INDONESIA INFRASTRUCTURE INITIATIVE

# CRPG

AIIRA RESEARCH REPORT

INDONESIA INFRASTRUCTURE INITIATIVE

# Center for Regulation, Policy and Governance

## THE ROLE OF REGULATORY FRAMEWORKS IN ENSURING THE SUSTAINABILITY OF COMMUNITY BASED WATER AND SANITATION

**AIIRA RESEARCH REPORT**

Date 30/06/2015

INDONESIA INFRASTRUCTURE INITIATIVE

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**Dyah Paramita,**
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**Center for Regulation, Policy and Governance (CRPG)**

Bogor,

June 30, 2015

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## ACRONYMS

| | | |
|---|---|---|
| AAIRA | : | Australia Indonesia Infrastructure Research Awards |
| ADD | : | *Alokasi Dana Desa*/The allocation of village fund |
| AMPL | : | *Air Minum dan Penyehatan Lingkungan*/Drinking water and environmental sanitation |
| AMPL BM | : | *Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat*/Community based drinking water and environmental sanitation |
| APBD | : | *Anggaran Pendapatan Belanja Daerah*/Regional expense and income budget |
| APB Desa | : | *Anggaran Pendapatan Belanja Desa*/Village expense and income budget |
| Bappeda | : | *Badan perencanaan dan Pembangunan Daerah*/Regional development planning agency |
| Bapemas | : | *Badan pemberdayaan masyarakat*/Community empowerment board |
| BPN | : | *Badan Pertanahan Nasional*/National Land Agency |
| BUM Desa | : | *Badan Usaha Milik Desa*/Village owned company |
| BUMD | : | *Badan Usaha Milik Daerah*/Region owned enterprise |
| BUMN | : | *Badan Usaha Milik Negara*/State owned enterprise |
| BLUD | : | *Badan Layanan Umum Daerah*/Public service agency |
| BPD | : | *Badan Permusyawaratan Desa*/Village advisory board |
| BPMPD | | *Badan Pemberdayaan Masyarakat dan Pemerintahan Desa*/ The village community empowerment agency |
| BP SPAMS | : | *Badan Pelaksana Badan Pengelola Sistem Penyediaan Air Minum dan Sanitasi*/Management agency for water and sanitation |
| BPSAP | : | *Badan Pengelola Sarana Air Bersih*/Management agency for drinking water facility |
| CB | : | Community Based |
| CBO | : | Community Based Organization |
| CLTS | : | Community Lead Total Sanitation |
| DAK | : | *Dana Alokasi Khusus*/Special allocation fund |

| | | |
|---|---|---|
| DDUB | : | *Dana Daerah untuk Urusan Bersama*/Local fund for public affairs |
| FGD | : | Focus Group Discussion |
| GR | : | Government Regulation |
| HIPPAM | : | *Himpunan Penduduk Pemakai Air Minum*/Drinking water user association |
| HGUA | : | *Hak Guna Usaha Air*/Water exploitation/commercialization right |
| HGPA | : | *Hak Guna Pakai Air*/Water Use Right |
| IKK | : | *Ibukota Kabupaten Kota*/District capital |
| KLM | : | *Kejadian Luar Biasa*/Extraordinary incidents |
| LKM | : | *Lembaga Keswadayaan Masyarakat*/Community based implementation organization |
| MCK | : | *Mandi Cuci Kakus*/Bathing, washing and toilet |
| NTT | : | Nusa Tenggara Timur/East Nusa Tenggara |
| NTB | : | Nusa Tenggara Barat/West Nusa Tenggara |
| NGO | : | Non Governmental Organisation |
| ODF | : | Open Defecation Free |
| PAMSIMAS | : | *Penyediaan Air Minum dan Sanitasi Masyarakat*/Community based drinking water supply and sanitation |
| Perda | : | *Peraturan daerah*/Regional by law |
| Perum | : | *Perusahaan umum*/Public purpose company |
| PDAM | : | *Perusahaan Daerah Air Minum*/Regional water utilities |
| PokjaAMPL | : | *Kelompok Kerja Air Minum dan Penyehatan Lingkungan*/Working group on drinking water and environmental sanitation |
| PT | | *Perusahaan Terbatas*/A limited liability company |
| RAD AMPL | : | *Rencana Aksi Daerah AMPL*/Regional action plan AMPL |
| RI SPAM | | *Rencana Induk Sistem Penyediaan Air Minum*/The ministerial guideline on drinking water plan |
| RKP Desa | : | *Rencana Kerja Pemerintah Desa*/Village government's plan |
| RPJMD | : | *Rencana Pembangunan Jangka Menengah Daerah/* Provincial-by-law on medium term development plan |
| RPJM Desa | : | *Rencana Pembangunan Jangka Menengah Desa*/Village by law on medium term development plan |
| ROE | : | *Region Owned Enterprises* |
| RKM | : | *Rembug Kesiapan Masyarakat*/Community preparedness meeting |
| SIP | : | *Surat Izin Pengeboran air tanah*/Well-drilling permit |

| | | |
|---|---|---|
| SIPAT | : | *Surat Izin Penggunaan Air Tanah*/Ground water intake permit |
| SIPAP | : | *Surat Izin Pengambilan Air Permukaan*/ Surface water intake permit |
| SKPD | : | *Satuan Kerja Perangkat Daerah*/Local public service agency |
| SOE | : | State Owned Enterprises |
| STBM | : | *Sanitasi Total Berbasis Masyarakat*/Community-led total sanitation |
| UPTD | : | *Unit Pelaksana Teknis Daerah*/Local government working unit |
| Watsan | : | Water and sanitation |
| WSLIC2 | : | Water Supply and Sanitation for Low Income Communities Project |

# EXECUTIVE SUMMARY

Indonesia aimed at achieving universal access to water and sanitation by 2019. Sixty (60) percent of this target are expected to be materialized through Community-Based Water and Sanitation (CB-Watsan) Programs. Despite such expectations, regulatory and institutional frameworks for CB Watsan are inadequate. This condition threatens, not only the efforts towards universal access, but also the sustainability of existing CB Watsan initiatives.

Two main factors influences the governance of CB Watsan in Indonesia: ambiguity over the long-term role of CB Watsan in the policy framework and the preference over state owned management in the national regulatory framework.

Government policy document distinguished between community based and "institution based" water and sanitation systems such as regional water utilities (PDAM). Decision makers are divided as to whether the community based system should be regarded as "temporary" or "permanent" solution to water problems.

Meanwhile, recent discourse in Indonesian political economy as reflected by Constitutional Court Decisions on natural resources -- including water -- tend to discourage private sector participation. According to the Court, water should be controlled by the state and this control is to be manifested through state owned enterprise, such as PDAM. Thus, the national legal framework favors state owned "institution based" system. As a result, CB systems are considered somewhat auxillary to institution based system in the national regulatory framework.

Despite such complexities, due to regional autonomy and donor-driven advocacy, there is a rise of regulation on CB Watsan at the regional levels. The primary intention of such regulation appears to be in ensuring that the local government take charge after donor projects are completed.

However, local regulation have yet to deal with the complexities within within the CB-Watsan system itself: issues pertaining assets, "legal forms" of Community Based Organizations (CBO), service standard, monitoring and enforcement and government's role in post construction. Assets ownership in CBO are generally unclear, which carries implication on operation, maintenance and expansion. CBOs are established in various forms of legal and non legal entities and there is no set of policy clarifying which forms are suitable for them.

Lack of CB-specific regulation on service standard means that from the consumer side there are no rights to claim over certain standard and from the government side, there is a lack of platform for monitoring and enforcement. This brings the question of what sort of regulatory framework is appropriate for standard setting in CB Watsan, what monitoring framework is desireable and in a wider sense, what sort of role do governments have in the post construction stage.

We sum-up the above problematique in the following research question: How can regulatory frameworks ensure the sustainability of community-based water and sanitation? After going through a lengthy social and regulatory analysis, we came up with the following answers and recommendation:

1. In Eastern Indonesia, there are examples where Adat systems are efficient in terms of shaping actors behaviour and in ensuring compliance, in line with modern regulatory objectives. Unfortunately, integration with Adat in water projects occurs mostly during pre-construction stages but not during post-construction. The introduction of CBO as modern organization may place them at odds with Adat system. We recommend that integration between Adat and CB Watsan system should be designed for post construction. Rather than introducing modern compliance and sanctioning mechanism which may not work in traditional societies, CB Watsan should utilize institutional resources already available through Adat mechanism. Local regulation should provide "space" for such arrangements.

2. Limited professionalization is the way forward for CB Watsan. In both Eastern Indonesia and East Java, CBO survival depends on central, dominant authoritative figures. For CBO leadership, monetary incentives does not appear to be the main driver for success. Recognition (both within and beyond their communities) are the primary motivation. The position of technical (and administrative) personnel are central in CB Watsan day-to-day operation. It is possible to professionalize and insulate them from local politics by strengthening their position through village or CBO articles of association.

3. National regulatory framework must regulate CB-Watsan in equal level with "institutional" system. This does not mean that the standards are similar, but the regulatory features and treatment should be similar. CB-Watsan should use similar nomenclature throughout Indonesia in order to ensure consistency of treatment.

4. Local regulation should clarify the role of local government in terms of support, monitoring and evaluation of CB Watsan. This could be regulated in regional by-law in general, but each agencies role for CB Watsan must be specified in detail through regent regulation.

5. In order to avoid inefficiencies and ensure coordination, CB Watsan and non-CB Watsan Planning Framework must be integrated. In terms of water supply, this could be conducted through *RISPAM*. Regional By Law -- should require that such coordination take place both before and post construction stages.

6. "Legal forms" of CBO should be compatible with the "CB-Watsan" concept. This means that it must pay attention to (a) accommodation of the "community-based" concept; (b) financials and profit (c) the degree of independence and (d) assets security. The community based concept means that there are: (i) similarities in terms of locality, values and problems faced (ii) participation and decision making on the planning process (iii) cost sharing, in kind or in cash by the community in the construction process and (iv) operators are appointed from, by and are accountable

to the community. Each “legal forms” has its own drawbacks and limitation, but we conclude that BUM Des, cooperatives and association are the second-best alternative.

7. Assets – especially immovable property – should either be owned by CBO or by village. Before decision are made as to who should own assets, careful consideration has to be made. If CBOs are to own assets, it must be constituted as a legal entity (which therefore, overrule BUM Des). Legalization of assets should be a part of national government infrastructure policy. Certification should be provided to CBO at affordable or at zero cost and the local government should designate a notary to deal with registration process. A local government agency should be tasked with monitoring and reporting CBO assets.

8. Assets Infrastructure should be protected by a combination of Regional By Law, Village Regulation and (where applicable) Adat. In essence, assets infrastructure should be regulated by “public” law and not private law mechanism. Regional by law should protect CB Watsan assets from damage or destruction, arising out of intention or omission from third parties.

9. Some CBOs are struggling to secure raw water in competition with other water users including industry. In order to secure CBO interest, there has to be a specific CB-Watsan water abstraction license, whose licensing application and administration should be simplified and at an affordable cost. Monitoring mechanism could be enforced through such licensing.

10. CBOs should be granted access to all planning instrument, including river basin, groundwater and spatial planning. Representations at planning events and exercise such as at river basin committees can be carried out through local association of CBOs. Local government must ensure that CBOs interest are guaranteed in planning mechanisms.

# CHAPTER 1: PROBLEMATIQUE AND RESEARCH QUESTION

The government aims to achieve universal access to water supply and sanitation by 2019.[1] According to some calculations, this ambitious target cannot be fulfilled by relying on regional water utilities (Perusahaan Daerah Air Minum or "PDAM") alone. It is estimated that PDAM can only contribute around 40% of the total target, whereas the other 60% would be expected to come from community-based systems.[2]

The policy framework for CB Watsan was introduced by the government in 2003. The 2003 National Policy on The Development of Community-Based Water and Sanitation introduced a duality in Indonesian national water policy: one being "institution-based" and the other being "community-based".[3] Our 2013 Research Proposal outlined several problems surrounding Community Based Water and Sanitation (CB-Watsan) from the conceptual level down to regulatory practice.[4]

The conceptual problem surrounding "community-based" watsan is on the definition and delineation between CB watsan and institutional watsan. In the policy framework, the term "institution-based" is used to denote water services operated by corporate water utilities including PDAM, whereas "community-based" is used to describe services provided by local communities for their own needs. How community and institutions are defined, at least in the academic sense, might not be compatible with what is intended by the policy framework.

