

# OVERVIEW OF THE INDONESIAN KNOWLEDGE SECTOR

MILESTONE 8

# Final Report

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<sup>1</sup> This diagnostic has been commissioned by AusAID's Tertiary Education and Knowledge Sector Unit. The views and opinions expressed in this paper are those of the author only. AusAID does not accept legal liability for material contained in this document.

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## ABBREVIATIONS AND TERMS

AKATIGA	Adipati Kertabumi Tiga (Name of AKATIGA Foundation was derived from its original office address)
AMAN	<i>Aliansi Masyarakat Adat Nusantara</i> (National Alliance of Indigenous Communities)
ANU	Australia National University
ADEKSI	<i>Asosiasi DPRD Kota Seluruh Indonesia</i> (Association of Indonesian Municipality Councils)
APEKSI	Asosiasi Pemerintah Kota dan Kabupaten Seluruh Indonesia (Association of Indonesian District and Municipality Governments)
APPSI	<i>Asosiasi Pemerintah Provinsi Seluruh Indonesia</i> (Association of Indonesian Provincial Governments)
ARN	<i>Agenda Riset Nasional</i> (National Research Agenda)
AusAID	Australian Agency for International Development
BAKOSURTANAL	<i>Badan Koordinasi Survei dan Pemetaan Nasional</i> (Nasional Coordinating Body for Surveys and Mapping)
BaKTI	<i>Bursa Pengetahuan Kawasan Timur Indonesia</i> (Eastern Indonesia Knowledge Exchange)
BALITBANG	<i>Badan Penelitian dan Pengembangan</i> (Research and Development Body)
BALITBANGDA	<i>Badan Penelitian dan Pengembangan Daerah</i> (Regional Research and Development Body)
BAPETEN	<i>Badan Pengawas Tenaga Nuklir</i> (Nuclear Energy Monitoring Body)
BAPPEDA	<i>Badan Perencanaan Pembangunan Daerah</i> (Regional Development Planning Board)
BAPPENAS	<i>Badan Perencanaan Pembangunan Nasional</i> (National Development Planning Board)
BATAN	<i>Badan Tenaga Nuklir Nasional</i> (National Nuclear Energy Body)
BKKBN	<i>Badan Koordinasi Keluarga Berencana Nasional</i> (National Coordinating Body for Family Planning)
BPKKS KEMENSOS	<i>Badan Penelitian dan Pengembangan Kesejahteraan Sosial Kementerian Sosial</i> (Social Welfare Research and Development Body, Ministry of Social Affairs)
BPPT	<i>Badan Pengkajian dan Penerapan Teknologi</i> (Technology Research and Application Body)
BPS	<i>Badan Pusat Statistik</i> (Statistics Indonesia)
BPSD BUDPAR	<i>Badan Pengembangan Sumber Daya Budaya dan Pariwisata</i> (Culture and Tourism Resource Development Body)
BSN	<i>Badan Standardisasi Nasional</i> (National Standardization Agency of Indonesia)
CRC NPB	Cooperative Research Centre, National Plant Biosecurity
CSO	Civil Society Organisations

DEPAG	<i>Departemen Agama</i> (Ministry of Religious Affairs)
DEPDAG	<i>Departemen Perdagangan</i> (Ministry of Trade)
DEPDAGRI	<i>Departemen Perdagangan Republik Indonesia</i> (Ministry of Trade, Gol)
DEPDIKNAS	<i>Departemen Pendidikan Nasional</i> (Ministry of National Education)
DEPHUB	<i>Departemen Perhubungan</i> (Ministry of Transport)
DEPHAN	<i>Departemen Pertahanan</i> (Ministry of Defense)
DEPHUT	<i>Departemen Kehutanan</i> (Ministry of Forestries)
DEPKES	<i>Departemen Kesehatan</i> (Ministry of Health)
DEPKOMINFO	Departemen Komunikasi dan Informasi (Ministry of Communication and Information)
DEPNAKERTRANS	<i>Departemen Tenaga Kerja dan Transmigrasi</i> (Ministry of Labour and Transmigration)
DEPPERIN	<i>Departemen Perindustrian</i> (Ministry of Industry)
DEPPU	<i>Departemen Pekerjaan Umum</i> (Ministry of Public Works)
DEPTAN	<i>Departemen Pertanian</i> (Ministry of Agriculture)
DIKTI	<i>Pendidikan Tinggi</i> (acronym used for the Directorate General for Higher Education, Ministry of National Education)
DGHE	Directorate General of Higher Education
DRN	<i>Dewan Riset Nasional</i> (National Research Council)
DRD	<i>Dewan Riset Daerah</i> (Regional Research Council)
ERSA	European Regional Science Association
Forum Kepala BAPPEDA KTI	Heads of Eastern Indonesian Provincial Development Planning Boards Forum
GARUDA	<i>Garba Rujukan Ilmiah</i> (Scientific Reference Gateway)
Gol	Government of Indonesia
ICIAR	International Center for Interdisciplinary and Advanced Research
ICT	Information and Communication Technology
IGGRD	Institute for Good Governance and Regional Development
IMF	International Monetary Fund
IRSA	Indonesian Regional Scientist Association
ITB	<i>Institut Teknologi Bandung</i> (Bandung Institute of Technology)
JIKTI	<i>Jaringan Peneliti Kawasan Timur Indonesia</i> (Eastern Indonesia Researcher Network)
KAM	Knowledge Assessment Methodology
KEI	Knowledge Economy Index
KEMENNEG KUKM	<i>Kementerian Negara Koperasi dan Usaha Kecil Menengah</i> (State Ministry of Cooperatives and Small and Medium Enterprises)
LAPAN	<i>Lembaga Penerbangan dan Antariksa Nasional</i> (National Institute of Aeronautics and Space)
LIPI	<i>Lembaga Ilmu Pengetahuan Indonesia</i> (Indonesian Institute of Science)
LP3ES	<i>Lembaga Penelitian, Pendidikan dan Penerangan Ekonomi dan Sosial</i> (Institute for Social and Economic Research, Education and

	Information)
MENRISTEK	<i>Kementerian Negara Riset dan Teknologi</i> (State Ministry of Research and Technology)
MoNE	Ministry of National Education
NGO	Non Government Organisation
P2BK	<i>Pusat Penkajian Budaya dan Kemasyarakatan</i> (Center of Culture and Society Studies)
PEACH	Public Expenditure Analysis and Capacity Harmonization
PERCIK	<i>Persemaian Cinta Kemanusiaan Foundation</i> (Name of NGO based in Salatiga)
PNPM	<i>Program Nasional Pemberdayaan Masyarakat</i> (National Community Empowerment Program)
PPIA	<i>Persatuan Pelajar Indonesia Australia</i> (Indonesia Australia Student Association)
PPKEUDA UNCEN	<i>Pusat Pengkajian Keuangan Daerah Universitas Cendrawasih</i> (Center for Analysis of Regional Finance Cendrawasih University)
PRSCO	Pacific Regional Science Conference Organisation
PSHK	<i>Pusat Studi Hukum dan Kebijakan</i> (Center for Indonesian Law and Policy Studies)
PSKK	UGM – <i>Pusat Studi Kependudukan dan Kebjakan Universitas Gajah Mada</i> (Center for Population and Policy Studies, Gajah Mada University)
PSKTI	<i>Pusat Studi Kawasan Timur Indonesia</i> (Center for Eastern Indonesian Studies)
PSP3 UNCEN	<i>Pusat Studi Perencanaan Partisipatif Perdesaan Universitas Cendrawasih</i> (Center for Village Participative Planning Studies, Cendrawasih University)
R&D	Research and Development
RMIT	Royal Melbourne Institute of Technology
RPJMD	<i>Rencana Pembangunan Jangka Menengah Daerah</i> (Regional Medium Term Development Plan)
RPJMN	<i>Rencana Pembangunan Jangka Menengah Nasional</i> (National Medium Term Development Plan)
RPJPD	<i>Rencana Pembangunan Jangka Panjang Daerah</i> (Regional Long Term Development Plan)
RPJPN	<i>Rencana Pembangunan Jangka Panjang Nasional</i> (National Long Term Development Plan)
RSAI	Regional Science Association International
RSAmericas	North American Regional Science Council
SMERU	Social Monitoring and Early Response Unit (original name of SMERU before becoming an independent research institution)
SOFEI	Support Office for Eastern Indonesia
TAF	The Asia Foundation

## 1. Introduction

This Final Report covers the period of August 2009 to July 2010 and synthesizes findings to date of the Knowledge Sector Specialist, based on activities tasked in the terms of reference. These activities included:

- a. Conducting of strategic consultations with stakeholder groups agreed to by AusAID in Indonesia and Australia as input into the design process (at least 8 groups in the major Australian capitals of Canberra, Sydney, Melbourne, Brisbane, Adelaide and Darwin and another 8 groups in key regional centres in Indonesia, i.e. Jakarta, Yogyakarta, Salatiga, Makassar, Surabaya and/or Denpasar and Medan). These consultations will result in:
  - i. A qualitative review of chief sources of information used by Indonesian policymakers to inform their views of which issues in economic and social development require government attention, analysis and policy attention;
  - ii. Input regarding university incentives, and;
  - iii. Survey of career paths for researchers.
- b. Produce a series of case studies based on interviews with key individuals to gain a perspective on how these figures have approached the challenges of working in, managing and sustaining successful, knowledge institutions. The contractor will conduct at least six (6) such interviews with key Indonesian figures to be identified.
- c. Provide input and support for the overall long-term design process of the initiative as indicated by the AusAID core team, including the following components of this design process:
  - i. Assessments of Indonesian institutions potentially suitable for participating in the pilot phase conducted in conjunction with AusAID research thematic adviser
  - ii. Development of pilot activities; and
  - iii. Long term financing plans of Indonesian budgetary support for the pilot institutions from 2011/12 for 5 years

As the assignment progressed, a number of changes were made to the original assignment, with additional input sought on non-traditional organisations, Cendrawasih University and LIPI. On the other hand, activities such as consultations in Australia and interviews with key individuals were deleted from the assignment as different priorities were identified.

The report builds on the consultant's mid-report and synthesizes input from other reports and diagnostics conducted for the program.

The structure of the report first looks at the original assumptions contained in the program's concept note and then provides an overview of input received which is presented based on a conceptual framework developed for the program. The final section brings together the various elements incorporated into a strategy map providing an outline for the program and recommendations for future implementation.

## 2. Revisiting the Knowledge Sector Concept Note and Original Assumptions

The initiative to revitalize Indonesia's knowledge sector was initially outlined in a concept note which was presented and received approval for funding<sup>2</sup> from AusAID on the 14<sup>th</sup> of May, 2009. Consultations conducted consistently met with a positive response to the program from both central and local governments and from a range of knowledge sector institutions.

As stated in the concept note, the term Knowledge Sector refers to “the overall institutional landscape of government, private sector, and civil society organizations that support the development of public policy. It includes think tanks, university institutes, specialized agencies, certain types of private sector contractors, and a range of non-governmental organizations”<sup>3</sup>.

Use of this term is not to present boundaries to what this sector should contain, but to ensure that focus is on the broader picture and not on individual institutions or aspect within the sector. A number of indicators now available can be used to compare the general condition of Indonesia's knowledge sector with other countries.

For instance, the World Bank Institute has developed a Knowledge Economy Index (KEI)<sup>4</sup>. The sum of the components making up KEI are: 1) Economic Incentives and Institutional Regime, 2) Innovation System, 3) Education and Human Resources, and 4) Information and Communication Technology (ICT)<sup>5</sup>. As shown in Figure 1. Comparison of Knowledge Economy Index (2009 and 2005)”, Indonesia's status is compared to 8 other countries in 2009 (the upper bar marked with the name of each country), and 2005 (the lower bar marked 2005) and within the East Asia and Pacific Region (average scores). Specifically with regard to Indonesia, the chart also shows how Indonesia's indicators were higher in 1995 compared to 2009. However it should be noted that most of the other countries except for Taiwan, Vietnam and China also had higher levels in 2005.

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<sup>2</sup> Funding approved for a 2 year design phase

<sup>3</sup> Revitalizing Indonesia's Knowledge Sector: Concept Note, June 2009, AusAID

<sup>4</sup> KEI – Takes into account whether the environment is conducive for knowledge to be used effectively for economic development

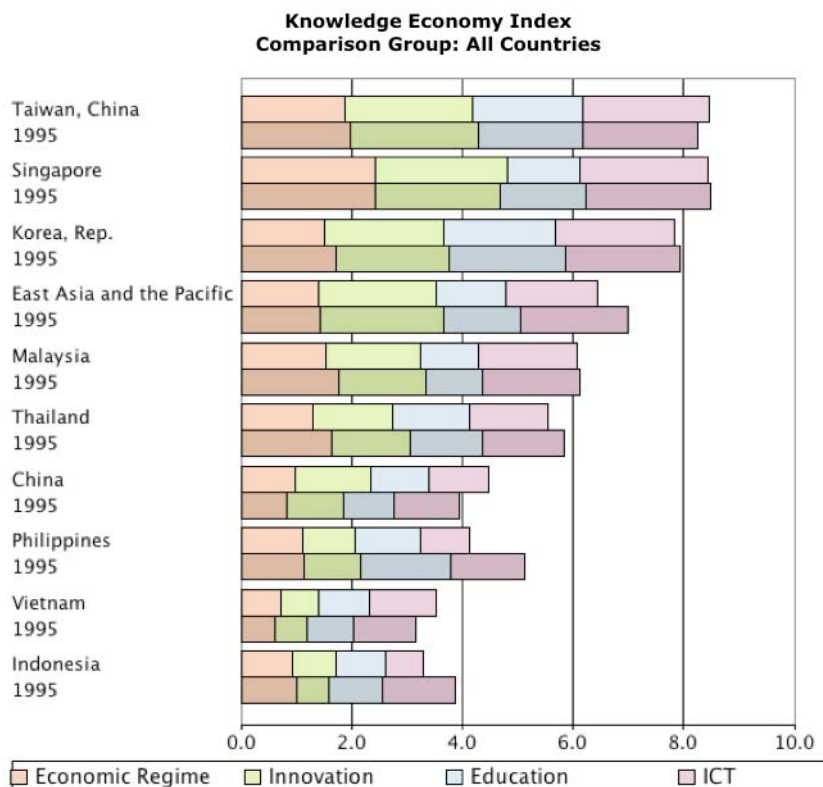
<sup>5</sup> **Economic Incentive and Institutional Regime** – Average of scores on three key variables of Tariff and Non-tariff Barriers, Regulatory Quality and Rule of Law

**Innovation System** – Average of scores on three key variables being receipt and payment of royalties, patents and applications granted by US Patent and Trademark Office, and number of scientific and technical journal articles

**Education and Human Resources** – Average of scores on three key variables being adult literacy rate, secondary enrolment, and tertiary enrolment

**Information and Communication Technology (ICT)** – Average of scores on three key variables of Telephone, Computer and Internet penetration per 1000 people

Figure 1: Comparison of Knowledge Economy Index (2009 and 2005)



Source: World Bank Knowledge for Development: Cross Country Comparison (KAM 2009)

Noting that the Knowledge Economy Index (KEI) was developed to provide an indication on whether a country’s “environment is conducive for knowledge to be used effectively for economic development”(Chen 2006), the graph shows that Indonesia’s knowledge environment has actually regressed over the last 14 years. This provides an interesting introduction to the general constraints across the knowledge sector initially outlined in the concept note <sup>1</sup>These included:

- 1) Few **incentives** for knowledge workers to cooperate with government agencies;
- 2) Unstable **financing** in knowledge institutions;
- 3) **Uncompetitive** wages propelling analysts to donor and private sector programs;
- 4) Government constrained by **civil service rules and promotion criteria** in recruiting and retaining high quality researchers;
- 5) Indonesian university **bureaucratic structures** not rewarding policy research/ publication;
- 6) **Quality of education** in Indonesia, does not encourage innovative, creative thinking and research;
- 7) Poor **oversight and review** lowers the quality of knowledge products;
- 8) Government lacks **autonomous structures and skill mixes** for obtaining reliable internal policy analysis; and 9) Narrow supply of knowledge resources limiting the diversity of policy perspectives and **preventing quality improvement through competition.**

### **Comments on Factors Limiting Demand for High Quality Policy Research**

Aside from the general constraints, a number of factors limiting the demand for high quality policy research were also outlined in the concept note:



1. Indonesia has no overall **policy** that supports knowledge for national development;
2. Government **budgeting and procurement** rules are extremely complex and unwieldy, geared primarily for large-scale infrastructure contracting rather than for the types of activities normally carried out by knowledge partnerships;
3. Government managers **lack strong incentives to hire the most qualified groups** nor does it have effective mechanisms for providing quality control;
4. Civil society organizations still engage more in **direct political activism** than in policy debates informed by analysis (with exceptions);
5. Indonesia's easy access to global knowledge through **international technical assistance**, often grant funded, reduces the incentives to improve the quality of what can be developed and sourced locally;
6. Policy **documents are rarely presented in formats that policy makers find useful**, which creates a culture of not using written policy products as part of the decision-making process.

*Existing policies to support knowledge for national development* - Responding to the first constraining factor, it was found that Indonesia has a number of policies supporting knowledge for development, which can be utilized to align the program with ongoing GOI plans. This can be done by referring to the "*Agenda Riset Nasional - ARN*" (National Research Agenda), which has been compiled as a 5 year plan and links directly to the 2010-2014 National Medium-Term Development Plan. The *ARN* itself is based on national legislation, being Law No. 18/2002 on the National System for Research, Development and Application of Science and Technology. This law provides the basis for a number regulations and decrees, for instance:

- 1) Government Regulation 20/2005 (Technology transfer, Intellectual Property, Research and Development by Universities and R&D Institutions), and;
- 2) Government Regulation 41/2006 (Permits for research and development by foreign institutions)
- 3) Presidential Decree No. 4/2003 on Coordinating the Compilation and Implementation of National Strategic Development Policies in Science and Technology.

