FOR SIBF

At present, SIBF is composed of NGOs, POs, academic institutions and individuals who or which are either “homegrown” or “doing environmental work” in any or all three provinces in Samar Island. Its goal is mainly to protect, develop and sustainably use the biodiversity resources of Samar Island and to mobilize public awareness and support for biodiversity conservation. (Please see Annex I for the listing of the goals, membership criteria, and members of SIBF.).

Its focus on biodiversity makes SIBF highly relevant and potentially the most effective organization to undertake biodiversity programs in the SIFR or in Samar as a whole; this, based on the indicated results of the cost-benefit analysis shown in this report. Its efficacy to implement SIBP seems most assured by the “local-ness” and multiplicity of its sectoral membership which, as concluded in this study, are critical features for a successful institutional intervention on biodiversity conservation in the island, except that, in this case, it might need to expand and strengthen its linkages with local private businesses, national resource agencies (particularly the DENR, DA, DAR, DTI and NEDA) and local governments in Eastern, Northern and Western Samar, because, as had been pointed out in the cost-benefit analysis, these sectors would be crucial institutions in biodiversity conservation in the island. NGAs, LGUs and PBGs would be necessary partners in SIBF to improve its capability to develop and secure real benefits from biodiversity for the people of Samar.

This study also points out that organizational development would be a critical factor in sustaining SIBF. It might need, therefore, to likewise include OD-assisting agencies like the DSWD, DECS and the Cooperative Development Authority in its government linkages to derive from them technical assistance in undertaking staff development and members’ continuing education activities.

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<sup>40</sup> The SIBF must be able to present itself as a Samar-wide institution, with a Samar-wide purpose.

The options in Appendices A, B and C must be carefully chosen by the present SIBF membership, in light of its currently high potential to implement SIBP and other biodiversity initiatives in Samar.

## 8. RECOMMENDATIONS

If the findings in this study are correct, it would seem crucial to SIBF that:

1. It is able to bring about high long-term biodiversity *benefits* to Samar residents;
2. The benefits are *real*;
3. The *transaction costs* to its members and constituency (when undertaking collective action under its auspices) are low;
4. It has an effective *organizational development* program that will allow it and its members and constituency to possess good linkaging skills; probably crucial would be its organizational skills on membership development, conflict management, staff sensitivity, and public education and information. (These seem all necessary before SIBF engages itself fully in SIBP.)
5. It maintains a recruitment, staff development, and members' education program that (a) paces the expansion of its linkages (and hence its costs) with how much its involvement in SIBP is expanding, and yet (b) ensures that it has the needed technical skills and organizational wherewithal to meet its commitments to SIBP.

Please see **Appendix A** for two options to achieve (1).

See **Appendix B** for options to achieve (2).

**Appendix C** are options to achieve (3).

As to (4) and (5), it is recommended that SIBF either engages the services of competent OD professionals, or include among its members local (or even regional and national if none exist in Samar) NGOs, POs, academic institutions or persons that have these skills.

## REFERENCES

Indicated where made.

## APPENDIX A

### TWO ALTERNATIVE LINKAGE STRUCTURES FOR SIBF

#### OBJECTIVE

Create *conditions* that will facilitate SIBF efforts to:

1. Increase local residents' long-term benefits from Samar's biodiversity;
2. Make the benefits real to the residents; and
3. Lower the transaction costs of its members and constituency when undertaking collective action in SIBF.

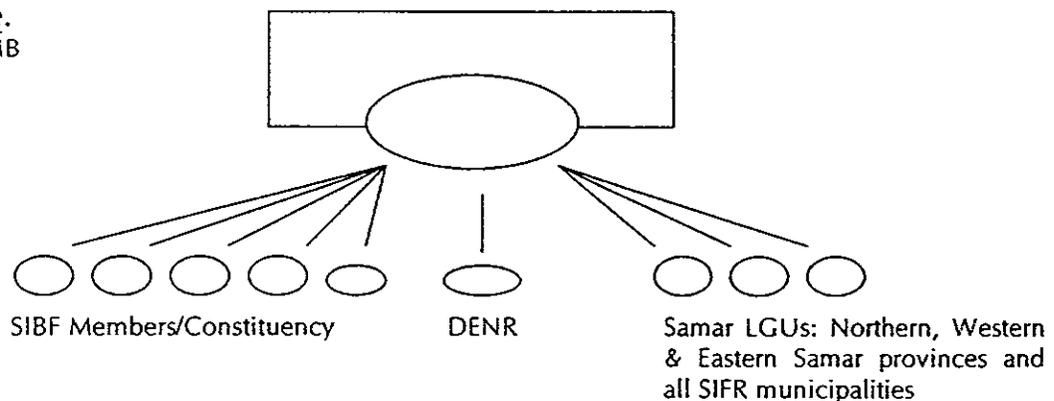
#### ALTERNATIVE I : *Structure the Linkages Around the NIPAS Act.*