There are also inconsistencies and discrepancies in the regulatory framework from the national down to regional and village levels, with regards to the role of CB watsan. The legal framework at the national level appears to favour "institution" based watsan, such as PDAM. Community based Watsan's role are considered to be residual – in providing access only where "institutional" system cannot serve.

Within the community based watsan itself, there is a major issue with regards to the clarity of assets ownership. Our Focus Group Discussion reveals that in some large scale projects, the assets still belong to the ministry of public works as it has not been transferred and thus, is accounted as liability and

[1] Bappenas, 'Penyusunan Rencana Pembangunan Jangka Menengah Nasional (RPJMN) 2015-2019 ' See Book III; See also development matrix, target 4

[2] *Lokakarya Kajian Efektivitas Kinerja Kelembagaan Kelompok Pengguna Sarana Air Minum, Jakarta 2 Desember 2014* (Bappenas 2014) also Mohamad Mova AlAfghani, *Interview with Fany Wedahuditama, Bogor, September 29,2014*

[3] Bappenas and others, *Kebijakan Nasional Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat* (2003)

[4] Mohamad Mova Al'Afghani and others, *Research Proposal; The Role of Regulatory Frameworks in Ensuring The Sustainability of Community Based Water And Sanitation* (Center for Water Governance and UNESCO Centre for Water Law, Policy and Science, 2013)

subsidy.[5] FGD participants agreed that "*Assets transfer is Indeed a big homework. The legal frameworks need to be completed."*[6] Some community watsan actvist considered that assets should be owned by the "communities"[7] whereas according to another, it should be owned by the village.[8] The national policy on community-based watsan on the other hand, advocates "community" ownership[9] and suggests that a legal framework be conceived by the government to smoothen the transfer of assets *from the government to the "community"*.[10] On the Pamsimas program technical manual it is suggested that it is the operation that is transferred, but not the asset owenership.[11]

We also found that there are cases where PDAM systems overlap and compete with CB Watsan. This is caused, partly by the introduction of the dualist system of watsan services in the 2003 framework. How these community watsan initiatives could coexist with existing PDAMs or – to maintain the economies of scale – be merged with or acquire existing PDAMs is a problem which yet to be solved, let alone, researched.

The FGD reveals that there are unresolved fundamental differences among regulatory stakeholders, in terms of whether CB should be perceived as a temporary "approach" with the overall intention to integrate it to the PDAM or "institutional" system in the future, or whether is stands equally to the existing "institutional" system.[12]

There are also problems with respect to service standards and how the government can foster monitoring, supervision and enforcement of such standards through regulatory frameworks. Community initiative and demand-driven approach is central to the community watsan movement. However, this approach is at odds with existing national legal frameworks requiring water and sanitation services to comply with minimum service standards enacted by local government.[13] The national policy on community watsan stipulates that "*The approach by community based watsan will no longer be based on normative standards from the government (supply driven) but is based on societal needs (demand driven).*"[14]

Whether or not similar standards should apply to both government owned water utilities and community watsan is a matter of debate. Some interpret "universal water provision" in the sense that

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[5] Mohamad Mova Al'Afghani and M Jibriel Avessina, 'Focus Group Discussion Report' (The Role of Regulatory Frameworks in Ensuring Sustainability in Community Based Water and Sanitation, Center for Water Governance and Jejaring AMPL, Hotel Alila Pecenongan, Jakarta, October 11, 2013)
[6] Ibid
[7] Reza Hendrawan, *Group Discussion, September 1-14, 2012* (2012)
[8] Max Adifan, *Group Discussion, September 1-14, 2012* (2012)see also the debate in Al'Afghani and Avessina, 'Focus Group Discussion Report'
[9] Bappenas and others, *Kebijakan Nasional Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat* see p.3 and p.20
[10] Ibid p.3 and 20
[11] Sekretariat CPMU Pamsimas, *Petunjuk Teknis Pedoman Pelaksanaan Pamsimas Tingkat Masyarakat* (2012) p.65 The "Pamsimas" is a communty-based water supply program from the Ministry of Public Works
[12] Al'Afghani and Avessina, 'Focus Group Discussion Report'
[13] Peraturan Pemerintah No. 16 Tahun 2005 Tentang Pengembangan Sistem Penyediaan Air Minum See Articles 34(2) and 40 c
[14] Bappenas and others, *Kebijakan Nasional Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat* p.6 and 23

similar quality, quantity, continuity, affordability should be applicable to everyone and every service providers. However, such ideal standard is difficult to achieve in Indonesian rural water provision, especially in the remote regions such as Nusa Tenggara and Papua. FGD participant considered the need for a universial/national menu and a local menu (adjusted to climatic conditions, etc) in regulation.[15]

Equality – one of the main issues in the water sector, could also be problematic in CB Watsan setting. Community elders and male participants may or may not have stronger voice within the CBO compared to women and minority groups. CBO executives may determine how water is allocated and prioritized within the community as well as in imposing the duties over the maintenance and operation of watsan assets. How CBO executive is elected and how it carries its decision making warrants further analysis. Whether or not a CBO is democratic or egalitarian therefore, is determined by its statute and the actual power play within its organization.

Aside from the above problem, there is a trend towards an increase of regulation on community watsan in the last few years, coming mostly from provincial, municipal and regency governments in the form of regional by laws on community watsan (hereinafter "community watsan bylaws" or "CB bylaws") or executive regulations such as governor or mayor regulations. Aceh Besar Regency enacted its by law on 2010[16]; Bima regency (in East Nusa Tenggara) enacted in 2011;[17] while the East Nusa Tenggara provice enacted a Governor Regulation on community based watsan in 2012 and is considering to regulate it in a higher form of legislation: a provincial-by-law.[18] Sikka regency drafted its by-law recently and is being considered for adoption by its parliament. Other regencies in East Nusa Tenggara seemed to follow suit.[19]

The increase of regulation on community watsan at the regional level is an interesting phenomenon that warrants some investigation as to its actual motives. In the Academic Draft of the Sikka Regency Community Watsan By-Law, it is found that the law was intended to make village governments to take charge in repairing and maintaining community watsan assets.[20] In one discussion, the participants remarked that when community watsan assets are transferred to the village (and thus becomes village assets), then there will be justifications to allocate some state funding for operation and maintenance. However, when the assets are owned by the "community", village government may not be able to utilize its funds to maintain them.

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[15] Al'Afghani and Avessina, 'Focus Group Discussion Report'
[16] Qanun Kabupaten Aceh Besar Nomor 8 Tahun 2010 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat
[17] Ibid
[18] Aisha Ahmed, *What constraints on a BOT scheme are imposed by the interest of lenders : the Channel Tunnel as a case study* ([University of Dundee] 2008)
[19] *Risalah sidang Badan Penyelidik Usaha-Usaha Persiapan Kemerdekaan Indonesia (BPUPKI), Panitia Persiapan Kemerdekaan Indonesia(PPKI), 29 Mei 1945-19 Agustus 1945* (Sekretariat Negara Republik Indonesia 1992)
[20] Kabupaten Sikka, *Naskah Akademik Rancangan Peraturan Daerah Kabupaten Sikka Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat* (2012)

The motive in transferring community watsan assets to local or village government is interesting, as it appears to indicate that implementation by non-state actors does not actually offer security and sustainability. Is calling for the return of state intervention – in terms of water provision to rural society – the actual motive for the rise of regulation?

These legal complexities, combined with the government target to achieve universal access by 2019 and the prognosis that 60% from that would have to come from CB watsan, prompted our research question: How can regulatory frameworks ensure the sustainability of community-based water and sanitation? Such research question contains three central concepts: (1) regulatory frameworks, (2) sustainability and (3) community-based water and sanitation. These concepts – along with existing literature which discusses them-- will be elaborated below.

## 1.1 LINKAGES WITH INDII, DFAT AND GOI INFRASTRUCTURE OBJECTIVES AND POLICIES

As previously mentioned, the Government of Indonesia's medium term infrastructure development target is to achieve universal access to water supply and sanitation by 2019.[21] The majority of such services are expected to come from community-based water and sanitation. Economic and democratic governance, infrastructure and rural development are several key objectives of Australia's Aid to Indonesia. Access to water and sanitation is one key primary deliverables.

Australia has been supporting water infrastructure development in Indonesia for a very long time and this program continue to date. It is absolutely within the interest of the Australian Government to ensure that the infrastructure that has been built through aid funds are sustainable. One of the prerequisites for such sustainability are appropriate regulatory framework.

Thus, this research supports Australian water and sanitation program in Indonesia in at least two ways:

First, as an **evaluative** instrument to understand the institutional and regulatory challenges affecting the sustainability of water and sanitation infrastructure which has already been funded by Australian fund.

Second, as a **decision-making** component in aid disbursement. This report could be used to evaluate the institutional and regulatory resources available to a certain region which becomes target for aid; it can be used to require that certain regulatory arrangements should be in place before aid is disbursed or, that certain elements of the regulatory framework should be developed in conjunction with such aid program.

## 1.2 TEAM COMPOSITION

### 1.2.1 RESEARCH TEAM MEMBERS

#### 1.2.1.1 University of Dundee

Professor Geoffrey D. Gooch, PhD (Lead Reviewer) was the Director of the UNESCO Center for Water Law, Policy and Science at the University of Dundee and former Chair of Water and Environmental Policy at the University. Currently, Professor Gooch is an honorary Professor at the University of Dundee. Professor Gooch was a Professor of Political Science at the University of Linkoping, Sweden. A specialist in water and environmental policy analysis and in the study of institutional communication and interaction, he worked extensively with stakeholder and public participation and knowledge exchange in various research projects. He has a broad range of publication on water related topic such

[21] Bappenas, 'Penyusunan Rencana Pembangunan Jangka Menengah Nasional (RPJMN) 2015-2019 ' See Book III; See also development matrix, target 4

as transboundary water governance, environmental regimes, public and stakeholder participation and water and environmental scenarios.

Dr. Sarah Hendry, PhD (Reviewer) is a senior lecturer in water law at the UNESCO Center for Water Law, Policy and Science at the University of Dundee, Director of the Centre's LL.M program and Advisor of Studies for the Centre's research students. Sarah is a specialist in both Water Resources Law and Water Services Law and has authored a number of publications in both fields. Sarah's recent publication includes Hendry S, 'Water Management and Protection in the UK' in Alberton M and Palermo F (eds), Environmental protection in multi-layered systems : comparative lessons from the water sector (Martinus Nijhoff Publishers 2012) and Hendry S and Reeves A, 'The regulation of diffuse pollution in the European Union: science, governance and water resource management' (International Journal of Rural Law and Policy 2012).

#### 1.2.1.2 Universitas Ibn Khaldun Bogor

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Ms. Dyah paramita, SH, LL.M. Mita obtained her bachelor degree from Universitas Diponegoro and her Master's degree from the Centre for Energy, Petroleum, Mineral Law and Policy, University of Dundee, UK (2009). Her dissertation title is Access to environmental information towards good governance in mining: A case study from Indonesia. Mita has been awarded various scholarship and awardsMita assisted national team members appointed by the Office of Coordinating Minister for Political, Legal and Security Affairs to combat illegal logging; Public Interest Lawyer team member for a legal NGO standing versus a transnational mining corporation for the Buyat Bay Pollution Case (2007).

Ms. Feril Hariati, ST, M.Eng (Engineering Specialist, Researcher) is a lecturer at the Faculty of Engineering and vice director to CRPG. Ms. Hariati obtained his latest education (M.Eng) from the UNESCO-IHE at Delft. Her recent publications include "Climate Change Impact in Developed Wetland in Banyuasin Ministry of Public Works – CCROM, 2010), Lead Author, "Indonesia Second National Communication Under The United Nations Framework Convention on Climate Change (GEF-UNDP, 2010), "Development Study of Land and Water Infrastructure for Livestock in West Nusa Tenggara" (Creata IPB, 2008).