These regulations provide a legal basis and national policy framework for the Knowledge Sector Revitalization Program. For instance, Law No. 18/2002 specifically requires local government to utilize input from a variety of knowledge providers (including universities, *BALITBANGs* and non government organisations) for strategic development plans and to make provisions for this in terms of budgeting. The law is also the basis for the formulation of national and regional research councils, another structure that cannot be ignored in the program. The regulations as well as the *ARN* emphasize the need for social research, although as Sherlock has identified in his paper<sup>6</sup> the main emphasis is still on the more scientific and technical aspects of knowledge as natural sciences and technology, where the 7 sectoral focuses of the *ARN* are: 1) Food Security, 2) Energy, 3) Information and communication technology 4) Security and Defence, 5) Transportation technology and management, 6) Health and medicines, and 7) Advanced materials to support the development of technologies in the above categories. Humanities and basic sciences on the other hand are categorised as supporting factors ( see Figure 2 – Indonesia National Research Agenda).

Within the *ARN* strategy, the Knowledge Sector Revitalization Program could be seen as supporting the "strengthening of social and humanity dimensions", thus directly aligning the

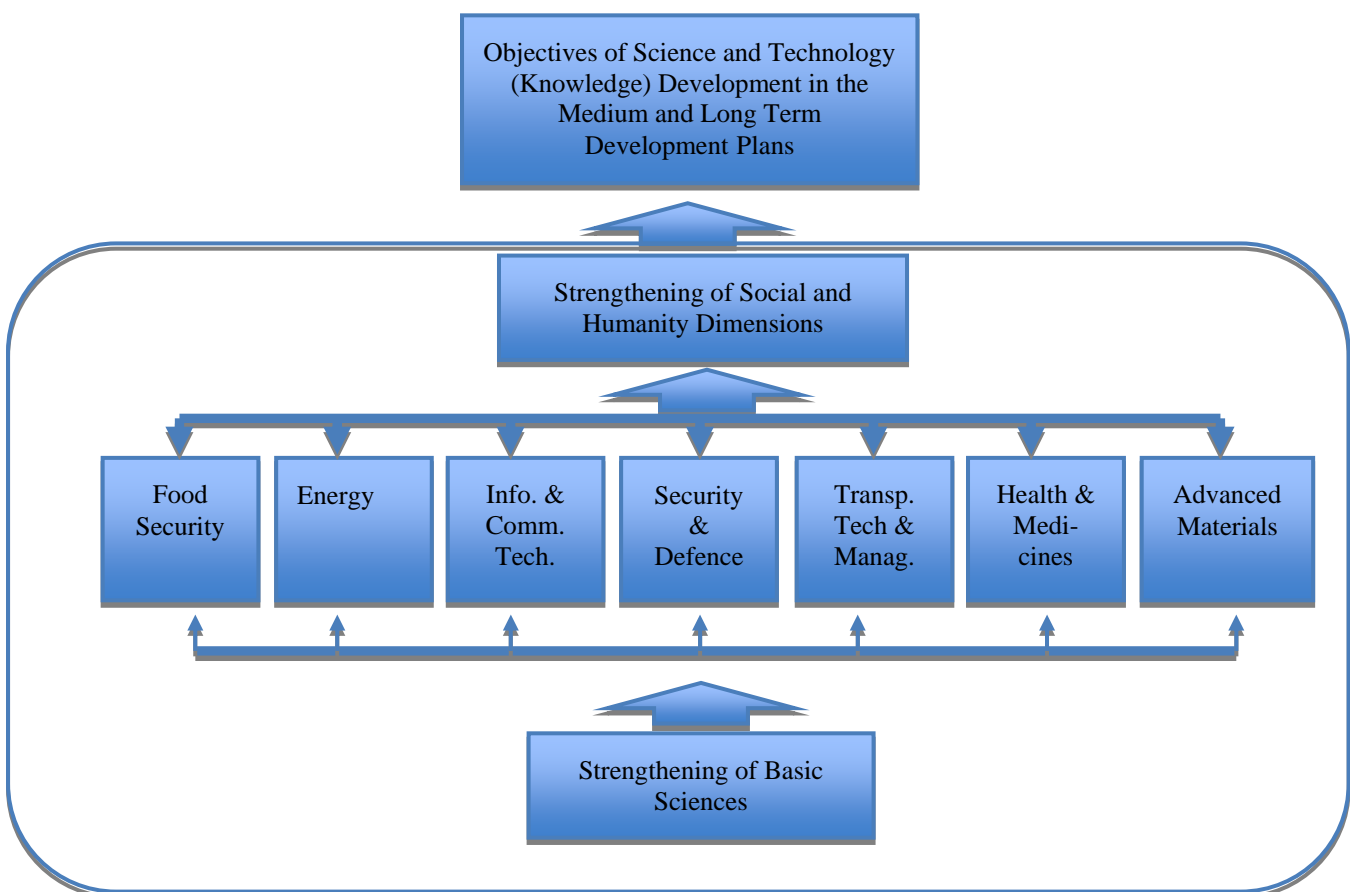
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<sup>6</sup> Stephen Sherlock: "Knowledge for Policy: Regulatory Obstacles to the growth of a knowledge market in Indonesia" (June 2010)

program with Indonesia's existing knowledge sector policy. According to the *ARN*, the current 5 year phase for this particular "dimension" will focus on the values and principles of justice and how these values and principles can be incorporated and implemented in the sectoral focuses of the *ARN*. This includes social, cultural, economic and environment sustainability aspects. The *ARN* plans to develop the social and humanity dimension through two approaches:

- ensuring that social and humanity-related input on policies are developed for each of the sectoral focus areas, and;
- focusing on social and humanity studies to increase the diffusion and utilization of technologies and knowledge developed in the sectors.

**Figure 2: Indonesia National Research Agenda**



(Source: Agenda Riset Nasional 2010-2014, Republik Indonesia)

The *ARN* states that social and humanities considerations must underpin the policy, where it describes development as "involving change in terms of state, civil society and markets. This includes the need to develop mutually agreed values, strengthening of social practices based on mutual trust, cooperation and partnership, and voluntarism, where development consists of four interrelated dimensions of politics, economics, social and culture"(Government of Indonesia 2010).

In terms of diffusing knowledge, the *ARN* identifies three levels:

- **micro** (focusing on the increased participation of knowledge users, equality of access, interaction between users and suppliers of knowledge, and studies on the social impact of technology)
- **meso** (focusing on identifying opportunities for the diffusion of knowledge and the development of intermediate processes, standards, policy studies and linking of intellectuals to government and private sector)
- **macro** (focusing on long term and broader dynamics of technological and social changes and trends, future developments and efforts to enhance the functioning of technology to support social justice and to promote a knowledge based society).

The *ARN* states that although this research strategy has a strong legal position, GoI has not provided sufficient budgeting allocations for research and development. It also highlights the lack of cooperation, coordination and synchronization within state supported initiatives and agencies, citing an example of research in bio-fuels, where 11 research activities were funded and implemented with no communication or collaboration between the different programs. This is why the *ARN* was developed to function as 1) a framework for interaction and coordination between knowledge actors to increase the collective performance of the sector, and; 2) as a platform to direct research, development, dissemination and usage of knowledge activities towards overcoming national development challenges.

Despite this being included in the *ARN* framework, no further mention of social and humanity related research was found in the sectoral research program matrices. For example, one strategy to enhance food security is to increase the availability of rice growing centers in other regions (Papua, Kalimantan and Sumatra). Yet no activities are found in the matrix for this program to undertake social research, for instance regarding the impact of introducing large-scale rice production centres, nor consideration of local practices and cultures promoting local diets and staple foods. This gap in terms of support and allocations for high quality, qualitative social research in Indonesia's existing national research agenda presents an important niche for the Knowledge Sector Revitalization program.

*Complex and unwieldy Government budgeting and procurement rules* – The concept note recognises that “development aid as a share of the overall development budget will continue to shrink”. Provision of support to state institutions are no longer seen as complementary to existing budget allocations. This means, for example that any additional funding from donors. to the Ministry of National Education, or to LIPI is not seen as additional support to increase budgets already allocated, but is instead incorporated as part of the agency's total proposed budget.

Positively, this means that if external financial support was provided, resulting programs and policies could be sustained by GoI in the future. This however decreases incentives for state institutions to collaborate and receive external funding as it means additional reporting requirements (to the national government and to the funding provider). In other words, the donor support will only be influential in areas which are lacking in support but which are critical to Indonesia's ongoing development. Focusing on support for research into social issues and links and collaboration between policy makers and Indonesian non-state knowledge suppliers (while working to decrease reliance on international technical assistance) is one of the critical areas in the overall development landscape not receiving sufficient funding support internally and is therefore a strategic sector to support.

*Direct political activism of CSOs rather than informed policy debates* - Civil Society Organisations are not traditionally recognised as knowledge institutions, a mind-shift within many CSOs is needed regarding the value of their knowledge based on their access to local networks and communities. In consultations with the National Alliance of Indigenous

Communities (AMAN – *Aliansi Masyarakat Adat Nusantara*) and Jurnal Celebes, an NGO providing advocacy on environmental issues in Sulawesi<sup>7</sup>, it was clear that neither recognized their role as knowledge institutions, yet both are involved in collating, analyzing and presenting data and information on relevant development issues directly to government officials or indirectly through the use of mass media. Both organisations had also moved their advocacy approach from a confrontational style to more evidence based dialogue, especially with sympathetic government authorities.

Representatives from both organisations recognised the need for a stronger analytical capacity to support recommendations, as they and other CSOs are challenged by authorities not only to highlight issues but also to present viable solutions. This signals an emerging demand from government, which, depending on the appropriateness and accuracy of the CSO's response, could also lead to improved development policies. During the consultation, Jurnal Celebes members began to further appreciate (a) the value of their own data and information (b) how the depth and accuracy of the information they analyzed and presented could serve to increase the organisation's role and influence, (c) how their knowledge assets could help secure ongoing funding.

*Access to global knowledge reduces incentives to improve local quality* – The concept note states that access to global knowledge through international technical assistance reduces incentives to improve locally developed and source expertise. This statement does relate to existing conditions at the national level where international agencies are accessible and abundant. However, it should be noted that the imbalanced distribution of qualified human resources is also a major issue, with a majority of institutions and personnel based in Jakarta and Java. This limits the demand for instance from local governments to local institutions simply due to both perceived and actual lack of capacity in local institutions. Coupled with limited access to international technical assistance, many regions simply do not have sufficient evidence based development planning capacity.

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<sup>7</sup> Consultations were conducted in Makassar, 28 -29 May, 2010

### 3. Conceptual Framework

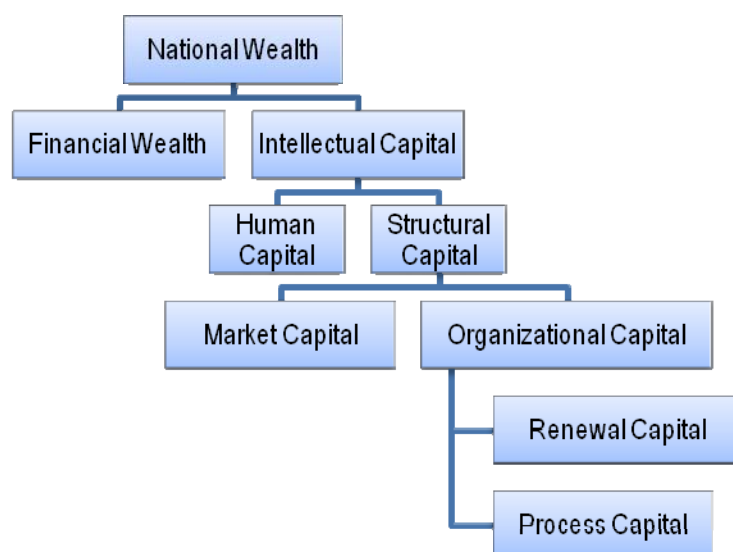
The complexity of Indonesia's knowledge sector landscape requires a broad conceptual framework, which can be used to analyze the sector and categorize input gained from consultations and diagnostics. Referring to literature looking at a nation's overall knowledge capacity, a concept map on the intellectual capital of nations, presented by Bontis (Bontis 2005) and used in national and multinational analyses, was selected.

The reason for developing a framework based on intellectual capital concepts is based on the consideration that the framework for revitalizing Indonesia's knowledge sector should not only be applicable in the short term specifically for knowledge institutions involved in supporting national development policies, but should also resonate with key government decision makers at both national and sub-national levels who are responsible for allocating budgets and who are often driven by macro-economic growth concepts.

Newer macro-economic theories point to the importance of knowledge in enhancing a country's performance, and so this program should also be seen as a way of enhancing Indonesia's economic growth not only at the national level, but also at the subnational levels through evidence based development planning<sup>8</sup>. In order for the program to be supported by both intellectuals and politicians, discourse on the importance of revitalizing Indonesia's knowledge sector must be expanded from an aid and/or development effectiveness perspective to one of increasing the nation's economic growth. This includes the need to embrace agendas that shift from a reliance on natural resource exploitation to a more diversified and technology/knowledge based economy.

Figure 3 provides an overview of the basic components making up a nation's intellectual capital<sup>9</sup>.

**Figure 3: Intellectual Capital of Nations Concept Map**



<sup>8</sup> Based on input from Dr. Marthen Ndoen, Center for Eastern Indonesian Studies, Satya Wacana Christian University

<sup>9</sup> This diagram was included in the presentation provided to the Working Group Meeting held 1 September, 2009, BAPPENAS)

(Source: Bontis, National Intellectual Capital Index)

Indonesia’s national wealth consists of both its financial wealth (obtained mainly from its natural resources), and its intellectual capital. Indonesia’s intellectual capital comprises both human capital and structural capital. Much of the focus to date (including the support by international development agencies), has been in developing Indonesia’s human capital. However the channelling of this capital requires structures, which include markets for knowledge products as well as organizational capacity (organizational capital). Critical to the organizational capital are the capacities to process and renew knowledge (Process Capital and Renewal Capital).

Using these concepts as the key components of a nation’s intellectual capital to be considered, a framework was developed to describe linkages between components separated into supply and demand cycles (Figure 4: Indonesia Knowledge Sector Revitalization Conceptual Framework). This framework can be used to categorize input into the program to revitalize Indonesia’s knowledge sector for development policy.

**Figure 4: Indonesia Knowledge Sector Revitalization Conceptual Framework**<sup>10</sup>



This framework can be described as follows:

- Components of the framework form two interlinking cycles of Supply (related to quality), and Demand (related to performance).
- The first component of the Supply cycle (**1. Human Capital**) to the extent it is available in various knowledge institutions in Indonesia, should be linked to the organizational capacity of these institutions.
- The second component, (**2. Organizational Capital**) refers to the capacity of knowledge institutions to support the codification and transfer of knowledge from its human resources into explicit forms of media allowing for knowledge to be exchanged.

<sup>10</sup> Adapted from Nick Bontis’ Intellectual Capital Conceptual Framework and discussions with Dr. Willi Toisuta, PhD.

- In order for transfers of knowledge to occur, each institution must have clear processes (**3. Process Capital**), not only to allow for knowledge to be made explicit, but also to assess whether further research or development of existing knowledge is required (**3a. Research and Development**).
- As further research and development is undertaken, a process of renewal occurs (**3b. Knowledge Renewal**), which can bring about an increase in the capacity of the human resources (**3c. Expertise Development**).
- The linkages between these components (1 to 3c) form a cycle on the right side of Figure 4, and can be seen as a process to improve quality in the supply of knowledge for development policy.
- If processes within organisations support research and development which supplements and updates existing stocks of knowledge, and channel information to expert personnel for the development of their knowledge, the supply of knowledge will remain current and relevant to users.
- However, if institutions are able to implement a process where ongoing research and development is conducted leading to renewal of existing knowledge and which can be applied by the organisations' human resources to produce knowledge required by users, logically this process should lead to increased quality.
- As organizations codify knowledge, their products can be seen as knowledge assets that can be marketed, depending on the capacity of the organization to identify its users and clients.
- Accessing of markets (**4. Market Capital**) can only be accomplished effectively if the institution is able to package its knowledge in the form of data, information and analysis that meets the needs of clients.
- As needs of clients and markets are met, there are increased perceptions of value given to the institution and its products, where knowledge assets produced become commodities in these markets (**4a. Knowledge Asset Commodification**).
- These commodities are sought after and exchanged, resulting in income specifically for the institution involved, but also collectively as revenue of the knowledge sector.
- The manner in which such revenue is managed and invested (**4b. Revenue Generation & Management**), determines the extent in which Indonesia's knowledge sector institutions have sufficient financial leverage and capacity (**5. Financial Capital**) to continue operations and sustain expertise.
- Linkages between this second group of components (4 to 5) form a process cycle on the left side of the diagram. This is the performance cycle of knowledge-producing institutions in Indonesia seen from a demand perspective. The overall framework also emphasizes the interdependence of suppliers and users of knowledge for development.

Input from consultations is presented in the following section based on this framework allowing for a systematic overview of Indonesia's knowledge sector from both demand and supply perspectives.

## 4. Consultations Overview and Synthesis of Findings

Commencing in September 2009, consultations and discussions were conducted in Indonesia and Australia. These included consultations with university representatives<sup>11</sup>, the Indonesia Australia Student Association (PIIA), NGO's/think-tanks<sup>12</sup>, university research centers<sup>13</sup>, and intermediary organisations<sup>14</sup>.