*Description.* SIBF enters into an agreement with the SIFR PAMB to serve as its Secretariat and Technical Support Unit. It shall volunteer and shall seek to be recognized by the PAMB to be among the NGO/PO representation in the board and shall serve as the facilitator and forum for its NGO/PO caucus. It will backstop, commit to raise funds for, and participate in all inventory, data banking, conservation, benefit-sharing, and regulatory activities of both the PAMB, DENR and PAS. It shall also enter into agreements with all LGUs in the island to provide them technical support, assist in raising funds for their ENROs (if any) or Development Offices, and undertake public information and education campaigns to raise the level of popular support for biodiversity conservation in Samar. It shall also enter into an agreement with DENR to be its institutional partner in Samar and to assist it in its development and regulatory activities both within the SIFR and across Samar. It shall do all these, first, on behalf of SIBP, then, later, after SIBP, as a stand-alone local civil society organization in Samar.

*Legal Basis.* Constitution, NIPAS Act, Forestry Code, Mining Code, PD 1586, DENR DAO 96-37, LGC, EOs 430 & 247, CBD, AFMA, Fisheries Code.

*Structure.*  
SIFR PAMB

SIBF\*



\* As representation of SIBP, then later, after SIBP, as a local civil society organization in Samar.

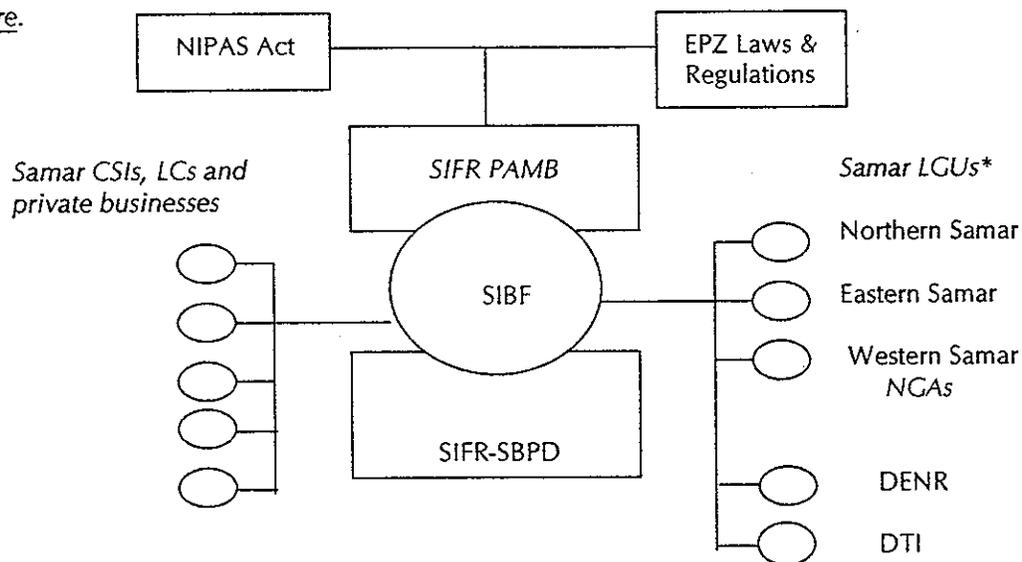
Linkaging Instruments. Covenant with other CSIs, LCs; Memoranda of Agreement (MOAs) with LGUs, private sector institutions and DENR; also with SIBP, if still necessary.

**ALTERNATIVE II : Structure the Linkages Around the Concept of a Special Production Zone**

Description. SIBF shall seek to have the SIFR designated by the national government as a Special Biodiversity Production and Development Zone (SBPD). It is to be administered like an EPZ but strictly as a protected area as well. Its unique value – unlike the industrial and commercial products of EPZs – shall be, in this case, biological materials and information. The PAMB shall remain as its highest policy body and SIBF shall serve as its primary link to local civil society and private sector institutions; it may even serve as its staff support as well. The designation shall be a two-step process: immediately, by way of a proclamation or Executive Order of the President; then, later, as a law by Congress. The INBio model might then be instituted in the SIFR but, here, stringent and rigorous safeguards shall be put in place to ensure complete and absolute Philippine control over the use of and rights over the resources and their applications anywhere in the world, whether in R&D, commerce, or industry. SIBF shall serve as the core organization of the local participation in the program and, as such, shall link itself closely with Samar CSIs, LCs, private businesses, LGUs and the DENR and DTI. It shall need to win support from Samar legislators to effectively represent its advocacy in Congress.