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Mr. Aftaf Muhajir, S.Si (Geographer, Field Researcher) is a researcher at the CRPG. He is a Geographer specializing in Geography Information System/GIS. His past researches includes "Water Quality in Wonosobo Villages" (UI, 2009); "Spatial Pattern of Edifice Function Change at Depok" (UI, 2012); Team Leader/Surveyor "Design Engineering Detail for Public Housing in Batam Area (Ministry of Public Housing, 2010); Field Coordinator for "Modelling of Dengue Fever and Malaria Incidents with Projected Climate Change and Disease Distribution in Five Provinces" (RCCC UI and Ministry of Health, 2013

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### 1.2.2 DISTRIBUTION OF TASKS ACROSS PARTNERS

**Universitas Ibn Khaldun Bogor**

The Centre for Regulation, Policy and Governance (CRPG) is established at the University level to encourage inter-disciplinary collaboration among different faculties. The Centre was established in 2011 – under the name Center for Water Governance through the initiative of Dr. Mohamad Mova Al'Afghani and was expanded and developed into CRPG.

Dr. Al'Afghani was instrumental in drafting the initial proposal and finalizing the mid term and final report, as well as liaising with government contacts. Mr. Avessina researched case study candidates, justify the selection of case study and created the guideline and framework in conducting fieldwork and social analysis. Mr Muhajir liase and coordinate with CRPG field contact, prepare filedwork logistics and is in charge of overall financial issues. Ms Hariati conduct engineering related asessement of community-based watsan aspect and provide advice to all team members on technical aspects of community-based watsan. Ms. Paramita collects and analyze primary legal documents used in the research and assist Dr. AlAfghani with finalization of the report.

**UNESCO Centre for Water Law, Policy and Science, Dundee, UK**

The University of Dundee is responsible in reviewing CRPG's research deliverables and in exploring channels for international publications.

Professor Geoffrey Gooch was involved in the development of the initial proposal and then visited Bogor on Febuary 2015. He took part on two field visits to Community Based Watsan sites in Bogor, undertake one seminar attended by the Mayor of Bogor and chaired internal workshop for the purpose of writing AIIRA Report. Subsequently Prof Gooch reviewed and provided comment to non legal aspects of this report. Dr. Sarah Hendry conducted a very detailed review on this report draft and provided comment both in the draft document and separate commentary. This report's analytical framework was restructured in response to her comments.

**National Watsan Task Force and Watsan Network (Pokja/Jejaring AMPL)**

The Pokja AMPL is a formal national hub for donor, NGOs, IGOs and government departments at national and regional levels (such as the ministry of public works, ministry of health, home affairs and the ministry of finance) operating in the watsan sector. The Pokja AMPL is chaired, ex officio, by the Bappenas (National Planning Agency) Director for Housing and Settlement. All initiatives and policies are discussed by the Pokja AMPL. The Pokja is located at the central, provincial and municipality level. At the provincial and municipality levels the Pokja membership mimic closely its configuration at the central level.

The Jejaring AMPL (Watsan Network) consist of private individuals whose institution are usually members of the Pokja AMPL. As a networking hub, it operates informally. The Jejaring AMPL is currently chaired by one of Bappenas official at the Housing and Settlement Directorate.

Due to their network to bureaucracies, donor, NGOs as well as the field, partnership with the Pokja AMPL and Jejaring AMPL is considered central for the research. As the Pokja and Jejaring is cross departemental and intra-institutional, institutional buy-in coming from the Pokja is likely to be stronger and able to motivate policy and regulatory change rather than that which comes from a single

institution such as Bappenas or Public Works. CRPG UIKA has engaged both the Pokja and the Jejaring and uses their networking for the FGD and several interviews.

## 1.3 GENERAL ISSUES

### 1.3.1 MANAGEMENT OF ACTIVITY

Research activities are organized primarily through project management software. Project Manager (Dr. Al'Afghani) create workplan and milestones and distribute tasks to researchers and administrative support. Until April 2015, we subscribe to *Mavenlink* software management. This was later changed into self-hosted solution (http://www.crpg.info/office/public/index.php) using *Activecollab*. Each task is assigned to researchers with due dates. The Project Manager is able to evaluate workload using such software and redistribute tasks when necessary. Research data and media files were stored, shared online and backed-up with triple redundancy, using both online/cloud and onsite backup mechanism. Offline meetings are conducted *when necessary* at the premises of Universitas Ibn Khaldun Bogor, primarily to organize events, trainings and solve matters which cannot be solved through online coordination. Researchers were given research workshop and citation management workshop.

Within the team itself, Dr. Al'Afghani acts as project leader, principal investigator and legal researcher. Ms Feril Hariati acts as University liaison and researcher on technical (engineering) aspect of the project. Mr. Aftaf Muhajir acts as researcher (Geography) and treasurer. Mr. Jibriel Avessina acts as social research coordinator with overall responsibility for preparing and conducting field research. Ms. Dyah Paramita assist Dr. Al'Afghani in conducting legal research and final drafts. Mr. Aditya Rizkiana acts as CRPG Administrator, with responsibilities on administrative matters and event organization. During the course of our field researches in East Nusa Tenggara and East Java, we engage Mr. John Petrus Talan from Institute of Resource Governance and Social Change (IRGSC), Kupang, which assist us in field research, data collection and production of field notes.

At the beginning of the project, all researchers must develop a draft paper, with their own research question relevant to the project's main research question. This is meant to apply research skills as provided through research workshops and to familiarize themselves with water related topics (for researchers not yet familiar with water issues) as well as for preparing for post-AIIRA publications. Some elements of the draft papers were later incorporated into this final report. The draft papers have been submitted as a part of our Mid-term Report.

For field research, Dr. Al'Afghani utilize the network provided by Jejaring AMPL and others. We employ local facilitators, Mr. Teddy Mbabho (Bappeda Ende) and Mr. Galih Yanuar (Bappeda Lamongan).

### 1.3.2 INTERNAL QUALITY ASSURANCE

There are four types of review:

Internal draft reviews are conducted by Dr.Al'Afghani. As this is a team-research, all researchers produced their own drafts. These drafts were then collated and reviewed by Dr.Al'Afghani. If a draft needs improvement, it will be returned to each researcher before final inclusion in the Report.

The second stage of reviews are conducted by UNESCO Centre. The UNESCO Centre review coherence of this final report and suggests improvement. Also forming a part of the review is suggestion for publication. Report from their review is included in the Annex.

Specialized review are conducted by two legal experts. This review replaces the plan to conduct Legal FGD. It is meant to evaluate if the analysis of Indonesian regulation in this report and the conclusion it reached are sound. One review is conducted by a lecturer and public Notary, Mr. Bhudy Bhudiman, SH, MH, CN and the other review is conducted by administrative law expert and lecturer Dr. Dian Puji Simatupang.

Recommendations in this final report have been discussed and debated at a national Focus Group Discussion (see below).

### 1.3.3 PARTNERSHIP'S RESPONSES TO MID-TERM REPORT

Professor Geoffrey Gooch studied the Mid Term Report and discuss this thoroughly during his visit to Indonesia (see Annex) and during the Report Writing Workshop (see below). It was agreed to refocus the research question and to restructure the report outline. Some parts of the draft report (the focus on climate change) which were raised in the Mid Term Review were dropped form this final report.

### 1.3.4 WORKSHOPS, FOCUS GROUPS, ETC, CONDUCTED

**Internal Research Trainings**

CRPG implemented its first training on May 31, 2014. The training was held to introduce Mavenlink and Evernote to each member. It took place at the conference room of Law Faculty, Universitas Ibn Khaldun Bogor. The training started with the introduction of each application. Each member were expected to know that Mavenlink can be used as the application for sharing and discussing some materials related to the research online. Furthermore, the trainer introduced Evernote and its features, especially the "webclipper". Each member started to install the applications, sign up for an account, and try to use the applications. On the same date, CRPG also held the training for using EndNote as footnotes and citation manager, as well as database repository.

On June 28, 2014 CRPG held the second training. The training was at The Foundation Office of Universitas Ibn Khaldun Bogor. This internal training sharpen the use of EndNote, such as for conducting entry and save data for EndNote database so it can be used as footnotes or even citation in the report. Researchers are also introduced to open-source citation managers. The second session is focused on research management and methodology. Researchers are introduced to common research frameworks (problematique, research question, analytical framework, hypothesis, methodology, field work) and how it is applied in the present research.

**Focus Group Discussions**

This research benefit from four FGDs, two national FGDs and two local FGDs. This will be elaborated in the methodology section.

**Workshop and Seminar**

Two seminars and one workshop were organized in conjunction with this research. The first is a "Bose *Lunch Seminar*" (Bose is the traditional corn dish native to NTT) that took place in **Kupang, East Nusa Tenggara on November 22, 2014**, in collaboration with the Institute of Resource Governance and Social Change (IRGSC). The purpose of this seminar is to present our findings in Ende and engage local academia with such findings.

The second seminar took place in **Universitas Ibn Khaldun Bogor, February 5, 2015** in conjuction with Prof Gooch's visit. The topic of the seminar was "Challenges and new approaches to water supply and sanitation in the developing world." The seminar was opened by the mayor of Bogor City, Dr. Bima Arya and Prof Gooch was keynote speaker. (See Annex and pictures in Annex)

An internal workshop in **Hotel Novotel, Bogor was organized in 8 February 2015**. The purpose of the workshop is to discuss the comments in Mid Term Report and to guide the drafting of AIIRA final report. The one-day workshop was chaired by Professor Gooch and was attended by CRPG Team, including one researcher who recently completed his research on CB Watsan in Lamongan, from Bappenas, Mr, Indrawan Prabharyaka and Mr. Bambang Suryokusumo, who was a social coordinator for the Pro Air Project in Ende. Both guests presented their research/work in relation to CB Watsan. By inviting those speakers we hope that our findings can be confronted with their research and experience in our case study areas. Another guest, Tanja Lindquist, a PhD Student from the University of Technology Sydney who is researching community based sanitation in Bogor and other cities also attended the workshop. One of the most important result of the workshop was feedback from the group on AIIRA Draft. The feedback were as follows: (i) The scope of the research shall be limited to water supply and sanitation but without changing the research question. This is clarified in the section on Limitation and Scope of Studies. (ii) The chapterization was reconsolidated from around 9, to the present structure.

### 1.3.5 GENDER, SOCIAL INCLUSION, ENVIRONMENT ISSUES

Two out of five team members are female. CRPG focused on deliverables, meetings are held *when necessary* and most coordination are conducted online. In the research, gender and social inclusion are among the subjects included in the list of questions and observation. Social inclusion and gender roles are further discussed in "service standard" (section 5.7) and women role in CBO operation (section 5.7). The research discuss how regulatory framework can be used as a tool for gender mainstreaming and ensuring equal access to water.

### 1.3.6 LESSONS LEARNED FROM PARTNERSHIP APPROACH

Professor Gooch's visit and comments substantially reshape chapterization of the final draft and refocus our research question. Dr Hendry's very detailed comments result on the restructuring of the analytical framework chapter. The partnership with University of Dundee provide CRPG researchers with alternative point of view, approaches, knowledge and ideas. Such diversity is absolutely important in a healthy research environment because once a research team has been exposed to their research for a period of time, views and opinions are starting to crystallize. Partnership with University of Dundee enable CRPG researchers with "fresh" point of view and approaches in solving the problems.

### 1.3.7 BUDGET EXPENDED

We were granted AUD 100,000, excluding tax, equivalent to IDR 900,000,000 (1 AUD =9500 IDR). We have spent a total of IDR 736,134,984 to date. A sum of IDR 213,865,016 are outstanding, comprising of unpaid salaries, remuneration and other liabilities.

## 1.4 CLARIFICATION OF CONCEPTS

The research question posed in this report contain four basic concepts which would benefit some clarification, these are: (a) regulatory frameworks, (b) sustainability, and (c) community based. Such concepts will be clarified below.