Questions posed in these consultations were used to both test the conceptual framework as well as to seek further input for the program design, including:

- The strategic direction of the institution;
- Sectoral or regional focus of the institution;
- Overview of main clients and partners, the manner in which partnerships and collaboration is developed, and how the institution interacts with its partners;
- The extent in which the institution is dependent on individual or organisational relationships to support its work;
- Mapping of the main audience of the institution and the kinds of behaviour change sought (including policy, practices and attitudinal change) through the institution's output;
- Communication conducted with the institution's main audience during research processes;
- Expectations about the revitalization program in terms of supporting better partnerships and quality outputs;
- Capacity to implement multidisciplinary approaches;
- Capacity to combine a range of perspectives and approaches to provide policy input;
- Awareness and capacity in research communication and appropriateness of communication media used;
- Types, number and quality of output produced.

The extent in which details were obtained depended on the institution itself and the time available to meet and discuss their conditions and perspectives. These preliminary findings are summarized below based on the Indonesia Knowledge Sector Revitalization Conceptual Framework.

### ***Supply Side***

#### **Human Capital**

*Distribution of expertise* - In terms of human resources within Indonesian knowledge producing institutions, there is quite a broad distribution of expertise with high-level academic qualifications from both national and international institutions. All of the institutions consulted had strong combinations of foreign and national university graduates,

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<sup>11</sup> Gajah Mada University, Satya Wacana Christian University, Paramadina University, Cendrawasih University, Australia National University, Macquarie University and RMIT

<sup>12</sup> PERCIK Foundation, LIPI, AMAN and Jurnal Celebes

<sup>13</sup> PSKK-UGM, PSKTI, Indonesia Project, PSP3-UNCEN, Pusat KEUDA-UNCEN

<sup>14</sup> JiKTI (Eastern Indonesia Researcher's Association) and National Information Commission



which logically should translate as a high level of capacity in these institutions. Bursa Pengetahuan Kawasan Timur Indonesia - BaKTI (Eastern Indonesia Knowledge Exchange), collaborated with LIPI to develop a series of directories on researchers, research institutions in eastern Indonesia and research on eastern Indonesia. These directories showed just how much expertise already exists in a region continually depicted as lacking in human resource capacity.

Jaringan Peneliti Kawasan Timur Indonesia (JIKTI), the eastern Indonesia researcher's network supported by BaKTI, has members regularly publishing articles in international journals. However, the fact that many institutions still seek different forms of skills development and capacity building programs reflect an awareness that there are gaps in quality and capacity. The JIKTI workshop<sup>15</sup> for instance had a session specifically on strategies to get articles accepted and published in journals.

Unclear career paths - Although a number of universities (eg University of Indonesia) are experimenting with a range of incentives for researchers, the majority of Indonesia's universities do not seem to have a clear career path for researchers. Generally, academics are required to maintain at least a minimum teaching workload and are not directly remunerated by the university for their involvement in research centers. Research and publications is seen as a necessary process to accrue points<sup>16</sup> that increase status as an academic. As Sherlock states: "The measures are entirely output-driven, with the focus being on the production of a certain product or activity for its own sake, rather than for its results, effectiveness or utility for end users."<sup>17</sup> Once the highest academic level of professor, is attained, there are limited incentives to continue researching. Further input is required with regard to researcher status in non-university institutions, which may come from other studies/diagnostics underway. For staff in PERCIK<sup>18</sup>, status stemmed from seniority within this organisation's community, including length of time individuals had spent with PERCIK, with no obvious financial incentive for those performing better than others. This is very much influenced by the background of this unique organisation which was established by a number of senior researchers and lecturers unhappy with the leadership in Satya Wacana Christian University, leading to shared beliefs of equality and social justice.

Many non-government, non-university research organisations are similar in their dependence on the founders and subsequently the senior members of the institution for decisions such as how fees are split, focus of the organisation and any staff development. Therefore when an individual researcher begins to gain ground due to his/her output and profile, they are likely to establish their own organisation where they have more control over contracts and income. This is reflected in the fragmented landscape of Indonesia's research centers, where there are numerous smaller institutions and relatively few established organisations outside of universities, which are themselves fragmented into various "pusat studi" (research/studies centers).

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<sup>15</sup> Implemented in Makassar, 24-28 October, 2009.

<sup>16</sup> Points system established and implemented with oversight from the Directorate General of Higher Education, Ministry of National Education

<sup>17</sup> Stephen Sherlock: "Knowledge for Policy: Regulatory Obstacles to the growth of a knowledge market in Indonesia" (June 2010)

<sup>18</sup> Persemaian Cinta Kemanusiaan Foundation, known as PERCIK, is an NGO based in Salatiga known for its research on local politics

Input from PPIA, the Indonesia Australia Student Association, provided other perspectives on human capital. Although many students studying through targeted scholarships<sup>19</sup> from AusAID feel they have positions to return to, many wonder whether their skills and knowledge can be applied in Indonesia, not because of the actual relevance of the knowledge they are gaining in Australia, but because of the lack of assurance about merit-based career advancement in Indonesia. One lecturer participating in discussions commented that after returning to Indonesia, conditions were not conducive for him to advance in his organisation, and he has since taken up a lecturing position in an Australian university. It is rare to see an advertisement in Indonesian newspapers for academic or research positions aside from donor-sponsored activities. This can be due to the cost of placing advertisements, but considerations of transparency and the need to award positions based on merit should balance the costs of advertising. The fact remains that students preparing to return to Indonesia do not have the necessary information to apply for available positions in research institutions.

Researchers and academicians in universities are recruited mainly internally from the ranks of graduating students. This appears to be due at least in part to the lack of transparent processes for recruiting academic/research staff mentioned above. This practice may also result in an unwillingness of colleagues to be critical of peers or superiors presenting their work for fear of seeming ungrateful and/or unappreciative of more senior members. The usual course is for talented students to be provided opportunities to first become assistant lecturers (who have been subject to curriculum in universities which emphasize teaching rather than researching<sup>20</sup>). Depending on performance, these “assistants” are then recruited as full lecturers. Although many are provided opportunities to study abroad or in other universities (if their own university does not have an appropriate post-graduate program), they are committed to returning to their sponsoring institution. This in its own way promotes a type of “inbreeding” of knowledge in the institution, and hesitance in challenging existing or promoting new ideas in the university or think tank to which scholars and researchers are returning.

In terms of career paths, many university academic staff vie for structural positions and become embroiled in university politics for positions such as faculty deans and to become university presidents/rectors or vice-presidents, rather than becoming researchers, which lacks both financial and stature incentives<sup>21</sup>.

*Imbalance of human capital* - In the absence of secure core funding from host universities, research centers must seek their own resources and financing to continue operations. This brings about a tendency for them to become project oriented since projects are the most likely source of funding. Because research centers are established based mainly on the initiative and voluntary interests of individuals within the university (or at times in response to a certain government policy/program), they are highly dependent on the reputation of individuals and their networks. Too often, individual capacity to link and network has not been institutionalized, by being transferred into standard processes and procedures of knowledge production and marketing of knowledge assets to clients and users. For example, none of the institutions interviewed made mention of any documentation mapping out their stakeholders and a clear system to communicate with clients as an ongoing

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<sup>19</sup> Targeted scholarships is a specific category of awards where awardees are sourced based on recommendations from the government department, University or NGO they are working in, where recipients are expected to return to their host institution.

<sup>20</sup> Based on input from Dr. Marthen Ndoen, Center for Eastern Indonesian Studies, Satya Wacana Christian University

<sup>21</sup> idem

function of their organization. The lack of emphasis in strategic planning and management thus impacts on the manner in which the institution (at the university level but more specifically at the research center level) channels funding towards building its financial capital.

As a result, although a number of research centers have grown in size and reputation for example, at Pusat Studi Kependudukan dan Kebijakan (PSKK-UGM), the ability to develop and maintain human resources based on internally generated resources is limited despite having a broad project and client base. This could point to range of issues such as a lack of strong strategic financial planning, inappropriate costing structures, overly high operational costs, and other factors, or simply that consulting income is mainly spent on paying experts with little remaining for institutional development.

This raises another issue with regard to human capital in knowledge producing institutions. The emphasis to date has mostly been on the academic and technical capacity of researchers, yet as an organisation, the composition of its human resources cannot be limited only to the “thinkers”, i.e. only on the research. Supporting capacity is also required for example in project management and financial management, as well as client and knowledge management. Most of the organisations do not seem to have the necessary balance in capacity, with very strong academically oriented individuals, but with a much weaker capacity (in terms of both remuneration and qualifications) on the administrative and management side of the organisation. This is then reflected in the capacity of many organisations to package and “sell” their knowledge products, maintain clients and networks outside of their immediate associates, and in developing strategies to develop a strong and balanced human resource base.

Members of the Indonesia Project also highlighted the lack of ongoing seminars within institutions where research results are regularly presented for comment and critique. This, coupled with the practice of restraining criticism towards colleagues not only impacts on the quality and depth of analysis but also the incorporation of ideas and perspectives provided by others leading to more multidisciplinary approaches. This also relates to an organisation’s knowledge management capacity, as seminars and discussions are a key process to managing an institution’s knowledge. Only Paramadina University raised this as a key part of their strategy as a knowledge institution. Knowledge sharing is incorporated in their individual performance reviews. This relates also to the processes existing within institutions discussed further on in this document.

LIPI also reflects this imbalance of human capital. Although the institute has over 4,000 personnel, with 1,081 accredited researchers, only 189 (4%) are qualified as public relations support officers, and only 25 staff are based in LIPI’s central public relations unit (the remainder are distributed in the various research centers under LIPI). Out of a total operational budget of Rp. 490 billion in 2010, only Rp. 1 billion is allocated for the central public relations unit. This public relations budget is intended to cover equipment, events, press conferences and media (including internet) for the public relations unit, and as such is quite limited in the impact the unit could have for LIPI.

## **Organizational Capital**

Organisational commonalities - Professor Hal Hill of the Australian National University, noted that for its size, Indonesia is largely under-represented in international academic and research fora. According to Hill, only a few institutions in Indonesia, have international reputations. He characterized these institutions as having four common traits:

- i) A clear mandate – each of these organizations have a clear focus and objective in terms of the knowledge they are producing to bring about specific change/development in Indonesia.
- ii) The right people mix – each institution has personnel able to guide the organization and to establish and maintain networks with key partners.
- iii) Core funding – access not only to project funding but funds for a management structure and institutional overheads allowing institutions to maintain a clear Indonesian agenda (in other words, not continually changing to relate to donor priorities).
- iv) Commitment to quality and integrity – where the institutions are able to to maintain standards and demonstrate impartiality. This is also seen to be crucial for the organization to attract resources and people.

In further consultations with institutions in Indonesia, it became clear that all four factors were not consistently found in many organisations. Despite this, it is important to look forward on the extent in which various factors now are providing a more conducive environment to support stronger organisations in Indonesia. It will be interesting to see the extent also that these factors are identified in other diagnostic studies underway.

*Convergence of Factors supporting Organizational Capital Development* - One question presented at the Sydney Perkumpulan Pelajar Indonesia Australia (Indonesia Australia Student's Association - PPIA) meeting was: "What is different about this program compared to other efforts in the past?" The person raising the question was referring to past efforts seeking to support the development of higher education institutions and bodies such as LIPI, but which did not seem to have a lasting impact. What makes the revitalisation program different is not only the activities and networks it will support, but the timing of this program during a period when various supporting factors are converging.

One factor, largely due to support from donor agencies such as AusAID, combined with Gol human resource investments, is the increased amount of human capital available in Indonesia. The previous example of the directory of researchers in eastern Indonesia provides an indication of the potential of expertise available to the nation. However, many researchers are working in isolation, and are not placed within organisational environments that are sufficiently conducive to allow them to develop and disseminate their knowledge. Many are also unaware of opportunities or needs for their capacity, and this lack of awareness is linked also to institutions' (i.e. universities) lack of efforts to openly and competitively seeking to attract new talent, preferring to recruit from internal sources. This has created an important role for intermediary institutions such as BaKTI, who support the distribution of information both physically and virtually.

Another factor is the gradual and necessary shift from a reliance on individuals to a more sustainable focus on institutions and their organisational capital. As many knowledge production institutions in Indonesia begin to mature and they have a greater capacity to analyse their market niche and determine ways in which they can finance their operations. As they make the transition to a more mature organisation, securing of funding must move from a reliance on individual networks, to funding based on financial and management and technical performance. This further highlights the need to strengthen organisational capacity.

For state universities, the decrease of government funding and the need to compete for students and grants has brought about a change in attitudes, where broader institutional

interests come into play. Universitas Indonesia, UGM, and ITB are all endeavouring to increase their profiles both nationally and internationally.

LIPI is also in a critical condition, where its operational budget is based on annual, set allocations no longer sufficient for it to operate and properly support its researchers. Although the overall amount allocated from the national budget for LIPI has not decreased, the purchasing power of the rupiah has. As a consequence, an increasingly larger proportion of LIPI's annual budget must be allocated for remuneration of personnel in order to cope with higher living costs, thus reducing the proportion available for actual programs. The limited remuneration for researchers as seen in LIPI also cultivates, in the words of one Deputy Director, a culture of mediocrity, where increasing quality of output cannot really be expected with such limited resources.

In non-government organisations, the transition from dependence on donors to national and local sources of funding has been a struggle, particularly as many have become reliant on donor funding. The capacity to develop alternative funding sources, is constrained by regulations on procurement which prevent organisations from being contracted by government to implement and sustain research. Diagnostics focusing on laws and regulations analyze this issue in further detail (Sherlock 2010).

Universitas Cendrawasih indicated that engagement with local government is on an ad-hoc basis, and relies on individual relationships to tap expertise. Interestingly, researchers in Universitas Mataram, have been able to capitalise on the situation by positioning themselves to be part of the incoming governor's "*tim sukses*" (campaign team). They are currently in a position to assist in the design, support and monitoring of the governor's programs. However in this case, it is also the individuals who are contracted by the government as expert staff rather than the institution, and the long term sustainability of this type of involvement is questionable. In both cases however, it was evident that researchers in the university were seeking to develop closer links with development planners and implementers.

Information and Communication Technology, is another supporting factor to increase organizational capacity in Indonesia, as it facilitates linkages and collaboration between individuals and institutions separated by land and sea in the World's largest archipelago. Although the Internet in outer regions such as eastern Indonesia is still hampered by the lack of ICT infrastructure, future investments and the advances in mobile technology are combining to increase the volume of information and knowledge sharing between regions.

Separately these factors perhaps seem of minor consequence, but when brought together collectively, and looking at the broader landscape of Indonesian institutions, a picture is emerging of a knowledge sector gradually having to come to terms with a new and more competitive environment. In this environment, state universities seem to be becoming much more self-reflective in configuring their role and relevance. Some universities are positioning themselves to secure funding in the form of research grants and diversify from a dependence on income from students. The Directorate General for Higher Education (DIKTI) has been instrumental in providing grants on a more competitive basis. State universities are also looking to create a bigger role for themselves by collaboration with provincial and district level governments, where more financial resources are becoming available. For these efforts to be successful and sustainable, a stronger and more balanced organisational capacity, covering the four previously mentioned traits will be increasingly necessary. Decreased reliance on public funding will also allow state universities to be more independent in their assessments and analysis.

Private-State University Partnerships - Satya Wacana Christian University, identified over-regulation of private universities as a constraint faced by these institutions in shifting to a stronger research orientation. Despite this, a number of private universities also have a reputation for introducing innovation and in critiquing the government. Partnerships between state and private universities would not only encourage interdisciplinary approaches to development, but also increased openness and impartiality. The role of associations such as the Consortium of Development Studies could accelerate and support partnerships which are able to strengthen organisational capital across a range of institutions by not only looking at delivery of study programs, but further at publicising and advocating findings to key government decision makers.

Shifting from Knowledge Fortresses to Knowledge Pools<sup>22</sup> - Traditionally, knowledge institutions in Indonesia, due to the lack of access to information, are very protective of their research and publications. This was seen as their competitive advantage over other organisations. However with the advent of the information age, institutions must necessarily profile their research not only as a reflection of their capacity, but also to prevent others from publicizing their work (either through plagiarism or pre-empting of publications). This shift also requires more attention to quality, if research work publicized is to be referred to and recognized. Almost all of the organisations consulted have websites, yet also stated the need for a better national research databases in order to access and refer to work already conducted to date.

## **Process Capital**

This section focuses on processes related to research and development, knowledge renewal and expertise development:

Research and Development - It is not always clear how work conducted by individual researchers in institutions is consolidated to become the collective knowledge and capacity of the institution when many organisations do not conduct regular discussions and seminars. Much of the in depth research conducted is to meet project needs or demands and does not seem to be linked as an internal process of renewing knowledge and developing expertise. For example, PSKK-UGM complained about their collaboration with the World Bank on a nationwide survey of citizen satisfaction. They felt that their role was only as data collectors, and all data had to be submitted for analysis and synthesis by the World Bank team, leaving them with no data sets for their own analysis. This was interesting from a variety of perspectives. First it meant weakness in the negotiations undertaken by the center, perhaps stemming from the need to accept work without emphasizing their own knowledge development needs. Second, it a lack of commitment to quality and integrity, as an established long standing research center, PSKK-UGM should be able to have some control and input over the resulting analysis. Thirdly, as a research center, PSKK-UGM could still separately develop and publish a paper on the resulting output of the World Bank to present its own views on the survey. Finally it showed a lack of ongoing and open communication with World Bank as a client.

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<sup>22</sup> Quoting from paper prepared for the EADI/IMWG Conference, Dublin, by Geoff Bernard: "Knowledge Sharing in Development Agencies: Knowledge Fortress or Knowledge Pool?". September 2003. Knowledge Fortresses refers to institutions protective about their knowledge and sources of information, whereas Knowledge Pools refer to organisations who are more open in exchanging or sharing their knowledge to others. Bernard, G. (2003). Knowledge Sharing in Development Agencies: Knowledge Fortress or Knowledge Pool? EAD//IMWG Conference.