Legal Basis. Constitution, NIPAS Act, Forestry Code, Mining Code, PD 1586, DENR DAO 96-37, LGC, EOs 430 & 247, CBD, AFMA, Fisheries Code, Integrated Investment Law and other regulations pertaining to EPZs, investment promotion and growth centers.

Structure.



\* Includes SIFR municipalities

Linkaging Instruments. Covenant with other CSIs, LCs; Memoranda of Agreement (MOAs) with LGUs, private businesses and the DENR and DTI; also with SIBP, if still necessary. Liaise closely with Samar legislators for the needed laws on the SIFR-SBPD.

## APPENDIX B

### OPTIONS TO MAKE BIODIVERSITY BENEFITS REAL<sup>1</sup>

#### If SIBF Pursues Alternative I of the Linkage Structure Proposed in Attachment I.

- 1.1 Monetize the value of certain ecological services produced by the SIFR, charge their users the appropriate fees, then use the income to support buffer zone livelihoods of communities living within and in the fringes of the reserve e.g.,
  - Local Water Districts using water from rivers flowing from the reserve
  - Commercial firewood gatherers in the reserve
  - Tourists and other visitors
  - Movie makers
  - Research institutions
- 1.2 Develop amenities and facilities (picnic and camp sites; public toilets; ranger stations; trails) within the reserve using funds from private, corporate or bilateral sponsors. Use these to attract fee-paying users, maintain the facilities, develop more facilities, and open them to local residents at lower (or even for some, free) use. Non-residents shall be charged a fee that is able to subsidize the local residents' access to the reserve and to its amenities and facilities.

#### If SIBF Pursues Alternative II of the Linkage Structure Proposed in Attachment I.

- 2.1 Options 1.1 and 1.2 above.
- 1.2 Establish a community-based taxonomy and research laboratory (not necessarily within the SIFR) together with competent Philippine academic or public R&D institutions (e.g., PCARRD, UP, VISCA, other SUCs in Samar). Develop a business and proprietary control plan as basis for entering into some partnerships with commercial biodiversity users. Involve SIFR settlers and fringe communities as parataxonomists and prospectors. Undertake direct income sharing among the residents involved, and with LGUs. (This is the INBio model described earlier, but which has to be modified in the case of Samar to ensure maximum local control of the access to and use of the island's biodiversity; cultural and heritage values have to be included as well in any plan to open the SIFR for commercial undertakings.)

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<sup>1</sup> These are only suggestions meant more to sketch examples which SIBF may use to begin its own process of developing the options. It is advised that SIBF decides its own array of options-together with its institutional partners.

## APPENDIX C

### OPTIONS TO MAINTAIN A LOW TRANSACTION COST AMONG SIBF MEMEBERS AND CONSTITUENCY

1. If SIBF Pursues Alternative I of the Linkage Structure Proposed in Attachment I.

- 1.1 Ensure clear rules on who shall represent each member-group in SIBF;
- 1.2 Clearly agree on how SIBF's seat in the PAMB shall be occupied; if the members agree to rotate this among them, then clearly specify how the rotation shall proceed and the replacements determined in the event a designated group is unable to send a representative;
- 1.3 Develop clear – and universally agreeable (to members) – rules on staffing, and on how the members shall evaluate and exercise influence on staff performance (without eroding officers' ability to control the staff);
- 1.4 Institute a membership protocol that specifies, among others:
  - member-group responsibilities and disciplines,
  - dispute resolution procedures and arbitration and
  - protocol for evaluating members' efforts and activeness in SIBF, to be the basis for allocating officers' seats and staffing slots in the foundation.

These have to be all consistent with the SIBF constitution and by-laws.

2. If SIBF Pursues Alternative II of the Linkage Structure Proposed in Attachment I.

- 2.1 Options 1.1 to 1.4 above;
- 1.2 Establish a Business Affairs Unit to undertake marketing functions, linkaging with industries, and benefit-sharing among Samar's local population;
- 1.3 Establish a strong Legal Staff to ensure property rights and Philippine sovereignty over Samar's biodiversity resources;
- 1.4 Develop and maintain – or link with – strong technical personnel to do continuing R&D on Samar's biodiversity; oversee bioprospecting activities.