### 1.4.1 REGULATORY FRAMEWORKS

The phrase "regulatory frameworks" contain two basic concepts: regulation and framework. There is no agreed definition among scholars on what is meant by "Regulation". According to Ogus: "*Regulation, in our conception, involves individuals and firms being induced to outcomes which, in the absence of the instrument, they would not have attained*".[22] According to Hood, regulation has some characteristics: the capacity for standard setting, information gathering and behaviour-modification.[23] To sum-up the strand of academic literature and discussions, it is best to cite the definition proposed by Black: "*Regulation is the sustained and focused attempt to alter the behaviour of others according to defined standards or purposes with the intention of producing an identified outcome or outcomes, which may involve mechanism of standard-setting, information gathering and behaviour modification*."[24]

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[22] A. Ogus, 'Comparing Regulatory Systems: Institutions, Processes and Legal Forms in Industrialised Countries' CRC Working Paper 35/2002 <http://ageconsearch.umn.edu/bitstream/30609/1/cr020035.pdf>

[23] Christopher Hood, Henry Rothstein and Robert Baldwin, *The government of risk: Understanding risk regulation regimes* (Oxford University Press, USA 2001)

[24] Julia Black, 'Critical reflections on regulation' 27 Austl J Leg Phil 1

It is also important to reiterate that the notion of regulation used here is not a narrow-technical sense of "economic" regulation. It is a broader notion of regulation as envisaged by Prosser, whose purpose is not simply only in 'holding the fort' until competition forces arrive but rather, a somewhat perpetual form of effort necessary to produce intended outcome.[25] Thus, regulation in this report is not to be viewed as simply a tool for enhancing economic efficiency, but tools for other purposes as well, which could be based on rights and norms.

If such above is the understanding of regulation, then what is a regulatory "framework"? According to Black, a regulatory regime is *"… the set of interrelated units which are engaged in joint problem solving to address a particular goal, its boundaries are defined by the definition of the problem being addressed, and it has some continuity over time*."[26] Thus, regulatory framework is the same. It also comprised of a set of actors, institutions and rules, whose purpose is in addressing a particular issue. Some of the parts of the framework will be discussed below, whereas the rest will appear in various parts of this report.

### 1.4.2 LEGISLATION

By legislation, this report means legal products which results from the deliberation of the parliament or the executive. Thus, included in this category are everything in the hierarchy of laws and regulation from parliament enacted acts to regional by laws. Of particular importance are Water Law 7/2004 (revoked), GR 16/2005 on Drinking Water Provision System (not applicable), Law 6/2014 on Village and various regional by-laws on community-based water and sanitation systems. After Judicial Review of the Water Law 7/2004 by the Constitutional Court, Law 11/1974 on Irrigation becomes the primary legislation for the water sector, which will regulate both water resources and sanitation. Implementing regulations which will replace GR-16 are currently being drafted. For the long term, the government plan to enact a new Water Law to replace Law 11/74. There is a high likelihood that provisions form previous legislations will be reinserted in the new Law and its implementing regulations. Analysis of the defunct regulatory framework therefore remains relevant.

#### 1.4.2.1 Sectoral regulations

Sectoral regulations are a body of law applicable to particular sector. Water sector regulation is of particular importance. Other than Water Law 7/2004 and GR 16/2005 mentioned above, there are various implementing regulations that may be applicable to CB Watsan in the form of technical regulations issued by the Ministry of Public Works or the Ministry of Home Affairs. Other than water sector regulation, the new village sector regulation – including Village Regulation or Peraturan Desa -- is also applicable when discussing rural CB Watsan. In addition to that, various regional autonomy regulations may also be applicable.

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[25] T. Prosser, *The regulatory enterprise* (Oxford University Press)
[26] Julia Black, 'The decentred regulatory state?' in Peter Vass (ed), *Regulatory Review 2006/2007, 10th Anniversary Edition* (The University of Bath 2007)

#### 1.4.2.2 Private law

Other than public law regulation, the other corpus of regulative instrument is the private law. Most Community Based Organizations (CBO) operating in Watsan are constituted in the form of private entity through contractual arrangements – with or without notarial deed. They may take the form of Lembaga Keswadayaan Masyarakat or "LKM" (with or without legal entity), cooperatives or foundation. Thus, while most of the regulating instruments for urban water utilities are public, we suspect that quite a number of the regulating instruments for CB-Watsan would be private.

#### 1.4.2.3 Adat Law

Other than public and private law arrangements, some CB-Watsan operating in regions in which Adat Law still prevails will inevitably have intersections with Adat Law. This, we suspect, would be the case for CB-Watsan in eastern Indonesia. Adat (or customary) law may be the living law in those regions. Adat Law may operate in conflict with or in cooperation with modern legal systems.

### 1.4.3 SUSTAINABILITY

"Sustainability" is indeed a contentious terminology. In this report we will use an operative framework of sustainability as applied in water sector literature. According to Carter, sustainability of CB Watsan depends on four elements: motivation, maintenance, cost-recovery and continuing support.[27] Meanwhile, according to Sara and Katz, sustainability can be measured from physical condition, consumer satisfaction, operation and maintenance practices, financial management and willingness to sustain the system.[28]

It is to be noted that this report will not evaluate whether a particular system is sustainable or not. What this report will evaluate is if the Indonesian legal framework contains such elements which would enable sustainability. This will be discussed in the analytical framework chapter.

### 1.4.4 COMMUNITY BASED

The title of the 2003 policy is: The National Policy on the Development of Community Based Water and Environmental Health. The term "community" in that policy framework is contentious. The 2003 policy distinguished "community-based" from "institution-based" watsan.

The government uses the term "institution-based" to denote water services delivered by "legal persons which could be in the form of government department, companies or private entities operating on both non-profit or for profit purposes with the decision-making authority on the hands of the undertaker.[29] Meanwhile, the term "community based" is defined as a water services management which places the community as a decision maker and responsible actor; undertakers are

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[27] Richard C Carter, Sean F Tyrrel and Peter Howsam, 'The impact and sustainability of community water supply and sanitation programmes in developing countries' 13 Water and Environment Journal 292

[28] Jennifer Sara and Travis Katz, *Making Rural Water Supply Sustainable: Report on the Impact of Project Rules* (Water and Sanitation Project (WSP) -- The World Bank, 1997)

[29] Bappenas and others, *Kebijakan Nasional Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat* see page ix

community and/or institutions appointed by the community, which requires no legal formality and that the beneficiaries of the services would be the local community whose investment [for the development of the infrastructure] is generated from various sources (groups, communities, the government, private entities or donor institutions).[30]

As AlAfghani notes, these definitions are inappropriate. "Community-based" systems are also based on institutions (including organisations), both formal and non-formal, usually called Badan Pelaksana Badan Pengelola Sistem Penyediaan Air Minum dan Sanitasi (BP SPAMS) or Badan Pengelola Sarana Air Bersih (BPSAB) or Himpunan Penduduk Pemakai Air Minum (HIPPAM).[31] There is no standard nomenclature for the CBOs.

Furthermore, the characteristics of having a legal personality is not only confined to "institution-based". Pamsimas documents shows that CBO at the village level could have a legal personality.[32] Legal personality is required so that the CBO could potentially own land, buildings, as well as other infrastructure assets.[33] Finally, characterization based on decision-making authority also may not work. The human right to water and discourses in water governance emphasize citizen participation in decision making process.[34] Participation in decision making is perceived as a prerequisite of a democratic regulatory regime.[35] It is probably correct however, to describe that the modes of participation are different between the two regimes. This will be discussed further in this report.

Our Focus Group Discussion which took place in 2013 provides some insight as to what regulatory actors meant by "community-based". The requirements of "locality" in the concept of community-based watsan was explained by a stakeholder: "*From persil (*House*) to neighborhood is the playing field for community-based approach, because in those categories people can still meet each other whereas for city level, it would be too much for society to meet and enact decision making*."[36] We note that in a way, this definition limits "community-based watsan" in terms of size. Thus, according to

[30] Ibid
[31] Sekretariat CPMU Pamsimas, *Petunjuk Teknis Pembentukan Lembaga Keswadayaan Masyarakat (LKM) Pamsimas* (2012)
[32] Ibid
[33] *Instrument of Appointment by the Secretary of State for the Environment of Thames Water Utilities Limited as a water and sewerage undertaker under the Water Act 1989* (2005)
[34] See M. M. Al'Afghani, 'The transparency agenda in water utilities regulation and the role of freedom of information: England and Jakarta case studies' 20 Journal of Water Law 129 P. Rogers and A. Hall, *Effective water governance (TEC background papers no. 7)* (Global Water Partnership, Stockholm 2003) ; also Mónica García Quesada, *Water and Sanitation Services in Europe: Do Legal Frameworks provide for "Good Governance"?* (UNESCO Centre for Water Law Policy and Science at the University of Dundee 2010) as well as Catarina de-Albuquerque, *Report of the independent expert on the issue of human rights obligations related to access to safe drinking water and sanitation, A/HRC/15/31* (2010) and United Nations Committee on Economic Social and Cultural Rights, *General comment no. 15 (2002), The right to water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)* (E/C12/2002/11 20 January 2003, 2003)
[35] G. Palast, J. Oppenheim and T. MacGregor, *Democracy and Regulation: How the Public Can Govern Privatised Essential Services* (Pluto Press 2002)
[36] Al'Afghani and Avessina, 'Focus Group Discussion Report'

regulatory actors, the concept of community-based watsan have several characteristics: certain locality and shared problems in terms of water services, *gotong-royong,* cost-sharing by the community, which could be in kind or in cash, and, operation maintenance by community.[37]

We confirm from our field study that the element of *gotong*-royong and *sharing* was present in Maukaro and Lamongan. A part of the values of *gotong*-royong is volunteerism *"Oh ya gotong royong, Tlanak dulu juga kan ya gotong royong. Tapi harus ada yang di depan lho ya. Harus ada yang di depan, dan yang di depan harus kuat. Kuat pemikirannya, kuat pendanaanya, kuat macem-macemnya*."[38] (We built this by *gotong royong*, but someone must take lead. Those who take the leading role must be strong in vision, in financing in everything). We found in our field study that *volunteerism* is prevalent among CBO officials and – in conjunction with the sense of achievement and social recognition -- becomes one of the primary motivation for CBO officials. Meanwhile, the elements of ownership seemed to be debatable, some are of the opinion that assets must be owned by "communities" while others considered that it can be owned by other entities such as village.[39]

It is also important to understand how the term community is used in Bahasa Indonesia. Bahasa Indonesia uses the term *Masyarakat* to denote ***both*** society and community. While the distinction between community (*gemeinshaft*) and society (*gesselschaft*) is a matter of scholarly debate[40], the term *Masyarakat* is used interchangeably in Indonesian legislations. Thus, when interpreting the term, it is important to look at the context. Al'Afghani notes that the term *Masyarakat* in some parts of the Indonesian water law should be translated as "communities"[41] whereas in various other parts the term can be interpreted as meaning "society".[42]

The Bima by-law on Community-Based Watsan in Bima confers the right of the *Masyarakat* in the planning, operation and supervision of community watsan.[43] The Sikka draft regional by law on community watsan (as of June 2012) confers participatory and access to information rights to *Masyarakat*.[44] Likewise, the Community watsan bylaw in Aceh Besar confers the right to obtain affordable water services and to express their opinion on water services issues to *Masyarakat*.[45] When put in the context of "participation" as part of a governance process, the term Masyarakat should be interpreted as a society (at large).

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[37] Ibid

[38] Mohammad Jibriel Avessina, *Interview with Panggeng SIswadi,Researcher Homestay,Lamongan, 17 January 2015* (2015)

[39] Al'Afghani and Avessina, 'Focus Group Discussion Report'

[40] See Ferdinand Tönnies and Klaus Lichtblau, *Soziologische Schriften : Studien zu Gemeinschaft und Gesellschaft* (VS Verlag für Sozialwissenschaften 2011)

[41] Undang Undang No. 7 Tahun 2004 Tentang Sumber Daya Air Article 6 (2)

[42] See for example ibid Consideration, para D

[43] Peraturan Daerah Pemerintah Daerah Kabupaten Bima Nomor 6 Tahun 2011 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Bima Article 35

[44] , *Risalah sidang Badan Penyelidik Usaha-Usaha Persiapan Kemerdekaan Indonesia (BPUPKI), Panitia Persiapan Kemerdekaan Indonesia(PPKI), 29 Mei 1945-19 Agustus 1945* Article 15

[45] Qanun Kabupaten Aceh Besar Nomor 8 Tahun 2010 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat Article

Another example is from Water Law Article 40 para 3 which states that "State Owned Enterprises and Regional Owned Enterprise are the undertakers[46] of drinking water provision system". In para.4 of Article 40 it is stated that "Cooperatives, privately-owned business enterprises and the [**Masyarakat**] may participate in the undertaking of the development of drinking water provision system".[47]

Al'Afghani has explained that there are certain rationales as to the differentiating status between PDAM and non PDAM services.[48] In short, due to the anti-privatisation debates when the Water Law was enacted, preferences in managing water services were given to state-owned enterprises (hence paragraph 3 above)[49] while other groups can provide water only in certain circumstances.[50] This interpretation is reinforced by the recent Judicial Review which invalidates the Water Law.[51]

The term *Masyarakat* here should be translated as "community" and not society. Although the term used is "participate", it is not to be understood as participation in a decision-making process as described in the three regional bylaws mentioned above. This provision is meant to confer the authority to provide water to groups other than PDAMs. Local community is among them. However, by no means would this grouping solves the difficulties in definition. As will be seen in practice, community groups often take the form of cooperatives.