Recently there have also been a range of plagiarism cases, where senior academics have been found to have used the research of their students to publicize their own work without crediting the source of the data. That this was able to at least pass scrutiny within their own institutions reflects the lack as well as the need for better research databases as a prerequisite to support the development of research management skills and structures, use of references to other publications, peer reviewing and others. One such research database has been developed by DiKTI in collaboration with LIPI (Garba Rujukan Ilmiah – or GARUDA, <http://jurnal.dikti.go.id/>), however the database which contains over 100,000 documents, includes files such as program prospectus, campus maps and university statutes. In other words, it is not sufficiently selective in focussing on research results. Nevertheless it is a start to building a national research database, and could be considered for further support.

Discussions with Ariel Heryanto (ANU) raised the issue of knowledge frameworks. He felt that many researchers in Indonesia are more comfortable or adept in conforming and working on externally developed or conceptualized knowledge frameworks, where what is needed are locally (not necessarily nationally) constructed frameworks and perspectives. This issue relates for instance to concepts of poverty and markets, which tend to look at issues from national and international approaches which tend to homogenize “the poor” in order to simplify the design of poverty reduction programs. Comments received from the Consortium of Development Studies also emphasized the need for increased “localized” input. Leaders of the consortium claimed that many studies conducted were based on external frameworks insufficiently adapted and combined with other interdisciplinary perspectives. This has resulted in well meaning development plans and programs unintentionally creating social injustice or environmental damage.

Based on the above, aside from technical skills in research, a number of other aspects must be considered if research is to be more effectively conducted in Indonesia. These include a strong reference database in order to know what has been researched and how this can be progressed, the need to enhance responsibility towards research coming out of institutions leading to better quality, and the need to increase the capacity of institutions to interlink and to develop strong research frameworks which originate from local issues and contexts.

*Knowledge Renewal* - Processes of knowledge renewal in knowledge institutions are dependent on the research and development processes. As stated by a number of institutions, there is often a lack in consistency in progressing development processes based on critical examination and evaluation of prior programs. One researcher said that there was too much “flavour of the day”, referring to shifting priorities and agendas in donor agencies. However, if research institutions are consistent with their mandate, strategies should be developed by which revenue generated from research projects should be able to cross subsidize internal research agendas. This also relates to the weakness in maintaining relationships with agencies who require such data and analysis and which should be nurtured as ongoing partners. One example is the Papua PEACH<sup>23</sup> program, where local researchers were supported to undertake analysis of public expenditure. Utilizing the experience, the researchers and their institutions had the skills to continue the process with annual updates. Unfortunately this opportunity was not taken up, with all parties waiting for the initiative of the external partner (World Bank), to conduct an update of the first analysis.

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<sup>23</sup> Public Expenditure Analysis and Capacity Harmonization

Expertise Development - Most organizations consulted in Indonesia could not describe clear career paths for their researchers. They tend to rely on scholarships from external agencies or offers for research collaboration from international institutions to boost the capacity of their researchers (eg PERCIK). Often it is up to the individual to seek scholarship opportunities and research partnerships with little support from their host organisation. At the end of the scholarships, the host organisation often has no mechanisms for ensuring that the researchers will return to the institution aside from individual personal commitments.

A number of institutions such as PSKK-UGM also stated that the lack of financial resources limited their ability to initiate their own research and fulfill capacity development needs.

Based on the above, there seems to be a “disconnect” in processes between research and development to knowledge renewal and how this leads to increased expertise of each organization’s human capital. In other words, expertise development occurs due to personal initiative rather than by design and procedures established within institutions.

## ***Demand Side***

Catering to the Needs of “Shareholders” - It is important to first clarify who the main actors in the demand side of the conceptual framework are. These include elected and non-elected leaders within government at national, provincial and district levels. They not only determine the various policy priorities for Indonesia, but they are also instrumental in approving budget allocations and regulations affecting knowledge producing institutions. As individuals who determine policies and budgets, they can be portrayed as the main shareholders of Indonesia’s knowledge sector.

Other shareholders exist who have resources and an interest in providing financial support to Indonesia’s knowledge sector, including private sector/philanthropical organisations (national and international), international development agencies (bilateral and multilateral), and global or regional forums/institutions producing international agreements and conventions relevant to Indonesia.

Positioning such actors as shareholders, especially government decision makers, is important in understanding that the perceptions, interests and needs of these actors must be understood and served to a certain extent. For example, community empowerment and poverty reduction policies became highly politicized in the previous election. The national community empowerment program, Program Nasional Pemberdayaan Masyarakat (PNPM), was expanded nationwide to become one of the largest of its kind in the world. It was promoted by the current President’s party as being a program of the Democratic Party. Aside from its promoted aim in alleviating poverty, from a political perspective, PNPM could also be seen as a program to consolidate support for the President at the grass roots level, as it reached thousands of villages throughout the country, and relied on influential community facilitators dependent on the program for employment. Based on external analysis of how the program would also increase employment and support economic growth<sup>24</sup>, the Government increased funding for the PNPM rather than follow IMF recommendations, and this provided a boost to Indonesia’s economy during the recent financial crisis. The President and his party benefited immensely from this policy, as he

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<sup>24</sup> An analysis of the benefits of Indonesia investing in PNPM was provided by DR. Gustav Papanek, President of Boston Institute for Developing Economies (Jakarta Post, Thursday, December 4, 2008)



was able to take credit also for Indonesia emerging positively from the financial crisis. Aside from politics, the pro-poor, pro-growth policy also served in increasing the distribution of government funds, and enhancing community participation as well as their knowledge of government processes, further supporting democratization processes in Indonesia.

In looking at the transition Indonesia has undergone, both politically and economically, it is possible to look forward towards a future scenario, and see how the knowledge sector's role could shift as it adapts to the changes in the nature of the country's leadership.

**Table 1: Shifting Role of the Knowledge Sector in Indonesia**

<b>Characteristics</b>	<b>Past →</b>	<b>Current →</b>	<b>Future Scenario</b>
<b>Government System</b>	<ul style="list-style-type: none"> <li>○ Centralized</li> <li>○ Central Govt. Patron</li> <li>○ Low accountability</li> <li>○ High security emphasis</li> </ul>	<ul style="list-style-type: none"> <li>○ Interim/Semi Decentralized</li> <li>○ “Decentralized” Patrons</li> <li>○ Accountable to “Center”,</li> <li>○ Decreasing security emphasis</li> </ul>	<ul style="list-style-type: none"> <li>○ Democratic Decentralized</li> <li>○ Performance Based Leadership</li> <li>○ Accountable to citizens,</li> <li>○ High welfare emphasis</li> </ul>
<b>Economic Growth</b>	<ul style="list-style-type: none"> <li>○ Dependent on centrally managed natural resource “boom” revenue</li> </ul>	<ul style="list-style-type: none"> <li>○ Shifting to broader resource and tax based revenue</li> </ul>	<ul style="list-style-type: none"> <li>○ Strong and more evenly distributed private sector and local industries (tax based revenue)</li> </ul>
<b>Role of Knowledge sector</b>	<ul style="list-style-type: none"> <li>○ Justifying autocratic policy</li> </ul>	<ul style="list-style-type: none"> <li>○ Gaining and maintaining of power and access to resources</li> </ul>	<ul style="list-style-type: none"> <li>○ To increase and measure performance</li> </ul>
<b>Orientation of Knowledge</b>	<ul style="list-style-type: none"> <li>○ Reliance on macro/external concepts</li> </ul>	<ul style="list-style-type: none"> <li>○ Shift from reliance on macro/external concepts</li> </ul>	<ul style="list-style-type: none"> <li>○ Emerging context based/internal concepts</li> </ul>
<b>Perceptions towards Critical Thinking</b>	<ul style="list-style-type: none"> <li>○ Seen as threat to unity and not encouraged</li> </ul>	<ul style="list-style-type: none"> <li>○ Suspicious of intent and purpose of critical perspectives</li> </ul>	<ul style="list-style-type: none"> <li>○ Independent input sought and supported</li> </ul>

Table 1, shows that the past government system of Indonesia during the “New Order” was characterized as being “highly centralized” with the President acting as the central patron<sup>25</sup>. There was little accountability to citizens and high emphasis on security, as economic growth was mainly based on revenue from oil and other extractive natural resource exports (Sugema and Chowdhury 2005). At the time, the role of the knowledge sector was to justify the government’s autocratic policies (Hadiz and Dhakidae 2005), using macro and external concepts to compare Indonesia’s progress with other countries. Critical thinking was perceived as a threat and was not encouraged.

Currently, Indonesia’s government system has not fully stabilized, as power and authority is still being reconfigured with a strengthening of the role of provincial governments (shifting and decreasing authority at the kabupaten/district levels). Patronage systems have decentralized, and territorial reform (*pemekaran*) has been oriented towards positioning of local elite to access state resources and channel these resources to their

<sup>25</sup> This links with the dominant political culture of the period, based on the Javanese conception of power which is highly centripetal in nature Benedict R.O’G. Anderson, Language and Power: Exploring Political Cultures in Indonesia (Jakarta: Equinox Publishing (Asia) Pte Ltd, 1990)

clients, based on ethnic, religious or geographic links. This does not mean to say that all political and bureaucratic leaders purposefully seek to position themselves as patrons, instead it is often the tendency of many constituents to position themselves as clients instead of being partners or counterparts. As major budget allocations are still determined by central government, accountability of local government authorities is often oriented towards Jakarta. In most areas there has also been a gradual decrease in security, reflected in the increased role of the police force and decreasing presence of the army (Singh 2001). As oil production decreases, Indonesia has also sought to broaden and diversify its revenue sources, including renewable natural resources, and is seeking to increase tax-based revenue. As can be seen from the PNPM example, the role of the knowledge sector in influencing decision makers depends on the extent to which it is perceived to support political and bureaucratic leaders in gaining and maintaining power, and in accessing resources. Positively, the increased authority and power of local authorities has increased the demand for more locally, context driven solutions, and this has provided more scope for knowledge to be developed with a shift from macro oriented and external concepts to more localized concepts. This has also shifted perceptions towards critical thinking, where knowledge providers must be able to overcome suspicion of policy makers (McCarthy and Ibrahim 2010) on whether the intent and purpose of critical perspectives are presented to decrease their authority and power. This means that knowledge suppliers must be able to gain the confidence and trust of authorities and must develop strategic approaches in introducing and presenting new perspectives.

Looking forward to a future and working towards a more ideal and conducive environment for knowledge producers and suppliers, we can envisage an Indonesia increasingly democratic and with a stable decentralized system. As political and bureaucratic leaders become increasingly accountable to their local constituents, more leaders will be in position based on their performance and capacity, with an emphasis towards the welfare of citizens. In this scenario, Indonesia's economic growth will be dependent on a strong private sector and local industries (which presently is still largely reliant on public spending), with tax based revenues also increasing accountability and public service performance. In this environment, the role of the knowledge sector would shift towards supporting government in increasing and assessing performance, which should also increase the need for a knowledge sector able to provide contextual and internal frameworks. In such frameworks, external concepts and experiences are positioned as important comparisons rather than as the main point of reference. In this environment, independent input and critical thinking would be valued as references to increase or enhance performance.

Returning to the present, it is clear that the knowledge sector in Indonesia must be able to support existing policy decision makers based on an understanding of current perspectives and its operational environment, in order to position itself and its future role.

## **Market Capital**

Based on the above, we are able to look at the manner in which the revitalization program should support Indonesia's knowledge sector institutions to build markets for their products, by better understanding current demand and needs. For example, Dr. Sudjana Royat, Deputy to the Coordinating Minister for Social Welfare, lamented the lack of research on local markets, looking at the economies of indigenous groups at village level. Without the supply of such knowledge (rather than the many academic efforts to apply international economic theories to local issues), it would continue to be difficult to be able to develop meaningful poverty alleviation policies.

This unfortunately reflects existing frustrations of development policy makers who have clear yet unfulfilled knowledge needs. In terms of research, the topics are often quite simple and could be conducted by junior researchers under the supervision of a senior researcher. Possibly a wealth of research papers on local markets and economies might already be available. However, without the organizational capacity to manage and promote research to users, often it seems that research is conducted only for the sake of academic promotion, and development programs are conducted for the sake of projects, without interlinkages between the two.

Prof. Kutut Suwondo (Chair of the Consortium of Indonesian Development Studies), described his own experiences in providing input in the form of an academic paper for the regional autonomy laws, where the resulting laws and regulations ran contrary to the recommendations in the academic paper accompanying the draft. His own comment was that reliance on the academic draft alone to influence policy makers was insufficient. Capacity is needed to “market” products, in terms of lobbying and presenting the contents to a broader base of stakeholders in formats more accessible and understandable to the target groups such as parliamentarians.

The Forum of Eastern Indonesian Heads of BAPPEDA<sup>26</sup> in their meetings also raised the issue of a lack of information and knowledge on local issues to support their development planning, including the need for data to be able to develop regional profiles of natural resources and approaches to developing and/or exploiting these resources.

These examples provide two sides of the issues faced in the “market” for knowledge products for development policy. Government leaders as users of relevant research, often do not formulate nor communicate their needs appropriately. On the other hand, especially in regional (provincial and kabupaten) governments, there is still the attitude of “government knows best” - where senior government officials are often unwilling to disclose their lack of knowledge or comprehension of the issues they are dealing with and are suspicious of contrary perspectives. On the other hand, they are also often constrained by the limited availability and capacity of knowledge institutions in their regions able to provide credible support.

On the side of the knowledge supplier, knowledge of the market in terms of identifying the needs of the user and catering to these needs is also an issue, as this requires ongoing communications and relationship building. Dr. Zaini, of Universitas Mataram, remarked that although many local officials in public do not publicly welcome input, once personal relationships have been established and trust is built, then many of those officials will freely discuss their issues and constraints. However, fostering open and productive working relationships with government officials requires an investment in the time of key personnel which many organisations cannot afford.

Even more advanced institutions/bodies such as the Indonesia Project, did not really pinpoint the users of their knowledge products, seemingly working with the assumption that it is up to others to utilize the knowledge their researchers are able to compile. To a certain extent this is reinforced by their longstanding profile and reputation. For example, recently

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<sup>26</sup> This Forum is a sub-network of the Eastern Indonesia Forum, a network developed through the Support Office for Eastern Indonesia (SOEI). The Forum consists of the Heads of BAPPEDA from 12 provinces who meet every three months to discuss issues and develop plans in communicating development initiatives and strategies to central government. They also utilize the meetings to learn about different smart practices and gain new knowledge.

Indonesia's former vice president (Jusuf Kalla) was invited to speak at ANU, and was quite frank about utilizing the input from ANU's Indonesianists in responding to IMF recommendations. The data and analysis provided was sufficient for Gol to ignore IMF during the recent financial crisis and follow recommendations outlined by ANU.

As stated previously, most of the institutions had never really conducted any client and stakeholder mapping exercise, and with their limited (or focused) knowledge of their markets, were unable to strategically direct their resources and energy to the “clients” most valuable and relevant to their mandate. This is clearly an area for future focus and support. PERCIK for instance had never really mapped its stakeholders, and were enthusiastic to do so as part of their institutional profiling. Suwondo also saw the need to develop a forum and advocacy support, similar to the multi-stakeholder Eastern Indonesia Forum to be able to interact and maintain relationships with government as the main client.

### **Knowledge Asset Commodification**

Once markets in terms of clear and targeted clients are identified, knowledge institutions must be able to communicate effectively in identifying how their clients would prefer to receive their input. Many decision makers either don't have the time or do not make the time to read extensive reports, and so other media are required. For instance, BaKTI utilizes forums and seminars to be able to provide a communication link between researchers and policy makers, while others such as ITB have a high reliance on their alumni network, as many ITB alumni are high level decision makers. With the current weakness of many knowledge institutions in linking with their clients, the role of intermediary organisations thus becomes key, at least in the medium term, to broker and increase the perceived value of knowledge products.

A number of study centers collaborating with BaKTI have an ongoing agreement with the Cooperative Research Center – National Plant Biosecurity (CRC-NPB). As partners to the CRC-NPB, they contribute time and resources to the project currently under implementation (Australia-Indonesia Community Management of Plant Biosecurity). However they do not recognize this as being an in-kind contribution and an investment into the program. Because of this, they are positioned as dependents of the CRC-NPB which provides financial capital to the program. By recognizing their own contributions to the project, they would be able to better negotiate for staff development and other contributions from the project. In this sense, they are unable to commodify their own knowledge and capacity as actual financial contributions to the program. If this was done, then it would allow for many of these institutions to develop a track record of rates and charges which could then be applied to future contracts.

### **Revenue Generation and Management**

Institutions must first identify their key partners and clients, develop products that are valued by their users, and then cost their services before they can generate reliable revenues. This aspect goes back to the issue of human capital and the extent to which there is a balance of personnel in each institution, including staff able to properly budget and negotiate contracts or tender for projects. One example is SMERU Research Institute (SMERU) whose researchers are unable to cope with the demand for their services, and are turning away research “orders”. However, a strong network built with qualified researchers in Indonesia could allow SMERU to link with other organisations and utilize their capacity to undertake other research activities and to increase SMERU's own revenue.

## Financial Capital

The ability to commodify knowledge products and capacity and to generate and manage revenue should lead to financial reserves that can be used as investment capital. The manner in which finances are invested should allow the institution to fund their non-commodified activities, or as assets which can be used to leverage funding.

For example, PSKK-UGM (Research Center for Demography and Policy, Gajah Mada University) would like to be able to initiate and conduct their own research, however they feel they are constrained due to lack of funds, despite the large projects portfolio they have with a range of users, including private sector (BP-Tanggung). The center has its own offices built utilizing funds gained from projects, but as this was built on university owned land, this would make it difficult for the unit to use this asset as a guarantee or leverage for seed funding for their own research proposals. For example, it is unclear to what extent the center's facilities are negotiated and fully costed into proposals as fixed assets they are able to charge for additional income in contracts. For instance, depending on how the building was originally designed, to what extent could areas in the office building be rented out to other occupants, thus increasing revenue generation and strengthening the capital base of the institution.

## 4. Moving Forward

### *Emerging Trends and Recommendations*

Referring to the comparative study conducted on 5 middle-income countries<sup>27</sup> conducted as one of the diagnostics for revitalizing Indonesia's knowledge sector, it is interesting to note that the choice of whether Indonesia wants a domestic knowledge capacity is fundamentally a political decision. However, the paper states: "If Indonesia does not raise investments in the creation of knowledge, it may lag in achieving an Indonesian understanding of its development problems and solutions".

The paper provides a number of key considerations requiring consensus on the need to invest in Indonesia's knowledge sector, based on the experiences of the countries analyzed:

- Long Term Thinking & Coherence of Institutional Frameworks – "Policy makers need to think long term and aim for consistent policy, regulatory, budgetary frameworks that support domestic research and development institutions".
- Diverse Demand for Knowledge – "Government is not the only source of demand, but its demand can underwrite domestic capacity to produce research".
- Diverse Supply of Knowledge – "Diversity of knowledge institutions is a sign of a healthy sector. The government does not have to be the sole supplier or financier of research, but it can (i) supplement expertise, (ii) foster human capacity and (iii) set conducive regulations".
- Assess & Expand International Resources - "Indonesia may need to clarify its objectives for international networks and assess whether it is maximising opportunities to raise local capacity".
- Accept Non-Profitability & Externalities – "Assume that research centres and think-tanks do not make profits. Public funding of research may not be fully reflected in concrete,

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<sup>27</sup> Comparative Experiences of Middle Income Countries (as part of diagnostics for the initiative: Revitalising Indonesia's Knowledge Sector for Development Policy) by Greta Nielsen, AusAID (23 April, 2010)

tangible research output, but create intangible benefits to wider society which are difficult to quantify”.

These factors(Nielsen 2010) present a variety of key challenges. Although the national research agenda exists as an overarching framework for Gol’s research priorities, this is still within a five-year time frame. This time frame however is dependent on the national Medium Term Development Plan, which itself is determined by the political agenda and priorities introduced by the President during the presidential campaign. A LIPI Director lamented that at least during the time of President Suharto, long-term development frameworks existed to which research agendas could be developed and aligned.

Multilateral and bilateral agencies can also play a pivotal role in providing a diversity of demand for knowledge if the joint aim is to develop domestic capacity, which will gradually be underwritten by government. It is clear also that there is a diverse supply of knowledge in Indonesia, which the program can support by supplementing expertise, fostering capacity and supporting efforts to reform constraining regulations. By considering knowledge for development stakeholders as a sector in itself, more support can also be provided to better assess available international resources and coordinate efforts to ensure that local capacity is maximized. Finally, a range of intangible benefit provided by research centres and think tanks should be outlined and where possible, quantified as knowledge assets and output contributing to a range of development outcomes (not necessarily economic or financial in nature).

Based on the input gained to date and preliminary synthesis of findings, a number of trends are emerging:

*The need for stronger collaboration and partnerships between knowledge suppliers and intermediary institutions/networks linking to users.* The role of intermediary institutions able to support linkages to users is important in building awareness and recognition of good knowledge providers. As no single institution may initially have sufficient clients and revenue to support an expanded structure, linkages with intermediary organisations could be seen as a medium term measure to support institutions in gradually building up their capacity in areas such as marketing and financial management in order to have a better balance of human capital,. On the other hand, if a limited number of institutions were selected, these could be properly resourced to build and maintain a balanced team to generate increased revenue/funding sources to become self-sustaining.

*Developing and maintaining knowledge sector markets.* This is also dependant on recognising the existence of regulatory constraints. These must be removed to allow institutions to be contracted on a regular basis by local and national government agencies. It is clear that there has been insufficient attention given to knowledge institutions in mapping out their key stakeholders and in developing linkages and networks with clients. Workshops conducted through the TAF piloting program on institutional profiling can be further expanded if necessary to support interested and potential institutions in configuring their marketing strategies.

*Lack of easily accessible national research databases* – Without strong national and/or regional research databases, which could also be portals to institutional based databases, there will continue to be duplication and inefficiencies in research. Support in digitalization of research work and the development of national and/or regional research databases and directories should be considered.

Capacity Building to identify research funding opportunities, generate revenue and manage finances. Even with linkages to intermediary organisations, each supported institution requires internal capacity to creatively identify and develop research funding opportunities, generate income and to manage finances effectively. This will however require organisational changes and culture shifts, including compliance with internationally accepted governance standards. Partnerships with institutions such as Ernst and Young could provide financial management capacity building support, while partnerships with international institutions could be developed to build capacity on revenue generation.

Other capacity issues raised which underline concerns regarding quality. All institutions still saw the value in the provision of capacity building for researchers, including English language, use of a range of research analysis software and access to international journals. Funds allocated for flexible support in training and capacity building could be provided which can be utilized based on proof of need in applying the skills learnt in a research project. Another capacity development need, to be considered is human resource management for knowledge institutions, including procedures for more merit based recruitment.

### ***Developing a Strategy to Revitalize Indonesia's Knowledge Sector***

The various diagnostics and consultations synthesized in this paper provide the elements of a strategy to revitalize Indonesia's knowledge sector. If the overall aim of this initiative is "to revitalize Indonesia's knowledge sector for improved, evidence based development policies", there are four perspectives to be considered<sup>28</sup>, being:

- 1) Financial - being the interests and agendas of shareholders or providers of funding;
- 2) Stakeholder – being those of the institutions supplying and producing analysis within the knowledge sector;
- 3) Internal – covering the systems and processes required by stakeholders to improve services and to increase their perceived value to shareholders, and;
- 4) Learning and growth – being the underlying aspects of human, organisational and information resources/capital.

#### ***Financial (Shareholder) Perspectives***

As discussed previously in the section on Market Capital (Catering to the Needs of Shareholders), there are two groups of shareholders. (a) the main group being internal shareholders in charge of determining the nation's development policies; (b) the second group acts in support of the first group, being external shareholders who also have an interest in Indonesia's development. These institutions determine the extent the knowledge sector supporting development policy receives financial support.

#### ***Internal (Main) Shareholders***

This group consists of central government shareholders and local government, elected and non-elected shareholders. The main reference used for development policy at the national level is the *Rencana Pembangunan Jangka Menengah Nasional* (RPJMN), or National Medium Term Development Plan, which elaborates on the vision, mission and development programs of the incumbent president for the 5 years of each presidential term. The overall framework of the RPJMN is aligned to the *Rencana Pembangunan Jangka Panjang Nasional* – RPJPN, which is the the 20-year long term development plan that presents the broader vision of what Indonesia is to attain by 2025<sup>29</sup>. Provincial

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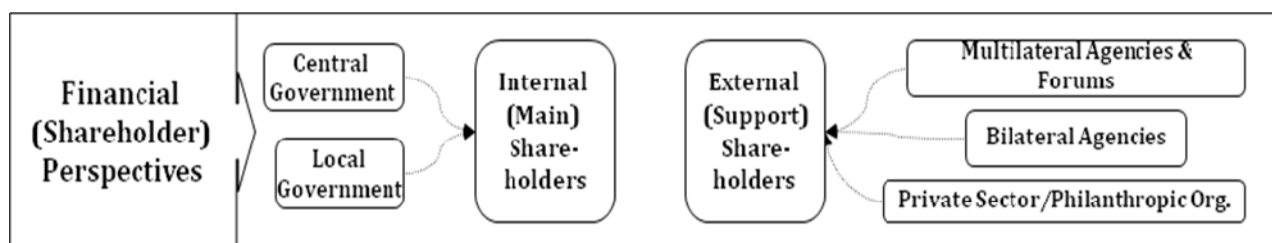
<sup>28</sup> These perspectives and the strategy map format are based on the "Balanced Scorecard Strategy Mapping process developed by Kaplan and Norton (Strategy Maps: Converting Intangible Assets into Tangible Outcomes, 2004, Harvard Business School Publishing)

<sup>29</sup> The RPJPN outlines 5 main development agendas: 1) Economic development and increased welfare of

and district level governments are also required to develop regional medium and long-term development plans (*Rencana Pembangunan Jangka Panjang Daerah* (RPJPD), and *Rencana Pembangunan Jangka Menengah Daerah* (RPJMD)). Similarly, the Provincial and District RPJMDs seek to elaborate each elected Governor's or *Bupati's* (District Head) agenda.

Although there may be varied opinions on the applicability of these documents, they, and especially the RPJM are fundamental in understanding the professed priorities of government at different levels, especially those of elected leaders. Noting that bureaucratic leaders in central, provincial and district level governments often are also politically "active" and not necessarily supportive of an incoming political leader's agenda, the degree to which the bureaucracy functions to support implementation of RPJMDs and the RPJMN must be noted.

**Figure 5: Shareholders Affecting the Knowledge Sector Environment**



Observable between Central Government and Local Government leaders are general power and authority related tensions, with one seeking to maintain flexibility to take decisive action nationally in response to global issues and trends (centralized perspectives), while the other preferring stability in terms of policies and regulations from central government in order to be able to focus on local issues and challenges (Mcintyre 2003). For example, a priority on all levels is the need to alleviate poverty, yet the types of data and analysis required is often different. From the central government perspective, data and analysis oriented towards supporting macro level policy making is needed, which tend towards more generalized indicators, for instance in determining nationwide poverty levels. On the other hand, local level governments require a greater degree of detail and context based input for their poverty alleviation policies. As poverty alleviation is a priority, a variety of central ministries endeavour to support the national development plan by implementing poverty alleviation programs, targeting regions that according to national statistical data have the highest incidences of poverty. Unfortunately, at the district level this can result in a multitude of programs implemented and targeting the same communities, while other communities receive limited support. For instance, Maluku province reported around 15 programs delivered directly by the national government to local communities, only one of which was oriented specifically for a majority of poor communities in Maluku (mainly coastal communities). In the same presentation, the issue of differing data used by central ministries was also raised, with 3 different figures given for Maluku's marine territory, and two different figures regarding the number of islands in the province<sup>30</sup>. Clearly there is a need for strong knowledge institutions, able to provide reliable independent analysis not only to support each individual level of government based on their needs, but also to support evidence based discourse between government levels.

citizens; 2) Improved governance; 3) Strengthening of democracy, and; 5) Law enforcement and anti corruption  
<sup>30</sup> The presentation of the Head of Maluku Province Regional Development Planning Board at the second meeting of the eastern Indonesia Heads of Development Planning Boards, Kupang, 9-10 September, 2008



## **External (Support) Shareholders**

Aside from the internal shareholders, other institutions also providing funds for knowledge sector institutions in Indonesia are multilateral agencies, international forums, bilateral agencies and a number of private sector/philanthropic organisations. Priorities for these institutions include global development agendas such as the Millennium Development Goals, input towards international conventions on issues such as biodiversity and climate change as well as context based contributions towards international development knowledge. Specifically for bilaterals, the demand for greater accountability in the use of development funding by taxpayers also increases the demand for stronger evidence, input and analysis in planning through to the evaluation of program outcomes.

Private sector corporations also see the need for knowledge institutions able to provide better input and who can play a role in “educating” leaders and communities on the impact of policies towards foreign and national direct investments within a global market<sup>31</sup>.

External shareholders have played an important role in supporting the development of Indonesia’s knowledge sector, through scholarships, research grants, research projects and institutional support. Some have also been accused of depleting Indonesian knowledge institutions of key personnel by offering more competitive salaries and benefits. From the perspectives of these external shareholders, it is often easier (based on their own internal regulations and procedures) to hire individuals rather than institution. Other external shareholders prefer to utilize Indonesian knowledge sector institutions only to collect and collate data, and then undertake the analysis (and compile the resulting publication) internally.

McCarthy & Ibrahim’s report stated that, “According to donors who commission research, in many cases the researchers they engage lack the capacity to develop high standard proposals, identify trends, draw conclusions and to make recommendations and to do project or policy design”(McCarthy and Ibrahim 2010). This in itself outlines shareholders needs, in other words the demand for what a revitalized knowledge sector should be able to provide in order to be valued and financially supported by both external and internal shareholders. The challenge presented here is the extent in which external/support shareholders, specifically multilaterals and bilaterals in Indonesia, are willing to work together in supporting the capacity of local knowledge institutions by providing institutional rather than individual contracts, and by collectively recognising origins of data and information used in developing programs if they are sourced from local suppliers. This collective action is important in influencing and increasing the confidence of government as the main shareholders (both central and local) to utilize local institutions.

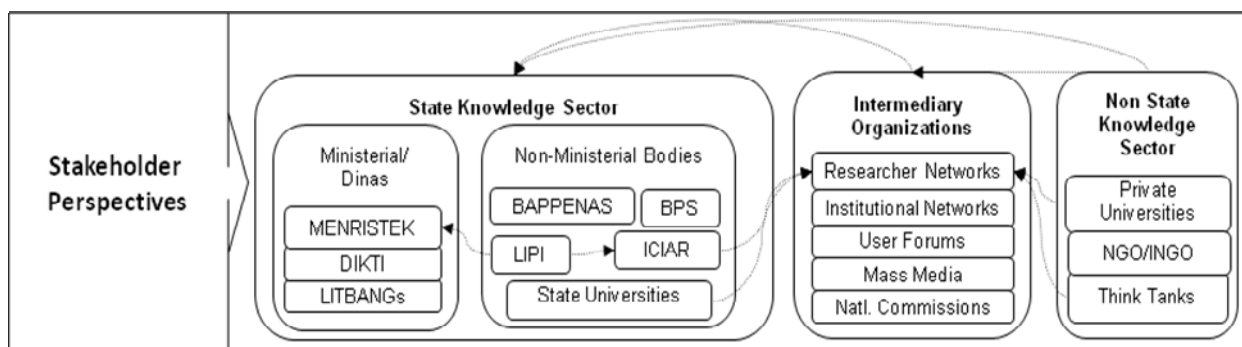
## ***Stakeholder Perspectives***

In mapping knowledge sector stakeholders, three general groupings emerge, State Knowledge Sector, Non-state Knowledge Sector and Intermediary Organisations.

### **Figure 6: Stakeholders in Indonesia’s Knowledge Sector**

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<sup>31</sup> Referring to presentation on “Business Opportunities in Indonesia” by Mr. John Fetter, Orica Corporate Affairs and Director of PT Orica Mining Services in Indonesia at Seminar on “Recent Developments in Indonesia” held by the School of Management, RMIT University, Melbourne, 3<sup>rd</sup> August, 2010.



## State Knowledge Sector

The first general grouping refers to institutions and bodies operationally funded by the government. Overall, this group is challenged by issues of coordination, distribution of funding and, output quality. Institutions in this group can be further divided into two sub-groups, those coming under ministries or provincial and district governments or *dinas*, and those formally categorised as *Badan Pemerintah Non-Kementerian* (Government Non-Ministerial Body)<sup>32</sup>

In the Ministerial group, the two most prominent ministries providing research support/funding are the State Ministry for Research and Technology – referred to as MENRISTEK, and the Ministry of National Education (MONE). In MONE, the Directorate General for Higher Education provided Rp.600 billion (approx. AUD 66 million) in 2009 for research grants to state and private universities. It also allocated an additional Rp. 400 billion (approx AUD 44 million) for research conducted by the ministry’s 35 research centres (Badan Penelitian dan Pengembangan - BALITBANG), through the Directorate for Research and Community Development<sup>33</sup> (also under the Directorate General for Higher Education).

## MENRISTEK

Despite its name, MENRISTEK in comparison to MONE received only Rp.400 billion for research in 2009, distributed among 8,000 researchers, meaning an average allocation of around Rp.50 million (approx. AUD 55,000)<sup>34</sup>. Unfortunately in 2010, the Ministry’s approved allocation has been further decreased to Rp.220 billion (approx. AUD24 million), divided between the 7 priority sectors of the national research agenda discussed (ARN)<sup>35</sup>. Allocations for these funds are based on proposals submitted by research and development units within the various ministries and other government bodies (such as the National Coordinating Board for Family Planning - BKKBN). Referring to the list of research topics approved for MENRISTEK<sup>36</sup> funding (Table 2: MENRISTEK Research Grant Allocations 2010), the largest proportion has been allocated to BALITBANG Pertanian, receiving Rp. 55 billion or almost 28% of the total budget (312 approved research proposals). This averages out to around Rp.175 million per research project.

<sup>32</sup> These were previously known as *Lembaga Pemerintah Non Departemen*, or Non Departmental Government Institution.

<sup>33</sup> Source: MONE Website (<http://www.diknas.go.id/headline.php?id=240>)

<sup>34</sup> According to the State Minister for Research and Technology, a more appropriate costing per research project should be around Rp.300 million (approx. AUD33,000).

<sup>35</sup> Source: Paper of the State Minister for Research and Technology titled: *Kualitas Peneliti Masih Jauh dari Harapan* (Quality of Researchers are far from Expectations), 3 August, 2009 (<http://www.ristek.go.id/makalah-menteri/?s=Anggaran+penelitian>)

<sup>36</sup> State Minister for Research and Technology Ministerial Decree No.53, Year 2010

It is important also to note the existence of the Dewan Riset Nasional – DRN (National Research Council), and Dewan Riset Daerah - DRD (Regional Research Councils). Although currently operating under the legal framework provided by Law No. 18 Year 2002, these councils have existed under the DRN label since 1984. The DRN is configured to support MENRISTEK in “developing the direction, main priorities, and framework for government policy on research, development and application of science and technology”(Dewan Riset Nasional - DRN 2007). Although the national council is supposed to be independent in nature, interestingly almost all the chairpersons of the 8 technical commissions<sup>37</sup> are public servants. These research councils are not supposed to conduct research but instead function to monitor research, innovations and trends, provide input to the national research agenda and recommend researchers for national awards. The province based DRDs have a similar function, primarily to develop research frameworks in direct collaboration with their respective Badan Penelitian dan Pengembangan Daerah - BALITBANGDA (Regional/Provincial Research and Development Centre). Many DRDs are also chaired by province level government officials.