To summarize, after evaluating policy documents, legal frameworks, focus group discussions and conducting field study, the concept of community-based contains these elements: (i) similarities in terms of locality, values and problem faced (ii) participation and decision making on the planning

[46] The original Bahasa Indonesia of Article 40.3 of Law 7/2004 reads: "Badan usaha milik negara dan/atau badan usaha milik daerah merupakan penyelenggara pengembangan sistem penyediaan air minum". The underlined phrase "merupakan penyelenggara" is the subject of the discussion here. Others have translated the underlined phrase as "will be the organizers of" and "shall carry out the development of.." (LEAD Translation). "Penyelenggara" is a noun, which can be translated into either Organizer or Undertaker, whereas, "merupakan" is a statement of being. The author regards that "are the undertakers of" is the closest expression in English that reflects the original Indonesian phrase.

[47] This article has been dubbed a "disguised privatisation" by a Constitutional Judge. See Mohamad Mova Al'Afghani, 'Anti Privatization Debate, Opaque Rules and Neglected 'Privatised'Water Services Provision: Some Lessons from Indonesia' (STEPS II Conference, "Liquid Dynamics", organized by the International Development Study (IDS) at the University of Sussex, Sussex, 22-23 March 2011)

[48] Ibid also Mohamad Mova Al'Afghani, 'The Role of Legal Frameworks in Enabling Transparency in Water Utilities Regulation' (PhD Thesis, University of Dundee 2012) Chapter 5

[49] Mohamad Mova Al'Afghani, 'Constitutional Court's Review and the Future of Water Law in Indonesia' 2 Law, Environment and Development (LEAD) Journal (2006)

[50] Peraturan Pemerintah No. 16 Tahun 2005 (GR-16) Article 64 (1)

[51] Mohamad Mova Al'Afghani, 'Can the court's concern over water privatization be justified? (Part 2 of 2)' *The Jakarta Post* (March 10 2015) Op-Ed 6 <http://www.thejakartapost.com/news/2015/03/10/part-2-2-can-court-s-concern-over-water-privatization-be-justified.html> accessed May 04, 2015 Mohamad Mova Al'Afghani, 'Court decision brings water governance reforms to a halt ( Part 1 of 2 )' *The Jakarta Post* (March 09 2015) Op-Ed 6 <http://www.thejakartapost.com/news/2015/03/09/court-decision-brings-water-governance-reforms-a-halt-part-1-2.html> accessed May 04, 2015

process (iii) there is a cost sharing, in kind or in cash, by the community in the construction process and (iv) undertakers are appointed from, by and are accountable to the community.

### 1.5 Analytical Framework

The regulation of water services have been the subject of attention for legal scholars. One strain of the literature focuses on economic regulation of water services, discussing the natural monopoly consequences of water services provision, the role of regulators as well as property rights.[52] The other strand of the literatures focuses solely on the legal aspect of regulation, listing down the principles and common features of water services regulation.[53]

However, almost all of the literature discussing the legal aspects of water services focuses on water utilities regulation. As previously mentioned, theoretically the details of the framework for regulating CB Water Services should be quite different than that regulating large-scale utilities. Nevertheless, the general features which regulate large-scale utilities may also be applicable to CB-Watsan. Thus, this section attempts to build a framework for regulating CB-Watsan by first asking the question: How does the regulatory framework for large scale utilities compares to that of CB-Watsan? We then need to explain (i) to what extent would the regulatory features of large-scale utilities can be applicable to CB-Watsan and (ii) which regulatory features are peculiar only to community based water sector.

Hendry groups regulation of water services into 6 topics: structure, ownership and control; duties of supply; standards of supply and treatment; economic regulation and business planning; customer protection and service standards; and water conservation.[54] Meanwhile, following Hendry, AlAfghani develops further the regulatory elements. They comprise of: (i) ownership and regulatory model, (ii) licensing, (iii) internal governance of the economic regulators as well as various regulatory features and powers: (iv) means of acquiring information, (v) investment and network expansion, (vi) tariffs and prices, (vii) service level and customer service, (viii) non-compliance and (ix) redress mechanism.[55]

As previously mentioned, literature measures "sustainability" in community-based watsan in several terms: motivation/willingness to sustain the system, operation and maintenance, financial management and cost-recovery, continuing support, physical condition and consumer satisfaction.[56] The element of motivation/willingness is not relevant in legal analysis but the rest of the elements are.

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[52] Andrei Jouravlev and United Nations. Economic Commission for Latin America and the Caribbean, *Water utility regulation : issues and options for Latin America and the Caribbean* (Economic Commission for Latin America and the Caribbean 2000) also Michael P Hantke-Domas, 'Economic Regulation of Public Utilites with Natural Monopoly Features. A Study of Limitations Imposed by Property Rights from a Legal & Economic Approach' (Dissertation, University East Anglia 2005) M. P. Sanz, M. Schouten and M. Hantke-Domas, 'Consumer-inclusive economic regulation: water pricing under different regulatory regimes'

[53] Sarah Hendry, *Frameworks for Water Law Reform* (Cambridge University Press 2014)also Al'Afghani, 'The Role of Legal Frameworks in Enabling Transparency in Water Utilities Regulation' and Quesada

[54] Sarah Marjorie Hendry, 'An Analytical Framework for Reform of National Water Law' (PhD thesis, University of Dundee 2008)

[55] Al'Afghani, 'The Role of Legal Frameworks in Enabling Transparency in Water Utilities Regulation'

[56] Carter, Tyrrel and Howsam; Sara and Katz

Our field research revealed that most of the regulatory features applicable to utility regulation are also relevant for community-based water services, the exception being the parts on economic regulation. Regulatory-making for CBOs appeared mostly at the community level, thus taking the form of either private law (through deeds, articles of association) or public law, by way of village regulation, whereas, regulatory framework for water utilities usually takes place at the municipal level in a public law mechanism (regional-by-law).

There are also regulatory features which are peculiar to community based water services. First, the role of actors in both pre, during and especially post construction stages are essentials. These actors are elementary for providing post-construction support which determines sustainability. In both Lamongan and Ende, there is a demand for clarity as to which government agencies would be responsible for post-construction monitoring, supervision and assistance. The CBO Association in Lamongan (HIPPAMS Lamongan) executive state that:

" The tasks of the government and regulations are not clear [regarding CB-Watsan]. It is still unclear what they want, how to do the work, how much the budget is and who is supposed to implement the plan. Which institution are we (HIPPAM) supposed to be under? Department of Public Works, BAPEMAS, BAPPEDA or who else? The name HIPPAM cannot be found in the regulation, and another organisation uses the name BPSPAM [instead of HIPPAM]. The name may not be important, but in the regulation and budgeting politics, it has an impact. PDAM has a lot of funds because the name is clear [based on the regulation] although it (the scope of work) is smaller. On the contrary, HIPPAM's scope of work is very clear but the name as well as the budget allocation is unclear."[57]

In light of this, it is important to evaluate the role of governmental actors in post construction phase. Our analytical framework will be broadened as to evaluate the role of governmental actors in every levels of government. Note that government's role in "post construction" are also dependent on national-level regulation and policy. In this respect, how national legislations perceives CB Watsan in comparison with non CB Watsan will later determine its role in post construction. Our framework will thus evaluate the issue of "discriminatory" regulation and how this may affect the government's role in post construction stage.

In terms of ownership, we note from our field studies that after construction projects are completed, most CBOs are being set up in the form of associations (*perkumpulan*), a private law entity:

" HIPPAM was first established and then it was followed by a cooperative (koperasi). It is legalized in the forms of notary deeds, statutes/articles of association, and village regulations. I have made a notary deed registration [for the HIPPAM] in the form of association (perkumpulan) to anticipate [future needs]."[58]

As large scale public utilities are often a subject to public versus private forms of ownership, the situation with CBO is more intricate, but with less ideological weight. Community Based Organization are often considered "private" entities under legal system, which means that they are set-up by private contracts, usually through notarial deeds. However, CBOs can too take "public" form, if they

[57] Mohammad Jibriel Avessina, *Interview with Association Officials (Kasdan, Kiswanto, Atekan Yossy), Asosiasi HIPPAMS Lamongan Office, Lamongan, 9 January, 2015* (Kasdan,Kiswanto,Atekan Yossy)
[58] Avessina, *Interview with Panggeng SIswadi,Researcher Homestay,Lamongan, 17 January 2015*

are set up through public law mechanism such as village regulation. The form of ownership of a CBO will have implications on its independence, abilities to retain profit for reinvestment and eventually also determine its abilities to access government and private financing mechanisms. This report will evaluate various "Legal Forms" of CBO and its implications.

Both Hendry and Al'Afghani included Planning; Investment and Network Expansion; Tariffs/Prices; Service Level as well as Customer Protection and Redress Mechanisms as parts of their analytical frameworks. These elements too, are relevant for CB Watsan. As these elements are CBO-focused and are highly interrelated, they will be analysed in one single chapter: **Regulating CBO's Operations, Maintenance and Expansion.** The framework must fist discuss how Operation, Maintenance and Expansion relate to assets ownership as previously analyzed.

From our field study and analysis of CBO documents, we found that protection of assets infrastructure is an important feature of Operations and Maintenance. Unlike large scale water utilities which rely on national police, regulators, ombudsman and centralized enforcement mechanism to protect its infrastructure assets from destruction or in solving problems relating to inability to pay tariff, the governance mechanism of a CBO is very much localized. From our fieldwork, we note that enforcement and sanctioning mechanism from central apparatus would be too costly (both for the CBO and for the community) to be enforced to rural regions. Thus, the framework will evaluate the efficient and effective enforcement and sanctioning mechanism at the community level.

In some situation the notary deeds of CBOs contain regulatory features such as service standards or operation and maintenance. In other cases there are complementary regulations in the form of village regulation (*peraturan desa*) – which is a public law mechanism.

Finally, the sustainability of the rural water supply systems would be dependent on the security of raw water. This element is not discussed by Al'Afghani but was discussed by Hendry. In this report Raw Water Security is analysed in terms of its "legal protection" and "access rights". What we meant by "legal protection" is the mechanisms in which CBO could "own" or guaranteed access to water source. Meanwhile "access rights" is meant to analyze legal avanues that could be used by CBO in various planning mechanism which eventually determines their water allocation.