**Table 2: MENRISTEK Research Grant Allocations (2010)**

<b>Name of Research Center</b>	<b>Approved Research Funding</b>	<b>% of total</b>
BAKOSURTANAL	894,000,000	0.45%
BALITBANG DEPAG	287,300,000	0.15%
BALITBANG Informasi DEPNAKERTRANS	1,564,500,000	0.80%
BALITBANG DEPDIKNAS	3,416,075,000	1.74%
BALITBANG DEPPERIN	5,747,000,000	2.92%
BALITBANG DEPDAG	510,800,000	0.26%
BAPETEN	63,900,000	0.03%
BATAN	13,345,800,000	6.79%
BKKBN	606,600,000	0.31%
Badan Kepegawaian Negara	63,900,000	0.03%
Badan Met.Klimotogi dan Geofisika	1,692,200,000	0.86%
BPPT	23,179,500,000	11.80%
Badan Riset Kelautan dan Perikanan	7,407,199,200	3.77%
BALITBANG DEPDAGRI	3,512,000,000	1.79%
Badan Penelitian dan Pengembangan Hak Asasi Manusia	894,000,000	0.45%
BALITBANG DEPHUT	14,686,700,000	7.47%
BALITBANG DEPKES	7,500,000,000	3.82%
BALITBANG DEPHUB	3,416,300,000	1.74%
BALITBANG DEPHAN	3,448,200,000	1.75%
BALITBANG DEPTAN	54,714,800,000	27.84%
BALITBANG DEPPU	287,300,000	0.15%
BPPKS KEMENSOS	1,947,600,000	0.99%
BPSD-BUDPAR	1,915,700,000	0.97%
BALITBANG DEPKOMINFO	817,500,000	0.42%
KEMENNEG KUKM	759,700,000	0.39%
LAPAN	8,588,440,000	4.37%

<sup>37</sup> The technical commissions, or Komisi teknis, are subgroupings of DRN based on the 8 sectoral focuses of the national research agenda (including social science and humanities)

LIPI	34,926,900,000	17.77%
BSN	315,000,000	0.16%
<b>TOTAL</b>	<b>196,508,914,200</b>	<b>100.00%</b>

(Source: Lampiran Keputusan Menteri Riset dan Teknologi Nomor 53 Tahun 2010)

Officials from MENRISTEK have stated an interest in the knowledge sector program, especially the extent to which it would align and support the state ministry's research agenda and supplement the ministry's research budget.

### **MONE & State Universities**

MONE's interest in the revitalisation program relate to the overall need to increase recognition of Indonesian intellectuals through the quality of their submissions to international journals. There is also a conscious effort to link academic work with community empowerment through research, as reflected in the combining of research and community empowerment in the same directorate under the Directorate General for Higher Education (DGHE). DGHE is also directly responsible for regulating state universities, and has already launched a number of research grant programs to stimulate research from universities.

State universities themselves play an ongoing role in providing analysis for central government and local governments, depending on their locality. State universities also have a strategic position, as they are able to utilize alumni networks and ties to link with policy makers. The shift towards greater autonomy for state universities<sup>38</sup> has meant that they are required to become increasingly self sufficient in terms of funding, and this has had a positive effect in motivating a number of state universities to increase research capacity in order to link with users and industry and to maintain or increase accreditation levels. Where formerly research centres in state universities operated independently and managed their finances internally, a number of universities such as UNHAS have taken steps to regulate these units, not only to ensure contributions to the university's finances, but also to enhance and maintain the reputation of the university.

An option to explore further is the extent in which research utilizing DGHE grants and relevant to development policies could be reviewed and where necessary, supported for further research and analysis, with opportunities provided for researchers to discuss or present their findings to policy decision makers.

### **LIPI**

Table 2 shows that LIPI is the second highest recipient of research grants from MENRISTEK's research budget, with 247 approved proposals totalling almost Rp.35 billion (AUD 4.35 million). This means that the average research proposal budget for LIPI is around Rp.141 million, or about AUD17,500. Out of the 247 approved proposals, only 40 (approx. 16%) are social research projects under the category "Social Dynamics" (*Dinamika Sosial*). Interestingly despite its own comparatively sizeable research funds, MONE BALITBANGs (BALITBANG DEPDIKNAS) also tap into this funding source, with 16 approved proposals.

<sup>38</sup> Recent decision of Indonesia's constitutional court (31/3/2010) to annul Law No. 9 Year 2009 on Education Legal Entities has raised new questions regarding the level of autonomy of State Universities. Source: Dr. Marthen Ndoen, Center for Eastern Indonesian Studies, Satya Wacana Christian University

LIPI itself should be recognised as a strategic stakeholder in providing input for development policies. Indonesia's Institute of Science is a conglomeration of research centres (22 research and service centres and 20 technical implementation units or UPT), divided into 5 sectors (Earth Sciences, Biological Sciences, Technical Sciences, Social and Humanity Sciences and Scientific Services). From its conception, LIPI was meant to support indigenous development of knowledge in the archipelago. LIPI serves a variety of functions. Aside from undertaking research itself, LIPI is also responsible for a number of research services, including accreditation of international researchers through to awarding of research professorships. LIPI provides regular input directly to BAPPENAS<sup>39</sup> as the national development planning board. This input is mainly sectorally based, while more multidisciplinary input is provided directly to the president through *kajian ilmiah*, or scientific analysis papers. However, submission of LIPI's input to the President is mainly based on the institute's own initiative, and apparently there is no formal mechanism to know whether such input is actually utilized by the President's office.

Although a number of sources openly state that support for LIPI would prove ineffective due to insufficient internal motivation to improve, statements from key LIPI personnel coupled with a number of initiatives underway in the institute, show that there are a number of options that could be pursued to enhance the role of LIPI in supporting development policies. One example is the establishment of the International Center for Interdisciplinary and Advanced Research (ICIAR), which combines the capacity and resources of research centres in LIPI in 6 main research streams. ICIAR could be utilized to provide an interdisciplinary platform for improved communications and sharing of knowledge between Indonesian researchers. Another way to strategically support LIPI could be to focus on its public relations unit, ensuring greater exposure to research and findings from LIPI and improved electronic access to data and information collected and stored in LIPI. This links to the need to develop a national research database that selectively receives, stores and provides access to good quality research output.

In discussing the initiative to revitalize Indonesia's knowledge sector, senior executives in LIPI also acknowledged the need to strengthen the role of this sector. This relates directly to the need for LIPI itself to have a stronger legal basis, from being dependent on a presidential decree, to a more stable legal basis and with clearer channels for LIPI to provide input to decision makers.

## **BAPPENAS**

The most interesting state stakeholder in this configuration is BAPPENAS. Although the head of BAPPENAS is a state minister, the status of BAPPENAS itself is as a non-ministerial body, with its role and function outlined in the same presidential decree (Presidential Decree No. 103, 2001) as institutions such as LIPI and the National Library of Indonesia. In outlining the functions of BAPPENAS, the first (and implicitly foremost) function of BAPPENAS is to provide "analysis and compilation of national policies in planning national development". Yet other functions such as coordination of development planning, and facilitating additional funding sources to support development programs seem to be more dominant in the body's day-to-day activities. This is also reflected in the minimal allocation of the body's budget for research, where

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<sup>39</sup> Acronym for *Badan Perencanaan Pembangunan Nasional*, translated literally as National Development Planning Board

each directorate in BAPPENAS is only allocated around Rp.100 to 300 million per year for research and analysis<sup>40</sup>.

The knowledge sector program logically could be positioned to support BAPPENAS in verifying data and sourcing research from a variety of Indonesian knowledge providers. In such a scenario, BAPPENAS and its equivalents at the provincial and district levels known as BAPPEDA, could focus on formulating research questions, and provide contracts to selected institutions able to undertake the research itself, an approach a number of BAPPENAS directorates and BAPPEDAs would like to implement, if not constrained by procurement regulations. However such an approach could be piloted to prove how research could support BAPPENAS and BAPPEDAs to function more effectively, to further identify areas where knowledge suppliers require strengthening, and at the same time to highlight regulatory issues.

## **BPS**

*Badan Pusat Statistik* (BPS) or “Statistics Indonesia”<sup>41</sup>, provides a range of statistical data used as a common reference point in Indonesia’s development policies. As such, it has been included in the diagram as another state-stakeholder. Aside from the national BPS, regional offices at provincial and district levels also exist. Internally, BPS has quite good capacity, where according to Jammal: “Since the 1960s it has established a solid reputation for the high calibre of its technical and operational capabilities” (Jammal 2003). Unfortunately as its budget was decreased since the 1997-98 financial crisis, the quality of its output has decreased (Jammal 2003). BPS has also suffered criticism that some of its data was unreliable, with some suspicion that these “inaccuracies” were politically driven (Jammal 2003). BPS itself is seeking to develop linkages with key agencies, for instance with MONE, to provide improved access to BPS data for researchers including students seeking to write research papers and theses (Rakyat Merdeka Online 2010). For the purpose of this program, it is important to note the existence and role of BPS in providing statistical data. It is important also to be aware of confidence levels (especially at local government levels) regarding data provided by BPS and identifying gaps requiring additional/context specific information, data and analysis for development policies, which translates also as demand for other knowledge sector institutions.

## **Non-State Knowledge Sector**

Indonesia’s non-state knowledge sector includes private universities, non-government organisations including international NGOs, and think tanks.

### **Private Universities**

A number of private universities have development studies programs (i.e. Satya Wacana Christian University) and active social research centres (i.e. Paramadina University). They are also able to tap into various DGHE research grant programs and international sources. Logically, private universities are even more dependent on reputation to attract students and funding, especially with the increased regulation of private universities (including stringent accreditation requirements).

The ability to participate in national and local government initiatives is important for these universities to increase funding sources and profile as well as to develop networks

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<sup>40</sup> Input from interview of BAPPENAS personnel undergoing graduate studies in Canberra

<sup>41</sup> Not a literal translation of BPS, but the name provided in the English website of BPS (<http://dds.bps.go.id/eng/>)

(including to donor agencies), and so there is a reasonable level of interest in international supported programs especially where participation is merit based.

### **Non-Government Organisations/Non-traditional Knowledge Organisations**

As discussed previously<sup>42</sup>, a number of organisations active in advocating on a range of issues such as environment (i.e. Jurnal Celebes), and indigenous rights (i.e. AMAN), are now recognising the need to be able to provide stronger evidence based arguments where the data, information and analysis presented can also be used to develop solutions and improved policies.

This group includes both national and international NGOs who are not traditionally viewed as knowledge supply institutions but include research and analysis as part of their internal processes. Their professed interest lies in ensuring action is taken to overcome or avoid issues they are focused on. Opportunities sought would include access to core and program funding including for research; fora to effectively present findings and support their profile, and network building.

### **Think Tanks**

A range of think tanks exist in Indonesia, falling under various classifications (Abelson 2002), from independent public policy think tanks like the Center for Strategic International Studies - CSIS, Institute for Social and Economic Research, Education and Information - LP3ES and SMERU, to “legacy” think tanks (i.e. Leimena Institute, Habibie Center), through to those which combine political advocacy to policy research (Abelson 2002) as is the case with PERCIK and the Center for Law and Policy Studies (PSHK).

Aside from independent think-tanks there exist a number of research centers in universities which can also be considered as think tanks, as they are often known in their own right, due to their focus in providing input and analysis of public policies and their links to government, and especially local governments, such as *Pusat Pengkajian Budaya dan Kemasyarakatan*– P2BK (Center of Culture and Society Studies, University of Mataram) or PPKEUDA, the Center for Analysis of Regional Finance, (Cendrawasih University). Others have developed from units or projects based in universities to become independent organisations, such as AKATIGA<sup>43</sup>.

Think tanks, whether independent or university based, require financial support to ensure “organisational sustainability” (McCarthy and Ibrahim 2010), for instance in the form of endowments allowing for opportunities to develop “goal oriented long term research” (McCarthy and Ibrahim 2010). This would be one of the expectations of think-tanks, as well as access to grants which would allow them to develop longer term research frameworks.

### **Intermediary Organisations in the Knowledge Sector**

An important group of stakeholders in the knowledge sector are the intermediary organisations. This group includes researcher networks, which provide forums for actors of both state and non state knowledge suppliers to interact, institutional networks such

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<sup>42</sup> Referring to the section under heading: “Direct political activism of CSOs rather than informed policy debates”

<sup>43</sup> Originally a joint research program of IPB, ITB (Indonesia), and the Dutch Institute

as the consortium of Indonesian development studies, user forums such as APPSI<sup>44</sup> and APEKSI<sup>45</sup>, mass media, and national commissions.

## **Researcher Networks**

The Indonesian Regional Scientist Association (IRSA), was mentioned in consultations with the Indonesia Project. IRSA recently conducted its 10th annual conference (28 July 2010) in Surabaya with speakers from Cornell University and the International University of Japan. IRSA internationally is associated to the Pacific Regional Science Conference Organisation (PRSCO). PRSCO is linked to the Regional Science Association International (RSAI) which includes the European Regional Science Association (ERSA), North American Regional Science Council (RSAmericas) and the Applied Regional Science Council (RSAI 2010). This shows how local/national associations are linked with regional and global networks. IRSA is especially interesting as a network as its chair is the current State Minister of Planning, Prof. Dr. Armida S. Alisjahbana, providing researchers in the network with a channel to link to development policy makers, at least in BAPPENAS. However, the extent to which IRSA actively channels research to users is questionable.

*Jaringan Peneliti Kawasan Timur Indonesia* (JIKTI) or the Eastern Indonesia Researcher Network, was established as a sub-forum under the Eastern Indonesia Multi-stakeholder Forum. A comparative advantage of JIKTI is that it has a clear user market directly linked to JIKTI, being the Heads of Eastern Indonesian Provincial Development Planning Boards Forum (*Forum Kepala BAPPEDA KTI*), another sub-forum under the Eastern Indonesia Multistakeholder Forum. This provides a clear opportunity for researchers to provide input to the 12 provincial development planning boards, and is constrained only by the ability of the planning boards to present research questions and the capacity of the researchers themselves in responding to needs.

Overall in a country like Indonesia, researchers must overcome both geographical and technological constraints to exchange knowledge nationally and internationally. This is why associations and/or networks such as IRSA and JIKTI are important because they provide platforms for researchers to link, share ideas and compare notes, and act as bridges between state and non-state knowledge sector stakeholders. They also provide options for delivering a range of support, for instance in disseminating research and research opportunities (including grants), and in coordinating through to delivery of skills training for researchers.

Expectations towards the knowledge sector program would include support for conferences, research funding, access to international research references and skills development.

## **Institutional Networks**

Institutional networks differ from researcher networks, as the focus is more on organisational collaboration rather than individual interests. Relevant to the knowledge sector program are networks such as the Consortium of Indonesian Development Studies, which brings together development studies programs from a number of universities and think tanks/research centres. Importantly from the perspective of the knowledge sector program, this consortium is seeking to change the manner in which

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<sup>44</sup> *Asosiasi Pemerintah Provinsi Seluruh Indonesia* (Association of Indonesian Provincial Governments)

<sup>45</sup> *Asosiasi Pemerintah Kabupaten dan Kota Seluruh Indonesia* (Association of Indonesian District and Municipality Governments)



development studies are perceived, shifting from an emphasis towards economic development, to acceptance of development studies as an interdisciplinary field of study.

Aside from supporting the agenda for a more interdisciplinary approach to development, knowledge of and linkages with such networks provide an efficient way to initiate programs oriented towards building organisational capital, where support can be provided towards marketing and financial management aspects of the organisations involved. Institutional networks such as the Consortium of Indonesian Development Studies, or the Consortium of Eastern Indonesian State Universities, would also seek support in strategic planning, sharing of resources (including for research supervision) and linkages to international networks and institutions.

### **User Forums**

Other intermediary organisations which can link to the knowledge sector program are user forums or associations. These include forums such as *Asosiasi Pemerintah Provinsi Seluruh Indonesia* - APPSI (Association of Indonesian Provincial Governments), *Asosiasi Pemerintah Kota Seluruh Indonesia* – APEKSI (Association of Indonesian Municipality Government), *Asosiasi DPRD Kota Seluruh Indonesia* – ADEKSI (Association of Indonesian Municipality Councils), *Asosiasi Pemerintah Kabupaten Seluruh Indonesia* – APKASI (Association of Indonesian District Governments), and Forum Kepala BAPPEDA KTI

From the perspective of the program, these forums can function to provide information to Indonesia's knowledge sector regarding trends and issues faced by different government bodies and levels. They also provide directly available outlets to direct and distribute policy briefs, research findings, and other evidence based output from the knowledge sector.

Research and analysis of innovations and smart practices, regulatory impact assessments, and international practices applicable for Indonesia, are all knowledge assets required by members of these associations and which could enhance the capacity of decision makers if presented appropriately. They also provide options for the knowledge sector program to profile and promote Indonesian knowledge sector capacity.

### **Mass Media**

As the knowledge sector program is also seeking to increase the level and quality of public discourse on development, Indonesian mass media must also be seen as an important partner to include in the knowledge sector strategy. A number of mass media corporations, such as Kompas, the largest daily printed newspaper, have actively supported discourse on development, including sponsorship of events such as the symposium on development in eastern Indonesia<sup>46</sup>. Tempo, a leading weekly news magazine (who also distribute a daily newspaper), has regular supplements focused on development issues. Jawa Pos Group, one of the largest media groups in Indonesia, have established the Jawa Pos Institute of Pro-Autonomy, which collates data of district performances in a number of participating provinces and provides awards to well-performing district governments.

Collaboration with one or a number of these media groups to distribute press-releases and news items on development research outcomes and policy briefs is one way in

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<sup>46</sup> Held in conjunction with the launching of the BaKTI Foundation, Makassar, 8 February, 2010

which the knowledge sector program can enhance exposure of research and other output of the program. It is also important in adapting research outcomes into language more easily consumed not only by the general public but also by decision makers such as parliamentarians who often tend to rely on mass media as one of their main sources of information. From the perspective of the leading mass media organisations in Indonesia, access to good quality, validated research “stories”, especially if seen as exclusive, is important in ensuring a competitive advantage to other media networks. On the other hand, a number of these media groups also have shown a high level of social responsibility and concern over Indonesia’s progress and therefore would likely be interested in supporting the knowledge sector program through active collaboration. This could be further secured by including a number of respected senior media figures in the steering committee or management committee of the program.

### **National Commissions**

The program should also consider a number of national commissions, and particularly the national commission for information, or *Komisi Informasi* as important intermediary stakeholders of the knowledge sector. These national commissions are only as effective as the information they are able to access, analyze and present on their specific focus areas.

Based on Law No.14, 2008 on Access to Public Information, *Komisi Informasi* was established with the appointment of national level commission members, which is now being followed with the establishment of provincial and district level information commissions.

More open access to public information should also increase the demand for better quality information, including for development planning, programs and evaluations due to increased public scrutiny (at least through mass media and civil society organisations). Interestingly, the composition of the national level information commission consists of media and academic representatives.

From the perspective of the program, inclusion of such commissions would provide additional support networks (i.e. *Komisi Informasi* and its links to civil society and mass media), and would serve as a key partner in supporting legislation to strengthen the role of the knowledge sector in development policy.

### **Knowledge Sector Stakeholder Summary**

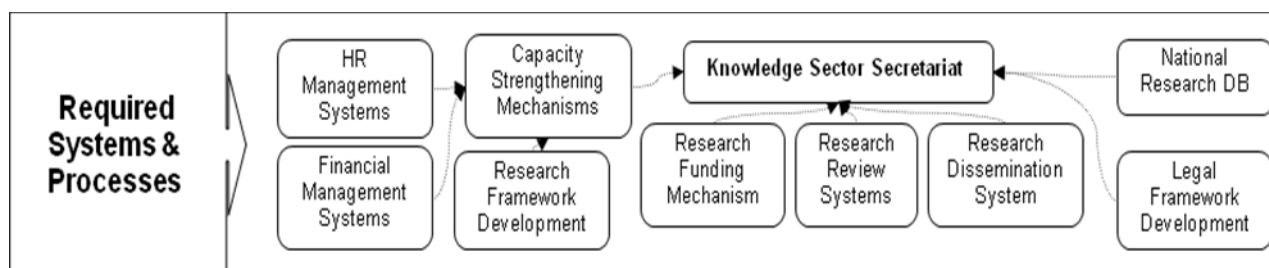
This overview of the stakeholders for the knowledge sector provides an indication of the complexities and wide variety of institutions involved or relevant to the knowledge sector. Quantitatively there are no shortages of structures and institutions in the knowledge sector, and so the issue is qualitative in terms of the internal capacity of knowledge institutions and researchers, and the effectiveness of their interaction with shareholders.

Linking expectations and needs of shareholders and stakeholders provides a variety of options for the program to pursue, and allows identification of various systems and processes which need to be developed or supported through the knowledge sector program.

## Required Systems and Processes (Internal Perspectives)

Based on the perspectives of shareholders and stakeholders in Indonesia's knowledge sector, it is possible to identify a number of required systems and processes which can be provided through a knowledge sector secretariat. This can be seen in Figure 7 below.

Figure 7: Required Systems & Processes



### Capacity Strengthening Mechanisms

A range of support can be provided through “Capacity Strengthening Mechanisms” which focus on strengthening organisational capital of stakeholders. These include Human Resource Management Systems, Financial Management Systems, and Research Framework Development.

Following piloting processes conducted by the Asia Foundation (TAF), effective approaches can be identified to provide training and upgrading of selected knowledge institutions in terms of human resource management<sup>47</sup> and financial management<sup>48</sup>, including the identification of organisations able to conduct this type of training and support. It is possible that a number of organisations participating in the piloting process could develop a role of mentoring other organisations requiring similar upgrading<sup>49</sup>. Skills development of researchers where necessary, and partnering with international researchers can also be supported through a capacity strengthening facility.

Development of longer-term research frameworks can also be seen as a way to develop the strategic management capacity of selected organisations, as this would need to include analysis of demand and development issues the research would be seeking to address. This includes development of research frameworks under researcher and institutional networks.

### Knowledge Sector Secretariat

Aside from the capacity strengthening facility with its emphasis on improving institutions, a number of systems and mechanisms to support actual research are also required. These could be managed and delivered through a national knowledge sector secretariat (McCarthy and Ibrahim 2010), which could either be a new stand-alone institution, embedded within an existing state structure such as BAPPENAS or LIPI, in a non-state entity such as the current secretariat (IGGRD), or utilise an institutional

<sup>47</sup> This includes merit based recruitment and promotion, and balancing of human resources to ensure adequate personnel handling administrative, marketing and management aspects of the organisation

<sup>48</sup> Financial management should also include capacity to manage endowment funds if required

<sup>49</sup> This includes stronger organisations identified by TAF as case studies. Mentoring could be between centrally/Jakarta based organisations and organisations based in the provinces.

network such as the Indonesian Consortium for Development Studies. This is a decision that must be taken collectively by the steering committee.

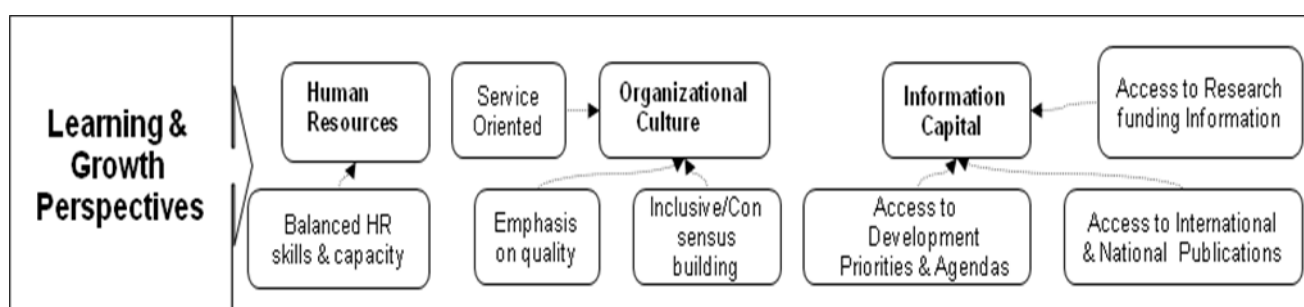
The secretariat itself would serve to coordinate and deliver a research funding mechanism, a research review system and implement research dissemination, including support for research workshops and conferences, linkages to intermediary organisations and direct dissemination to users. A national research database should also be supported through the secretariat, which could consider further resourcing and strengthening of existing databases, or develop a new and prestigious research database, containing research that has passed through the research review system.

An important function of the secretariat is to ensure linkages to existing legal frameworks, and to support the development of improved legal frameworks to strengthen the position and role of Indonesia's knowledge sector. Such work would be conducted under the review and direction of the management and steering committee and the various working groups that are currently being established under the management committee.

### **Learning and Growth Perspectives**

In order for the secretariat to function effectively, a number of factors must be considered. These include human resources, organisational culture and information capital (Figure 8).

**Figure 8: Learning and Growth Perspectives**



The secretariat itself requires appropriately qualified human resources, collectively providing the required skills and capacity to deliver services effectively. A number of options could be considered, including partnering with international organisations like IDRC and ODI<sup>50</sup> is to partner with the Indonesia Project to provide a number of the required skill sets the secretariat team needs, as well as to reinvigorate Indonesia Project itself, for instance in terms of information management and linkages to policy makers. Aside from personnel qualified and experienced in implementing research and in developing research frameworks, personnel are also required with other skill sets, including project management capacity, policy brief writing, database management, knowledge management, financial management and event organising. The number of systems and processes approved to support the knowledge sector program will determine the number and types of personnel needed.

From the outset, a conducive, organisational culture is also required, with efforts to transfer similar organisational behaviour to knowledge institutions involved in the

<sup>50</sup> This would provide an added benefit of combining efforts and support from 3 bilateral sources

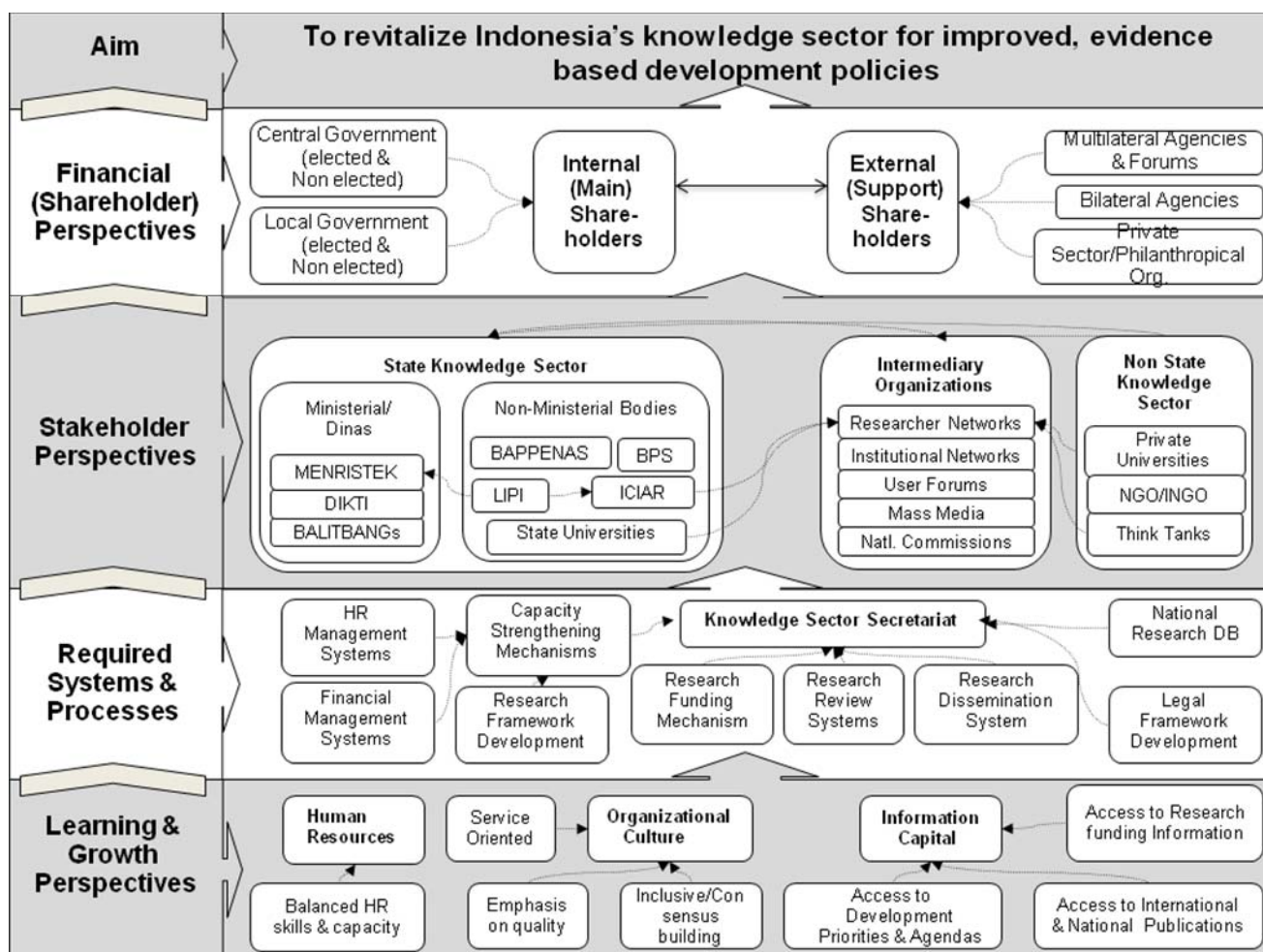
program. The secretariat team must be service oriented with an emphasis on quality and on being inclusive and consensus oriented to facilitate relationships and collaboration between the many different stakeholders and shareholders.

The secretariat must also have strong information capital, which in itself becomes a strong attraction for other institutions to interact with the secretariat team. The secretariat should have the capacity to access and distribute information on development priorities and agendas (which can be translated as research questions), to provide access to international and national publications and to supply information on national and international research funding. By ensuring that the secretariat is equipped with the appropriate human resources, organisational culture and information capital, the role of the secretariat will expand in its effective delivery of required systems and processes to support Indonesia's knowledge sector.

### Consolidated Strategy Map

Figure 9 brings together the four perspectives to be addressed in order to achieve the aim of revitalizing Indonesia's knowledge sector for improved, evidence based development policies.

Figure 9: Consolidated Strategy Map



By looking at current shareholder perspectives, and forecasting future needs of shareholders (both internal and external), there are clear knowledge needs, for example within the national research agenda, that can be addressed. If Indonesia's knowledge sector can answer these

needs in a satisfactory manner, the value of the sector will increase leading to a greater likelihood of more financial resources allocated to support the knowledge sector.

Effective servicing of shareholder needs requires effective collaboration of selected knowledge sector stakeholders. This includes collaboration with various intermediary organisations not only to disseminate information, but also to act as pressure groups to encourage increased and more effective investments in the knowledge sector.

For stakeholders to be more effective, a variety of systems and processes are also required, which can be supplied and developed through a knowledge sector secretariat. However, in order for the secretariat to function effectively, a number of components must be provided, including human resources, and information capital. These must be coupled with a strong organisational culture oriented towards facilitating collaboration and support of stakeholders and shareholders.

Based on the above, a performance matrix could be developed, which would outline short term, medium term and long term achievement indicators. A sample performance matrix can be seen in Annex 1. Matrix of Indicators based on Strategy Map Components (indicative).

It must be noted that these indicators are only preliminary and the final indicators including numbers or proportions should be proposed by the management committee and agreed to by steering committee members, as this must be an Indonesian driven process. Once indicators are agreed to, costings can be applied to each indicator, which then can be consolidated as short term, medium term and long term financing requirements. On the other hand, the overall budget approved for the program will also determine the number and types of outcomes achievable within each time frame. As can be seen also from the matrix, many indicators are interlinked and accomplishment of one will lead to or support others. For instance, “Subscriptions to XX key international journals and national publications to ensure ongoing access to national and international research relevant to research frameworks to be developed” as a short term indicator for information capital (component of the learning and growth perspective), will support Research Framework Development indicators (component of Required Systems and Processes). This in turn is linked to BAPPENAS/BAPPEDA indicators (component of Stakeholder Perspectives) where “Research needs and long term research framework (is) identified with BAPPENAS and participating provincial/ district BAPPEDA”. This then links to what the program must achieve in the medium term from the perspective of central and local government shareholders, being: “Strengthened knowledge sector for development policy based on evaluation of past policies including a shift away from annually based research projects (Qualitative report)”.

## **5. Conclusion**

Indonesia clearly does not lack knowledge sector institutions and structures. The deficit lies in effective collaboration between stakeholders and shareholders with clear supply and demand relationships. These relationships will develop, as appreciation of capacity and awareness of needs is fostered. However, increased appreciation of capacity is dependent on quality, and so incentives to ensure quality research output is also critical.

The knowledge sector revitalisation program will function importantly to build quality of, appreciation in and collaboration between knowledge sector shareholders and stakeholders. This should result in a number of long-term research frameworks, which will synthesize multi-sourced evidence and input to ensure strong and effective development policies for the nation.

In the process of enhancing Indonesia's development policies, a range of strengthened national and sub-national institutions and organisational linkages should emerge, ensuring future dependence on indigenous knowledge institutions and capacity.

The role of the secretariat, whether as a stand-alone program management unit, or incorporated into an existing organisation, is critical in bringing together the various development agendas, research frameworks and support mechanisms. As such, it must be resourced with appropriately qualified and experienced personnel able to commit to a long-term effort to revitalize Indonesia's knowledge sector.