For the purpose of this report, we develop an analytical framework specific to the Regulation of Community-Based Water and Sanitation, by incorporating elements from Hendry, Al'Afghani, Carter, Sara and Katz as previously discussed as well as this research's problematique and findings from our 2013, 2014 and 2015 Focus Group Discussions, Field Research and various interviews. The Analytical Framework and its relation with this research's problematique and the literature are as follows:

| General Features | Utilities | | CB-Watsan | | Analytical Framework for the Regulation of Community Based Water and Sanitation |
|---|---|---|---|---|---|
| | Instrument | Characteristics | Instrument | Characteristics | |
| "Post Construction" Support | Public: subsidy<br><br>Private: MoU or cooperation agreement, Water Operator Partnerships or WOPS | Most utilities are regarded to be fully independent. Support, if applicable, takes the form of financial assistance. | Not Clear | Support is required in terms of (i) technical, (ii) financial and (iii) institutional | Role of Governmental Actors<br><br>Role of Central Government<br><br>Role of Provincial Governments<br><br>Role of Regional Government<br><br>Role of Villlages<br><br>Role of PDAM |
| Ownership | Public: By-Laws or Private: Article of Association, Company Statutes | Public versus Private ownership (divestiture both full or partial as well as private sector participation dominates the literature) | Public: Village Regulation,<br>Private: Articles of Associations/ Notary Deeds | The legal forms of "community" ownership is under researched. Which legal forms are most suitable for "community-based" infrastructure? | "Legal Forms" of Community Based Organisation<br><br>Public<br><br>BLUD<br><br>BUM Desa<br><br>Private |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | Cooperatives<br><br>Foundation<br><br>Corporation<br><br>Association with legal entity |
| Internal governance of economic regulators | Public, quasi public.<br><br>Legislations or regulatory codes. | (When regulatory bodies are available) regulates appointments, dismissals, suspensions, conflict of interest within regulatory body | N/A. However, there are associations of CBOs which are privately regulated. | N/A. CBO associations have lobbying and to a certain extent a support role. Can CBO associations perform regulatory roles? | |
| Planning, Investment and Network Expansion | Public. Business Plan or Corporate Plan (Private), Regulator's determinations (Public). Final documents are public. | Top-down planning (through corporate and business plan when available). Regulators often invoke customer hearing. Investment plan are often released to public prior being enacted by regulators. Primary | Private. | Usually if the CBO is able to expand network, it is determined (or reported) in an annual year-end meeting (*Rapat Akhir Tahun*) or other general meeting mechanism. The process are often informal. Some CBO | Regulating CBO's Operations, Maintenance and Expansion<br><br>Assets ownership and its implication to OME |

| | | | | | |
|---|---|---|---|---|---|
| | The long term planning is stipulated in RISPAM | initiative comes from the companies' executive board and usually approved by commissioners. | | include their investment plan in RAT documents.<br><br>Ideally CB_watsan planning should be integrated to RISPAM. | CBO owned<br><br>Village owned<br><br>Operations, Maintenance and Expansion<br><br>Protection of assets infrastructure<br><br>Operation and Maintenance<br><br>Network Expansion<br><br>Tariff<br><br>Structure<br><br>Collection<br><br>Problematique<br><br>Service Standard<br><br>Applicability of water quality regulation<br>Universality of Access |
| Tariffs/Prices or Retribution | Public. Determination by regulatory bodies (when available) or regional heads | Advanced regulatory regimes have price cap embedded in their price structure | Private. Usually retribution/flat tariffs. Usually contained in the organisation's charter (Private) or through a Village Regulation (Public) | Retribution are usually fixed, but some CBOs have implemented progressive tariff. | |
| Service Level | Public. They are usually stipulated in a regional-by-law. | This regulates flow, quality, continuity, quantity. National drinking water quality regulation is regulated through the Regulation of the Ministry of Health | Private. Usually stipulated in organisation charter. | Service level depends on natural conditions. Regulation on clean water quality from the Health Ministry is legally applicable but practically not possible for some CBOs. [FGD AIIRA 2013] | |

| | | | | | |
|---|---|---|---|---|---|
| Customer Protection and Redress Mechanisms | Public. They are usually stipulated in a regional-by-law. | Compensation to customer is usually regulated as one form of redress for violation of service level | Private. Usually stipulated in organisation charter but can also be stipulated in village regulation (Public) | We have yet to discover "compensation" schemes for violation of service standards. Consumer protection measures are thus regulated less stringently compared to common water utilities. There is probably no consumer protection per-se. Consumer "rights" are guaranteed through informal mechanism. | |
| Raw Water Security | Public and Private. Private: certification and contracting | Abstraction licenses | Public, private and Adat. Private: certification and contracting | Most CBO does not have formal license. In Eastern Indonesia, the Adat (customary traditional law) guarantees raw water security through prohibition of logging and oath that transfer spring to CBOs | Raw Water Security<br><br>CBO's Water Rights (HGUA, HGPA, SIPA)<br><br>Legal Protection of Water Source<br><br>Land certification of springs<br><br>Waqf |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | Role of Adat Law (Mosa Laki)<br>CBO Access Rights in Planning Instruments<br>Land Use Planning<br>River Basin Planning<br>Groundwater Planning |

## 1.6 METHODOLOGY

### 1.6.1 FOCUS GROUP DISCUSSIONS

As previously mentioned, the research benefits from two national FGDs and two local FGDs. The first FGD took place on October 11, 2013, with the purpose of sharpening our research question and determining potential case study areas. The second FGD is a local FGD taking place at Ende, our study area, on November 20, 2014. The third FGD is another local FGD taking place in Lamongan on January 26, 2015. These two local FGDs took place at the end of our field work. Its purpose is to discuss some of the issues and findings in our field work and to confront those findings with stakeholders.

The fourth FGD is a national FGD. The purpose of this FGD is to communicate and test our findings and recommendation from our report draft to national stakeholder. It is important to note that in this FGD we find the issues discussed has been "saturated" and rather repetitious – in which we conclude that we have touched almost all major issues in this research. Almost all participants agreed with the majority of our recommendation – with a caveat that regulation should not impose "rigidity" on the CB Watsan system.

On our Research Proposal, we planned a national legal FGD, with the purpose of evaluating our legal analysis in this report. However this idea was later dropped since we felt that most legal scholars would need to comprehend CB watsan issues first, before any analysis is carried out. A one day FGD will not be adequate for such exercise. We thus decided to allocate our resources for two legal reviews. With such review, adequate time are given to the reviewers for discussion, for studying our draft final report and to conduct analysis.

### 1.6.2 IN DEPTH INTERVIEWS

In depth interviews are used as part of case study and FGD follow-ups. Interesting findings from the FGDs are discussed among the team and traced further through in-depth interviews. Conversely, findings from in depth interviews are brought to FGD for triangulation purpose.

### 1.6.3 MULTI-SITED ETHNOGRAPHY

In line with the research objectives and problems, we will use multisited ethnography as a method. Multi-sited ethnography is a method to analyze various data among groups of people and ideas in multiple locations.[59] As a strategy of research, multi-sited

[59] See Norman Kent Denzin and Yvonna Sessions Lincoln, *The Sage handbook of qualitative research* (Sage 2005) Mark-Anthony Falzon, *Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Social Research* (Ashgate Publishing 2009) George E Marcus, 'Ethnography in/of the world system: the emergence of multi-sited ethnography' Annual review of anthropology 95

ethnography is widely used in research that involves fragmentation in geographical context. The multi-sited ethnography perspective allows researcher to understand a macro-level phenomena. An orthodox ethnography method required a researcher in one field-site for a long period of time. Multi-sited ethnography has uniqueness, in that it explores holistically different social, cultural and historical context on various Sites. Multi-sited ethnography approach typically requires use of additional technical operational collection method: in-depth interviews methods, participant-observation and local FGD. Two sites will be used as case studies. The research will explore:

- The relationship between community and infrastructure assets; what "community" assets mean to them; how assets "ownership" is operated in their values;
- The socio-cultural determinants of sustainability on that particular site;
- Ability to manage flow of benefits from watsan assets and its subsequent positive impact on the broader welfare of the community;
- Local knowledge and perspective regarding watsan and community watsan projects
- Local perspective on NGOs and Government (Village or Regency) and their intervention in community watsan;
- Conflicts and power relations within their CBO and between them and external actors such as government, NGO, other villages or corporations and how this affects resource allocation (both in terms of services and bulkwater supplies);
- Whether access to services is universal and non-discriminatory; How women, marginal groups and the disabled are treated in terms of access to services;

The researchers will use operational techniques; in-depth interview methods to describe the dynamics and intersubjective relationship between the partisan parties (among government institution, local people, NGOs) in building up the collaboration, and on government response strategies to provide sustainability for Community watsan program.

Participant-Observation will be employed to clarify researcher's `active participation and engagement. In this research, daily participant-observation will be combined with regular evaluation meetings (local FGD) for knowledge exchange among observers and local people in analyzing the results of local choice and its consequences toward sustainability.

### 1.6.4 LEGAL ANALYSIS

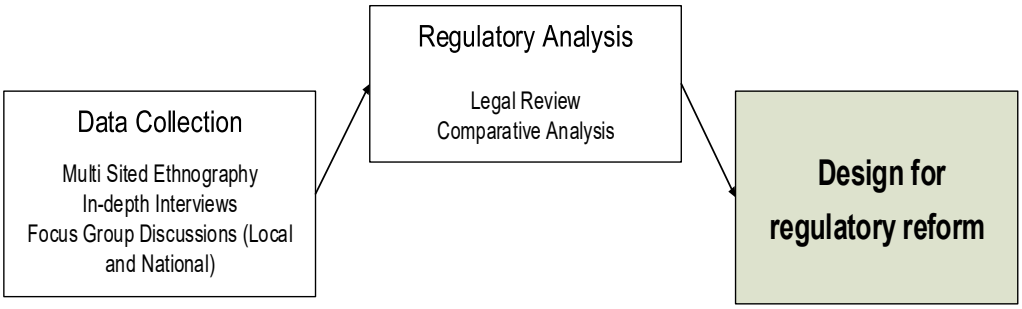
All legislation, regulation and by-laws, including sectoral and ministerial regulation with effect on community based watsan, will be compiled, reviewed and analyzed. The result will be a complete overview on the regulation of community watsan in Indonesia.

### 1.6.5 COMPARATIVE ANALYSIS

The research will compile, compare and benchmark regional by-laws on community watsan with foreign legislations regulating community watsan. The *tertia comparationis* (elements of comparison) will be developed both from the comparative law exercise and policy documents. This will result in a generic analytical framework for community watsan regulation applicable to multiple jurisdictions.

### 1.6.6 REGULATORY DESIGN

Findings from the above are used as information and input to build regulatory design for community watsan. The regulatory design will be brought to a national level policy FGD for a discussion with relevant stakeholders. Summary of the research method can be seen from the table below:




### 1.6.7 DATA ANALYSIS

As is common in "normative-prescriptive" legal research, legislations, regulations and private legal documents (contracts, statements, etc) are considered as "primary data". Meanwhile, social research methods such as FGD, interviews and multi sited ethnography are considered as "secondary data" whose purpose is in confirming *problematique*, aiding interpretation and analysis of primary data and provide input for designing the future law (*de lege feranda*).

### 1.7 LIMITATION AND SCOPE OF STUDY

Notwithstanding the applicability and relevance of various parts of this research in both rural and urban setting of community-based water and sanitation, this research is focused on rural water supply. This is because the majority of our field study was undertaken in a rural setting (villages in Lamongan and Ende) and focused on water supply, although we also collect materials on rural and urban sanitation. We also consider that sanitation value chain, from storage to treatment/disposal carries specific legal implications which would be too broad to be included in this report.

The *estimated* relevance of parts of the analytical framework in community based water sector is marked below. Note that the concern of the analytical framework is "regulatory" not technical.

| Issue | | Water Supply | | Sanitation | | Note |
|---|---|---|---|---|---|---|
| | | Urban | Rural | Urban | Rural | |
| Role of Actors | Central Government | X | X | X | X | The Ministry of Environment will be involved in Sanitation |
| | Provincial Government | X | X | X | X | |
| | Municipal Government | X | X | X | X | |
| | Village | | X | | | The role of village in rural sanitation is still very minimal |
| | PDAM | X | X | | | Some cities have their own sewage treatment company |
| Legal Form of CBO | BLUD | X | X | X | X | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | BUM Desa | | | X | X | Only applicable in Villages |
| | Cooperatives | X | X | X | X | |
| | Foundation | X | X | X | X | |
| | Corporation | X | X | X | X | |
| | Association with Legal Entity | X | X | X | X | |
| Regulating Maintenance, Operation, Expansion | Assets Ownership | X | X | X | X | |
| | Protection of assets infrastructure | X | X | X | X | |
| | Operation and maintenance | X | X | X | X | |
| | Network expansion | X | X | | | In water supply, capacity constrains are determined by raw water, in addition to system. In sanitation, it is dominated by system design. |
| | Tariff | X | X | X | X | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Service Standard | X | X | | | Different service standard will apply for sanitation |
| Raw Water Security | CBO's Water License | | | | | For sanitation, regulation of effluent and ambient water quality is more relevant, although for water supply, both factors have implications to both source and security of raw water |
| | Legal Protection of water source | | | | | |
| | Access rights in planning instruments | | | | | |

# CHAPTER 2: FIELD CONTEXT: ORGANISATIONAL CULTURE OF COMMUNITY BASED INSTITUTIONS

Field researches are conducted in two provinces: East Nusa Tenggara (Maukaro, Ende and Kupang) as well as East Java (Tlanak, Lamongan and Surabaya). In depth interviews and observation are conducted at the village and CBO level. We also conduct interviews at the regency and provincial level. Focus Group Discussion were undertaken at the regency levels (in Lamongan and Ende). Thus, in this research, policy and regulation from all levels of government, from the national to provincial to municipal (regency) and village levels are considered.

Lamongan is selected to illustrate th condition in Java and Ende is selected to illustrate the condition in Eastern Indonesia. The research choose to be focused on case study at the village/CBO level at these two provinces and engage directly with the day-to-day life of the locals in order to gain first hand experience on how policies and regulation made at the national level affects the reality of life at the village level.

The conditions on those two provinces cannot be entirely extrapolated into the overall condition of Indonesia. However, based on interviews and literature research, the problems and practices on those two provinces reflects the most common challenges and variety of complexities which can potentially be addressed through regulatory solution. As will b explained below both provinces are deemed to be the most suitable to be explored in order to answer our research question.

## 2.1 EAST NUSA TENGGARA PROVINCE

The East Nusa Tenggara (NTT) province was suggested as a research site through various stakeholder interviews.[60] The rationale is due to high activity of donor and non-governmental organizations in the regions, as well as local government's perceived responsiveness on CB Watsan initiatives. In terms of regulatory framework, NTT is equipped with Governor's Regulation No.10 Year 2012 on the Development of CB-WS which implements Medium-Term Regional Development Plan and other regional by-laws.[61] The Governor's Regulation provides a legal umbrella for donors, NGOs and other actors to move forward in developing NTT's watsan sector. East Nusa Tenggara's AMPL Task Force (*Pokja AMPL*) were awarded with "AMPL Awards" for its role on the strengthening of system, institution and development of AMPL.[62]

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[60] See Mohammad Jibriel Avessina, *Interview note with Reza Hendrawan,Bakoel Koffie Cikini,Jakarta,25 August 2014* (2014)

[61] Peraturan Gubernur Nusa Tenggara Timur Nomor 10 Tahun 2012 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat

[62] See Waspola, *WASPOLA FACILITY Laporan Bulanan Oktober 2013 Dokumentasi No: 050/2013/AWP1/C4/MR10*
*(AusAid Initiative INI 390) WB TF 071267* (2013) hal 21-23

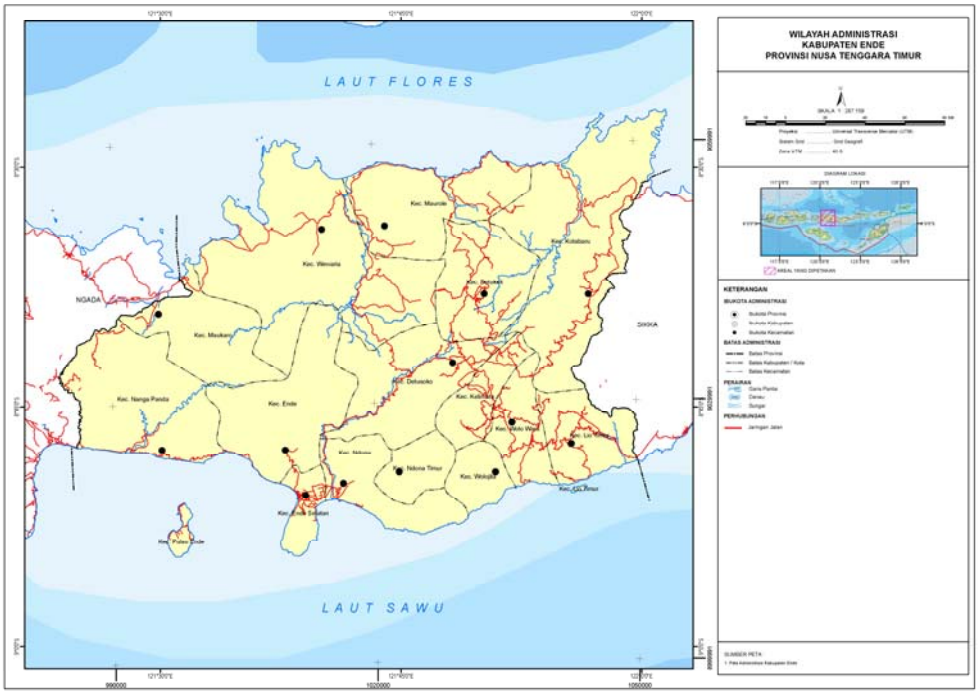
The NTT province has 4.683.827 population and 48.718.10 km square of territory.[63] Another important feature on the NTT region is the prevalence of local tribes and the strong influence of customary law (Adat Law). The NTT province consisted of various tribes, such as the Sabu (in Sabu island), the Helong (in Semau), the Dawan/Atoni (in Kupang), Timor Tengah Selatan, The Tetun (in Timor Tengah Utara), and the Alor. In Flores, its culture is dominated by the legacy of two large Kingdoms, Lio and Ende.[64] These tribes have different cultures and languages and which are adhered to by the local population. Almost all ethnicities acknowledge genealogical differentiations based on ethnicities/clan and that such clans are bound to certain ancestry, language, culture and specific regions.

An adequate understanding of traditional authorities is necessary for the effectiveness of infrastructure governance. Social mobilizations in Flores are influenced by there elites: local governments, Adat and religious elites. Competition among these elite systems may in theory impede developments.[65]

The Adat elites forms a *patron-client* relation between Adat leaders and local communities. Hierarchically, the Adat leadership stratum can be divided into three: Sonbay (Kings, in Kupang or Timor Tengah Selatan), Fetor (district heads) and village chiefs. There are often feuds between fetors over lands or cattle or other resources, culminating in tribes-war.[66] It is important that Adat leaders are de-facto land-lords.[67] They control vast areas of lands in the suburbs or rural regions. These lands, in theory, cannot be sold to third parties without the consent of the Adat leaders.[68] Water projects are most of the time dependent upon water sources located in areas controlled by Adat leaders. Thus, water projects are virtually impossible without their consent. Furthermore, as a living system, the Adat may have influence over infrastructure projects *beyond* the appropriation of water sources. As such, projects which disregard the importance of the Adat in post-construction stage may experience sustainability problems.

[63] See,NTT Biro Pusat Statistik, <www.bps.ntt.go.id> accessed 24 february
[64] See Susan Schrohner, 'Red cocks and black hens Gendered symbolism, kinship and social practice in the Ngada highlands' Bijdragen tot de Taal-, Land- en Volkenkunde / Journal of the Humanities and Social Sciences of Southeast Asia and Oceania 1
[65] See Olaf Smadal, 'Hierarchy, Precedence and Values: Scopes for social action in Ngadhaland, Central Flores. Dalam Precedence : social differentiation in the Austronesian world.' in (ANU E-Press: Canberra 2009)
[66] Schrohner
[67] PEA-Pemda Kab Ende, *LAPORAN KAJIAN BELANJA PUBLIK Sektor Air Minum dan Penyehatan Lingkungan (AMPL)* (2011)
[68] Mohammad Jibriel Avessina, *Interview with Dormaringan Saragih,Jejaring AMPL-Waspola Office,Jakarta,25 September 2014* (2015)

### 2.1.1 ENDE REGENCY




Ende regency was selected as a site through a series of interviews and desk study. Stakeholders that we interviewed informed that Ende regency has a very solid Watsan Task Force (*Pokja AMPL*) that is used as an example for other regions.[69] Most importantly, Ende Regency have recently enacted a regional-by-law on Community Based Water and Environmental Health. Regional By-Law No 13 Tahun 2014 is the primary regulation for CB Watsan activities. It is thus important for this research to study how the law was enacted, its motivations and how it is being implemented.

Ende Regency is around 2.046,60 KM², 79% of its region is in the lowland with elevation less than 500 m2 above sea level. In 2011, its population level is at 260.605 growth rate at 1,59 % per year and density of 127 population per Km².[70] The regency has potential income from fresh and saltwater fisheries. Protected areas in the regency are around 31.610,52 hectares (consisting of protected forests at 24.193,72 Ha, natural preserve at 2.060,30 Hectares and national park at 5.356,50 Hectares, cultivated forest at : 42.707,02 hectares (production forest at 36.557,02 Hectares, limited production forest

[69] Ibid
[70] See Ende Hal 18

2.275,00 Ha, and converted production forest 3.875,00 Ha. [71] In 2013, the regency has per capita income of 8.781.525 rupiah.[72]

Within Ende region, we undertook in depth study in two districts. The first is the district of Pulau Ende and the second is the district of Maukaro. Pulau Ende is selected as it is considered as a success story in sanitation. It is regarded as the first island to achieve Open Defecation Free status in Indonesia.[73] . Meanwhile, Maukaro has been the site of several CB water supply initiatives in the past. The process of community-preparation and conditioning in Maukaro district on the Pro-Air project have been perceived as a role-model.[74]

### 2.1.2 PULAU ENDE

The district of *Pulau Ende* (meaning *Ende Island*) is located in the north of the city of Ende. It is one of 21 regencies in Ende which is separated from the Flores mainland. Pulau Ende regency has 9 villages. It is 63,03 km2 wide and have a total population of 8045 people. In terms of topography, the island is hilly, which left only small space between the hills and the coastline for about 50 meters which is used as residences.

The primary occupation for Ende Islanders is as fishermen. The men sail for 20 days during the dark moon and the remaining 10 days – during full moon -- are used for working in farmlands or ship repairs. The lempara type ship which is commonly used in Pulau Ende, employs 10-12 people. The average income for the fishermen is around 2 to 3 million per month. The fishermen in Pulau Ende supplies fish to nearby city of Ende and its neighboring regions. The island also have small ship building industries which are also sold to other regions. Womens do not sail, they take care of the family and sometimes weave and knit to make additional income.

Farming is an alternative occupation. They farm in narrow fields or on the hillside. Coconut, cassava and corn are the primary crops. Rice has to be imported from outside the island. Their staple food is minced cassava. The island is also a producer of copra, as this is one of the main crops that grows there.

The only viable means of transport from the city of Ende to Pulau Ende is by boat. The regular boats depart from the beach near the city of Ende market every 3 times per day. It takes roughly 60 minutes of boat trip to get into the nearest beach.

There are no four-wheeled vehicles in Pulau Ende. The road network is designed only for motorcycle, which is the primary mode of transport inland. Electricy is available for only 12 hours, from 18.00 to 06.00 in the morning.

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[71] Ibid Hal 19
[72] See Pemkab Kabupaten Ende, <www.endekab.go.id> accessed 25 January
[73] See Qipra Galang Kualita, *Pulau Ende,Kisah sukses pulau Indonesia yang pertama yang terbebas dari buang air sembarangan* (Departemen Kesehatan,Jakarta)Hal 10-12
[74] Mohamad Mova AlAfghani, *Interview with Bambang S,26 October 2014* (26 October 2014, 2014)

One of important fact about the island is that 100% of its inhabitants are moslem, while in the mainland Flores, Catholic is the majority religion. The social context of the Ende communities canot be mapped into the general social structure of Lio and Ende kingdoms, underlying the mainland Flores. In the mainland, the Mosalaki (Adat Chief) holds immense influence. In the Ende Island, the social power is vested on the respective Imams of mosques. Hence, there is no one centralized authority.

Water is a scare resource on Ende Island. There are various wells that is currently being used but all of them are either brakish or saline. This lack of water resources was the reason for the lack of latrine – although this condition have improved after the island attained ODF status. Water from wells are thus used for washing and bathing and not for drinking, although we found several villages which use them for drinking.