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**Annex 1: Matrix of Indicators based on Strategy Map Components (indicative)**

Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
<b>A. Financial Perspective</b>			
A.1. Internal Shareholders	<p><i>Central Government</i> Consensus (rather than approval) of overall program design by &lt;date&gt;</p> <p>XX High level officials participating in launch program</p> <p>Workshops on effectiveness of existing knowledge for development policies</p> <p>GOI supplementary funds allocated to support preparatory activities</p>	<p>Incorporation of input and strategies suggested by Indonesian knowledge sector institutions in National Medium term development plan</p> <p>Minimum XX new or improved development policies based on research supported by program</p> <p>Strengthened knowledge sector for development policy based on evaluation of past policies including a shift away from annually based research projects (Qualitative report)</p> <p>Increased national budget allocations for knowledge sector to minimum X% of GDP</p>	<p>Incorporation of input and strategies suggested by Indonesian knowledge sector institutions in National Long term development plan</p> <p>Minimum XX new or improved development policies based on research supported by program</p> <p>Strengthened knowledge sector for development policy with support for multi-year research frameworks (Qualitative report)</p> <p>Increased national budget allocations for knowledge sector to minimum X% of GDP</p>

Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
	<p><i>Local Government</i> Written expressions of interest to collaborate in program from a minimum of XX provinces</p> <p>Workshop conducted on local research framework</p> <p>High level (rank and quantity) participation in X provincial launch programs</p> <p>Local government supplementary funds allocated to support preparatory activities</p>	<p>Written expressions of interest to collaborate in program from minimum XX provinces</p> <p>Incorporation of input and strategies suggested by Indonesian knowledge sector institutions in Provincial/District medium term development plan</p> <p>Minimum X new or improved development policies based on research supported by program in each participating province/district</p> <p>Increased local government budget allocations for knowledge sector to minimum XX% of APBD</p>	<p>Active collaboration in program from minimum XX provinces</p> <p>Incorporation of input and strategies suggested by Indonesian knowledge sector institutions in Provincial/District long term development plan</p> <p>Minimum XX new or improved development policies based on research supported by program in each participating province/district</p> <p>Increased local government budget allocations for knowledge sector to minimum XX% of APBD</p>
A.2. External Shareholders	<p><i>Multilateral Agencies</i> Agreement to collaborate from at least XX multilateral agencies</p> <p>Research program designed to support participating multilateral agency program</p> <p><i>Bilateral Agencies</i> Agreement to collaborate from at least XX bilateral agencies</p> <p>Research program designed to support participating bilateral agency program</p>	<p>Agreement to collaborate from at least XX multilateral agencies and complementary programming underway</p> <p>XX research programs completed to support participating multilateral agency program</p> <p>Agreement to collaborate from at least XX bilateral agencies and complementary programming underway</p> <p>XX research programs completed to support participating bilateral agency program</p>	<p>Ongoing collaboration from at least XX multilateral agencies and complementary programming underway</p> <p>XX research programs completed to support participating multilateral agency program</p> <p>Ongoing collaboration from at least XX bilateral agencies and complementary programming underway</p> <p>XX research programs completed to support participating bilateral agency program</p>

Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
	<p><i>Private Sector/Philanthropic Org.</i> Agreement to collaborate from at least XX organisation</p> <p>Research program designed to support participating organisation's program</p>	<p>Agreement to collaborate from at least XX organisations and complementary programming underway</p> <p>XX research programs completed to support participating organisation's program</p>	<p>Ongoing collaboration from at least XX organisations and complementary programming underway</p> <p>XX research programs completed to support participating organisation's program</p>
<b>B. Stakeholder Perspective</b>			
<p>B.1. State Knowledge Sector (Ministerial/ Dinas)</p>	<p><i>MENRISTEK &amp; MONE</i> Collaborative agreement established with MENRISTEK on research elements to support within the National Research Agenda</p> <p>Collaborative agreement established with Research and Community Development Directorate, DGHE, MoNE</p> <p>Benchmark figure established on current research allocations specifically oriented for development policies</p>	<p>Input provided to draft of the National Research Agenda reflected in increased focus on social science and humanities research</p> <p>Collaborative agreement reviewed and strengthened where required</p> <p>XX% increase in research allocations for social science related research aimed towards development policies at national and regional levels</p> <p>A minimum of X research recommendations referenced and or used in national development policies</p> <p>A minimum of X research recommendations referenced and or used in regional development policies</p>	<p>Strengthened National Research Agenda with increased focus on social science and humanities research</p> <p>Report on results of collaborative agreement implementation</p> <p>XX% increase in research allocations for social science related research aimed towards development policies at national and regional levels</p> <p>A minimum of X research recommendations referenced and or used in national development policies</p> <p>A minimum of X research recommendations referenced and or used in regional development policies</p>

Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
	<p><i>BALITBANG/BALITBANGDA</i> Dissemination of program information to XX BALITBANG &amp; BALITBANGDA (includes National and Regional Research Councils)</p>	<p>XX Collaborative research projects conducted with BALITBANG/ BALITBANGDA and universities/think-tanks with recommendations utilized for national and/or regional development policy</p>	<p>XX Collaborative research projects conducted with BALITBANG/ BALITBANGDA and universities/think-tanks with recommendations utilized for national and/or regional development policy</p>
<p>B.2. State Knowledge Sector (Non-Ministerial)</p>	<p><i>BAPPENAS/BAPPEDA</i> Research needs and long term research framework identified with BAPPENAS and participating provincial/ district BAPPEDA</p> <p>Identification of XX knowledge institutions able to implement required research</p> <p>Awarding process developed for research granting process (linked to long term research framework)</p>	<p>At least XX long term research framework under implementation with research programs awarded to a range of state and non-state knowledge institutions based on their capacity</p> <p>XX Knowledge institutions implementing research projects under long term framework</p> <p>Capacity building support provided including international linkages to XX state knowledge institutions</p>	<p>XX Research conducted for and input utilized in development policies</p> <p>XX Research completed, evaluated and XX recommendations featuring in long term development strategy</p> <p>Capacity building support provided including international linkages to XX state knowledge institutions</p>

Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
	<p><i>BPS</i> Diagnostic study conducted on BPS including past and ongoing programs implemented to support BPS strengthening</p> <p>Involvement of BPS in identifying gaps in research needs and long term research framework which cannot be effectively served through the use of BPS data</p>	<p>Long term research frameworks and research proposals include section on BPS data and description of existing knowledge gaps that can only be adequately filled through proposed research/framework</p> <p>Annual reports on how research conducted has supplemented knowledge gaps where BPS statistical data is insufficient</p>	<p>Long term research frameworks and research proposals include section on BPS data and description of existing knowledge gaps that can only be adequately filled through proposed research/framework</p> <p>Annual reports on how research conducted has supplemented knowledge gaps where BPS statistical data is insufficient</p>
	<p><i>LIPI/ICIAR</i> Support component agreed to with LIPI on utilization of ICIAR as to coordinate as dialogue platform for interdisciplinary development approaches</p> <p>Preliminary support to LIPI focussing on public relations unit to increase the profile of LIPI as a knowledge/research management institution and design of specific support component</p>	<p>XX Interdisciplinary workshops/conferences conducted</p> <p>Implementation of LIPI Support Component Phase I (Based on separate agreement and workplan)</p>	<p>XX Interdisciplinary workshops/conferences conducted</p> <p>Implementation of LIPI Support Component Phase II (Based on separate agreement and workplan)</p>
	<p><i>State Universities</i> Collaboration agreement with at least XX state universities (specifically for research database sharing, and inventory of research strengths)</p>	<p>Collaboration agreement with at least XX state universities (specifically for research database sharing, and inventory of research strengths) and XX research documents contributed from these universities in a national research database</p>	<p>Collaboration agreement with at least XX state universities (specifically for research database sharing, and inventory of research strengths)and XX research documents contributed from these universities in a national research database</p>

Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
B.3. Non State Knowledge Sector	<p><i>Private Universities</i> Collaboration agreement with at least XX private universities (specifically for research database sharing, and inventory of research strengths)</p>	<p>Collaboration agreement with at least XX private universities (specifically for research database sharing, and inventory of research strengths) and XX research documents contributed from these universities in a national research database</p>	<p>Collaboration agreement with at least XX private universities (specifically for research database sharing, and inventory of research strengths) and XX research documents contributed from these universities in a national research database</p>
	<p><i>NGO/INGO</i> Finalize piloting and case studies of NGO/INGOs producing knowledge/analysis output Commence capacity building activities based on needs assessments in XX NGOs/INGOs</p>	<p>XX strengthened NGOs/INGOs linked as partners to XX regionally based NGOs and providing input to long term research frameworks</p>	<p>XX strengthened NGOs/INGOs linked as partners to XX regionally based NGOs and providing input to long term research frameworks</p>
	<p>Selection of XX Think-tanks and negotiations completed regarding endowment fund management and administration</p>	<p>Financial management capacity strengthened in XX Think-tanks and implementing long term research framework linked to strengthened national research agenda</p>	<p>Additional XX Think-tanks supported and XX recommendations submitted for long term development plan and XX development policies</p>
B.4. Intermediary Organisations	<p><i>Researcher Networks</i> Collaboration agreement with XX Researcher networks finalized</p> <p>Support provided for XX capacity building and knowledge exchange programs proposed by networks</p>	<p>XX number of research papers internationally published and reported by each participating researcher network.</p> <p>XX recommendations from published research papers linked to medium term development plan and or development policies (national and/or regional)</p> <p>Support provided for XX capacity building and knowledge exchange programs proposed by networks</p>	<p>XX number of research papers internationally published and reported by each participating researcher network.</p> <p>XX recommendations from published research papers linked to long term development plan and or development policies (national and/or regional)</p> <p>Support provided for XX capacity building and knowledge exchange programs proposed by networks</p>

Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
	<p>Researcher database of each participating network developed XX research papers submitted to national research database</p>	<p>XX research papers submitted to national research database</p>	<p>XX research papers submitted to national research database</p>
	<p><i>Institutional Networks</i> Collaboration agreement with XX Institutional networks for strengthening of interdisciplinary research and studies for development policy</p> <p>Support provided for XX institutional capacity building programs proposed by network(s) and results disseminated</p>	<p>Collaboration agreement with XX Institutional networks reviewed and strengthened if required</p> <p>Support provided for XX institutional capacity building programs proposed by network(s) and results disseminated</p>	<p>Report on results of collaborative agreement with participating institutional network</p> <p>Support provided for XX institutional capacity building programs proposed by network(s) and results disseminated</p>
	<p><i>User Forums</i> Collaboration agreement with XX User Forums for dissemination of research results</p> <p>Support provided for researchers to disseminate recommendations in user forums and media</p>	<p>Collaboration agreement with XX User Forums reviewed and strengthened if required</p> <p>Support provided for researchers to disseminate recommendations in user forums and media</p>	<p>Report on results of collaboration with participating user networks</p> <p>Support provided for researchers to disseminate recommendations in user forums and media</p>
	<p><i>Mass Media</i> Collaboration agreement with XX mass media groups for dissemination of research results</p> <p>Support provided for researchers to disseminate recommendations in XX mass media initiated events</p>	<p>Coverage of research input to medium term development plans</p> <p>Support provided for researchers to disseminate recommendations in XX mass media initiated events</p>	<p>Coverage of research input to medium and long term development plans</p> <p>Support provided for researchers to disseminate recommendations in XX mass media initiated events</p>
	<p><i>National Commissions</i> Collaboration with XX National Commissions to develop and implement long term research framework</p>	<p>Collaboration with XX National Commissions for budget allocations in support of long term research framework and necessary legislation</p>	<p>Collaboration with XX National Commissions for budget allocations to support long term research framework and necessary legislation</p>



Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
<b>C. Internal Perspectives (Required Systems and Processes)</b>			
C.1. Capacity Strengthening Mechanisms	<p>Case studies and piloting results finalized and recommendations on required HR management and financial management systems discussed</p> <p>Expressions of interest requested for organisations specializing in HR Management and Financial Management systems</p> <p>XX HR Management and Financial Management Organisations selected as capacity building partners</p>	<p>Institutions and Networks collaborating with Knowledge Sector Program offered opportunity to select and develop proposal with HR Management and Financial Management Capacity Building Partners for approval and funding</p> <p>XX proposals approved for institutional strengthening (linked with institutional network indicators)</p>	<p>Second round/advanced strengthening proposals requested for approval and funding</p> <p>XX proposals approved for institutional strengthening (linked with institutional network indicators)</p>
	<p>Research Framework training, including comparative study visits to Australia and collaboration with Crawford and other Australian universities</p> <p>Joint workshops for development of preliminary long term research frameworks combining shareholders and stakeholders</p> <p>XX Long term research frameworks drafted</p>	<p>XX Long term research frameworks reviewed and approved at national level with emphasis on multisourced input to enhance collaboration (linked to A.1. and B.2. Indicators)</p> <p>XX Long term research frameworks reviewed and approved at sub-national level with emphasis on multisourced input to enhance collaboration (linked to A.1. and B.2. Indicators)</p> <p>Progress reports compiled and disseminated through user forums and researcher networks</p>	<p>Research collated based on long-term research frameworks and recommendations used for national level policies (linked to A.1. and B.2. Indicators)</p> <p>Research collated based on long-term research frameworks and recommendations used for sub-national level policies (linked to A.1. and B.2. Indicators)</p> <p>Utilization of research recommendations documented and disseminated through user forums and researcher networks</p>

Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
C.2. Knowledge Sector Secretariat Functions	<p>Steering committee and management committee membership finalized and established</p> <p>Workplan and program components approved by steering committee</p> <p>Research funding mechanism developed and approved</p> <p>Research review systems developed and approved</p> <p>Research Dissemination system developed and approved</p> <p>National research database development process developed and approved</p> <p>Current legal framework linkages (see B.1. Indicators) and XX workshops implemented to identify necessary future legislation</p>	<p>6 monthly meetings of steering committee and quarterly management committee meetings implemented</p> <p>Workplan progress reported and adjustments made if necessary</p> <p>Research funding mechanism under implementation with minimum XX research projects underway linked to long-term research frameworks and development policy processes at national and subnational level</p> <p>XX Research papers reviewed and results stored in database</p> <p>XX Research papers disseminated nationally and XX Research papers disseminated internationally through user forums, researcher networks, institutional networks and mass media</p> <p>XX Policy briefs compiled and distributed</p> <p>XX Research papers in national research database and records of access internationally, nationally and sub-nationally</p> <p>XX drafts of legislation for knowledge sector prepared and under consideration by relevant authorities (national and subnational)</p>	<p>6 monthly meetings of steering committee and quarterly management committee meetings implemented</p> <p>Workplan progress and program results reported</p> <p>Research funding mechanism under implementation with minimum XX research projects completed linked to long-term research frameworks and development policy processes at national and subnational level</p> <p>XX Research papers reviewed and results stored in database</p> <p>XX Research papers disseminated nationally and XX Research papers disseminated internationally through user forums, researcher networks, institutional networks and mass media</p> <p>XX Policy briefs compiled and distributed</p> <p>XX Research papers in national research database and records of access internationally, nationally and sub-nationally</p> <p>XX legislation for knowledge sector accepted and legislated (national and subnational)</p>

Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
<b><i>D. Learning and Growth Perspective</i></b>			
D.1. Human Capital	<p>Secretariat personnel composition and structure finalized</p> <p>Duty statements/job descriptions compiled:</p> <ul style="list-style-type: none"> <li>- Program/Secretariat Director</li> <li>- Working Group Convenors/Facilitators</li> <li>- Financial Management Specialist</li> <li>- Research Management Specialist</li> <li>- Research database Specialist</li> <li>- Knowledge Exchange Events Specialist</li> <li>- Knowledge Management Specialist</li> <li>- HR Development Specialist</li> <li>- Media/website content management Specialist</li> <li>- Legal Drafting Specialist</li> <li>- Administration and Finance Officers</li> <li>- Other support staff</li> <li>- Client Relations Specialist</li> </ul> <p>Positions advertised and/or management contract tender advertised</p> <p>Long term sustainability strategy drafted and discussed</p> <p>Managing agency selected/appointed</p>	<p>Annual individual and overall Performance Reviews conducted and recommendations for improvement applied</p> <p>Annual client satisfaction survey conducted, analyzed and recommendations applied</p> <p>Decision made regarding necessity of rebid process</p> <p>Long term sustainability strategy (and exit strategy) revisited and finalized</p> <p>Lessons learnt documentation compiled and disseminated</p>	<p>Annual individual and overall Performance Reviews conducted and recommendations for future programming compiled</p> <p>Annual client satisfaction survey conducted, analyzed and recommendations applied</p> <p>Decision made regarding asset transfer</p> <p>Long term sustainability strategy (and exit strategy) implemented</p> <p>Lessons learnt documentation compiled and disseminated</p>
D.2. Organisational Capital	Regular team meetings to discuss progress and challenges	Regular team meetings to discuss progress and challenges	Regular team meetings to discuss progress and challenges

Strategy Map Component	Short Term Indicator (1-2 years)	Medium Term Indicator (3-5 years)	Long Term Indicator (8-15 years)
	<p>Annual program retreat conducted with key stakeholders to strengthen collaboration</p> <p>Monthly presentations on research programs, frameworks and institutions</p> <p>Implementation of exchanges and fellowships to key international institutions for secretariat and working group members → results reported to team and to relevant working groups</p>	<p>Annual program retreat conducted with key stakeholders to strengthen collaboration</p> <p>Monthly presentations on research programs, frameworks and institutions</p> <p>Implementation of exchanges and fellowships to key international institutions for secretariat and working group members → results reported to team and to relevant working groups</p>	<p>Annual program retreat conducted with key stakeholders to strengthen collaboration</p> <p>Monthly presentations on research programs, frameworks and institutions</p> <p>Implementation of exchanges and fellowships to key international institutions for secretariat and working group members → results reported to team and to relevant working groups</p>
D.3. Information Capital	<p>Develop linkages to ensure ongoing information sourcing on national and subnational priorities including development agendas of elected leaders</p> <p>Develop XX linkages to ensure ongoing information sourcing on research funding opportunities (national and international)</p> <p>Subscriptions to XX key international journals and national publications to ensure ongoing access to national and international research relevant to research frameworks to be developed</p>	<p>Maintain and improve information sourcing and its distribution to participating institutions and networks</p> <p>Maintain and strengthen XX linkages to agencies (including shareholders) providing research related funding opportunities (including scholarships) and ensure distribution of this information</p> <p>Maintain XX subscriptions to international journals and publications and ensure distribution to researchers where relevant</p>	<p>Maintain and improve information sourcing and its distribution to participating institutions and networks</p> <p>Maintain and strengthen XX linkages to agencies (including shareholders) providing research related funding opportunities (including scholarships) and ensure distribution of this information</p> <p>Maintain XX subscriptions to international journals and publications and ensure distribution to researchers where relevant</p>