Several initiatives have been contemplated and/or implemented in order to overcome the island's water scarcity problem. Among these was the provision of large water storage in early 2000 by the government, where each village obtains 1-2 large storage tanks. In 2004, there was an initiative to deliver water in tanks from mainland Flores by ship, but this initiative was stopped due to high operational cost. A desalination effort using solar cells from Portugal was tried in 2006, but did not last long. In 2007, Ende Regional Government conducted deep well drilling to fulfil water needs. Initially they managed to find freshwater but the quantity was perceived to be inadequate. The operator drilled deeper into the soil but accidentally touch upon layers causing the water to be contaminated by salt water and consequently damage the water source. [75]

In 2006, development of rainwater cisterns was initiated by UNICEF, in which almost all costs are borne by the community themselves. The initiative built around 1555 rainwater cisterns which are still operational until today -- although the quantity is not sufficient to fulfil needs during drought. An initiative which is currently underway is a desalination project funded by the Ministry of Public Works using a public-private partnership scheme. After the construction stage is completed, the assets will be turned over to Ende Regency PDAM who will also be in charge of its operation and maintenance. The desal plan requires high energy and the energy cost may significantly affect the tariff structure. As the construction is still underway, it is not known if this initiative will be sustainable.

The sanitation condition before ODF status was achieved was worse. Ende Island was dubbed "the longest latrine in the world" as it is a custom for the population to go to the beach in early morning to defecate. The population defecated in the open while engaging in small talks. They do so in turn, 5 a.m. in the morning is the schedule for the females and 6.a.m is the schedule for the males.

This behaviour made Ende Island a place with highest diarrhea case in all of Ende Regency. Extraordinary Incidents (*Kejadian Luar Biasa or KLB* – cases where the epidemy

[75]Mohamad Mova AlAfghani, *Interview with Petrus H Djata Ende, 10 November 2014*

result in deaths) were declared in 2004, 2005 and 2006, reaching its peak during droughts. With the the island was dubbed as “disaster island” by health workers.

Latrines have actually been built since around the 80s. Mostly teachers, government bureaucrats and health workers, or those who often receive visits from the mainland built latrines in their homes. However, this is not the majority practice. Several inititatives have been conducted [to build public lactrines for bathing, washing and toilet or *MCK*] but as these were [public toilet], the infrastructure was underused.

It took 5 years of very intensive approach until Ende Island was declared open defecation free. Initially, STBM programs (STBM is the Indonesian version of Community-Led Total Sanitation or CLTS) were rejected by the island communities. The rejection was based on differences of religion between those who profess STBM and the Island’s 100% Moslem communities. At that time Ende Islanders were famous for their isolationism from outside interference. Coastal communities such as in Ende Island are known for their strong and persistent character, which in this case, impedes initiative for change. The communities reacted harshly with the STBM initiative and at some point, expelled officials and facilitators assigned to the Island. [76]

It was only until a more cultural approach was adopted that the islanders gave up their resistance. Islamic teachings regards cleanliness as a part of faith and human excrement is regarded as a form of *najis* – a state of ritually unclean. The religion commands its adherents to perform ritual purification with (among other) water before commencing prayers. One of the notable facilitators was Petrus Djata, who had to change his name into Piet H Djata in order to be able to approach the islanders. Piet studied Qur’anic verses and Hadiths regarding cleanliness. He confronted the communities in gatherings and when people stood up and challenge his words, he would replied back using the verses or the hadith. Slowly, this approach was succesful. The STBM team also introduced a new slogan “*suci orangnya, suci pula negerinya*” which means, if the person is pure, the country is purified. They also motivate the community with the target of making the Island “the third porch of Mecca” after Aceh province.[77]

In order to increase the triggering activities, sanitarians were recruited to live with the communities using all social and religious media in the village. A team was formed in order to expose those who defecates in the open. Various sanctions are imposed, such as the obligation to lift their own excrement and burned them down if they defecate in the open, or denial of certain governmental services. The message of cleanliness was inserted in religious sermons, gatherings and *Posyandu* (health service for children) activities. Some of the local religious leaders were sent to workshops in Ende city.

After 5 years of effort, in 2011 Ende Island was declared Open Defecation Free. A declaration was held on the island and was attended by several government ministers, top ranking officials as well as country representative of several donors. Pulau Ende is

[76] Ibid
[77] Ibid

the first island-based ODF in Indonesia and is regarded as the model for STBM approach in island communities. [78]

Clean water remain an issue at Pulau Ende. Each rainwater cistern can only last for 6 months. Some villages who considered their well water to be less brakish continue to use them. Those in other villages such as Roruranggga and Pu'utara chose to take water from the mainland using motor boats rather than purchasing brakish water from those villages.

For efficiency in rainwater harvesting, metal roofings are required. Most houses used zinc roofs. However, after some time the zinc roofs rusted and cause the harvested rainwater to turn red. Thus, several houses that we encounter no longer used rainwater for drinking. Based on recent random test carried out in 10 wells, high e-coli count was found, though it is unknown how. Post declaration, there are no more facilitators assigned to ensure the sustainability of Open Defecation Free (ODF) status. This has been the primary concern of former facilitators and activists involved in the 5 year effort in Pulau Ende. Household waste needs to be tackled. The Pencerah Nusantara team is planning to build simple wastewater infrastructure to handle the issue. The total amount of latrine has reduced, partially due to abration and there are some incidences of Open Defecation (OD) in the beaches.

### 2.1.3 MAUKARO

The district of Maukaro is located around 98 kilometres from the city of Ende, accessible by land roads. The road condition from Ende to Maukaro is primarily good, until it reaches the district Border, where the roads become impassable for vehicles with low ground-clearance.

The primary occupation in Maukaro is farming. Most of the population are Catholic. Islam is minority, adhered by the Bugis fishermen residing on the beaches. Rice, yam, corns, cacao, cashew, banana, cocounuts are among the dominant crops. Their food security is a combination of farming and plantation. Most farmers own 0,25 – 0,50 hectares and every 0,25 hectares can produce roughly 30 sacks of unhulled rice each weighing 50 kg. Rice farming is conducted twice a year, the first growing season commences in November/December to be harvested in April. The second season commences in May and harvested in August/September. Meanwhile, plantation fields only have single cycle per year, following the rainy season, usually commencing in November/Desember and harvested in March/April. This mode of farming will carry implications for the sustainability of tariff collection. Tarrifs are collectable mostly during harvesting season and conversely, arrears are higher during growing seasons. [79]

[78] Ibid

[79] Mohamad Mova AlAfghani, *Interview with Maukaro`s Head District,Maukaro District Office,Ende,12 November 2014* (Camat Maukaro, 2014)

Basically, farming is the main task for men, while women prepared everything for the males before going to the farm in the morning. Before the water projects, women and children were tasked with collecting water. After the project, women tend to participate with men on the farming activities. The men goes to the farm around 7/8 in the morning and return home at around 6. Activities in the farms and fields depends on the season, drought seasons are usually used to prepare the lands for growing season.

Other occupations include migrant worker in another countries or as construction workers. When the men are outside the villages for these works, the women must manage the land in adition to managing the house for domestic tasks.

The Maukaro district was the site of several water projects, one of the largest one being the Pro-Air project. There are 4 water systems in the Pro Air project, 3 multi-system (one system covers several villages) and one single system. All systems are gravity-fed and implement public taps. The system used steel pipes with a lifetime of 50 years.[80] The BPSAB (*Badan Pengelola Sarana Air* Bersih – local CBO in charge of water supply) Koja Aje is the largest water CBO in Maukaro.

Generally, the social structure in Maukaro is a relation between the Adat Chiefs (*Mosalaki*) who are also landowners and tenant farmers. Maukaro was a part of the Ende Kingdom. Ende was controlled by two kingdoms, Ende Kingdom and Lio Kingdom, who often engaged in rivalries for land control. The prevalence of Adat and the role of Mosalaki is an important feature of Ende social stratum. According to the Adat, the Mosalaki are the owners of the land. The farmers have the right to cultivate the land but the Mosalaki remain the landowners. This ownership of land is not as rigid as it is commonly understood in feudal type landlord-tenant relation. Tenant farmers are only required to pay small tribute in the form of money [around IDR 200,000], mokke (local liquor) and animal offerings during religious ceremony, held at the request of the Mosalaki, called Po'o .[81] This amount is very small if compared to the overall income generated from land cultivation. Note that the Mosalaki is an instution and an organization. There are several Mosalaki in one adat region and their apparatus is in charge of different things.

As such, water sources are located in lands controlled by the Mosalaki. Only through his blessings and consent can anyone utilize the land. In the case of Koja Aje – the largest CBO in Maukaro that is still organisationally functional – the water source is located in a land controlled by Mosalaki Owa Joje, which is the family of the great Mosalaki but then its cultivation is entrusted to Sikke Sani – a party which helped Owa Joje during the war, but the ownership still resides with Owa Joje. With this, the Sikke Sani has the obligation to bear arms in case the Owa Joje family is under attack.[82]

[80] AlAfghani, *Interview with Bambang S,26 October 2014*
[81] Mohamad Mova AlAfghani, *Interview with Bennedictus Bera (Mosalaki),Mosalaki`s House,Ende,12 November 2014* (Bennediktus Bera (Mosalaki), 2014)
[82] Ibid

Any activities related to the land, including agricultural and infrastructure projects, must obtain the consent of the Mosalaki. Symbolically, this is done by "wounding the land" with farming tools. When the Pro Air entered, the land was wounded by its guardian, the Sikke Sani. However, as the land was owned by Mosalaki, the Mosalaki conducted *sosomba*, which a request to the ancestors in the form of a ceremony, in the hope that the spring will always flow. The great mosalaki attended the ceremony and swine blood was poured to the land where construction will take place.

The Adat ceremony also has another role, that is, in making the water and the forest sacred. The Mosalaki ordered that the trees shall be preserved and that logging are prohibited. Those who violates will be fined with 1 jar (equals to 40 bottles) of *Mokke* (traditional liquor), 1 sack of rice and 1 big swine. It is believed that utmost punishment for violation of these sacred vows can take the form of illnesses or even death. The size of the protected forest is around 3 $km^2$. The ceremony also has the role of transferring the ownership of the springs to the CBO – but not the surrounding forests. We asked the Mosalaki, whether it will reclaim the land it has transferred to the CBO. He cited a principle in Adat language: "*pati iwa ari, ti'i iwa ka buki*" which means, those who have been surrendered shall not be reclaimed. The Mosalaki told that if he insist on reclaiming, then he will be cursed and may result in death. [83]

#### 2.1.3.1 Hierarchy Culture of CBOs

We found during our filedwork that of all four CBOs in Maukaro district: Koja Kumi, Koja Aje, Ae Pu'u and Ae Ondho, only one CBO, Koja Aje who are still operating organizationally.

Of all four systems there, Koja Kumi, Koja Aje, Ae Pu'u and Ae Ondho, BPSAB Koja Aje is the only system that is able to maintain its operation. The other systems ceased to operate – organisationally – within 1-2 years of construction. In these other systems, some of the public water taps installed are still running. However, the rest of the taps are no longer running. This forced the population to resort to other sources such as rivers or deep wells. Organisational processes in other CBOs are not functioning properly, this can be seen from the frequency of annual meetings, bookkeeping and tariff collection.[84]

Meanwhile, Koja Aje is still organisationally intact. Contributions are still regularly collected as well as routine maintenance programs and routine visits to each zone, annual meetings and book-keeping and all of the taps are functional. Koja Aje also

[83] John P Talan, *Interveiw with Benediktus Bera, Mosalaki`s House, Ende,15 November 2014*
[84] John Petrus Talan, *Interview with Vinsensius Mei,personal house, 16 November 2014* See also John Petrus Talan, 'Interview with Yoseph Kesu,Nabe Head Village,Nabe Head Village Office,16 November 2014'; also Mohammad Mova Al Afghani, *Interview with Agustinus Meo,Personal House,Ende,13 November 2014* (Agustinus Meo, 2014)

conducted some network expansion activities. However, the Koja Aje system itself is facing some challenges from the Mosalaki families, which refuse to pay tariffs and chose instead to offset the tariff from their salary as zone chiefs.

An understanding of power relations wihtin a social organisation is vital in the discussion of sustainability.[85] In Ende, it is a social reality that Adat plays a powerful role in shaping consensus and local rules relating to economic activities and utilization of land.[86] In terms of CB Watsan project in Maukaro however, recognition to Adat entities are limited as symbolic recognition at the beginning of the project, in the form of a release and transfer of land rights from the Mosa Laki to the CBO.

All CBOs have modern organizational structure with 5 offices: Chairman, Secretary, Treasurer, Zone Leaders and Technical Unit. There is also one informal structure, "Standpipe Coordinator" which is tasked with ensuring the cleanliness of the standpipe.[87] Zone leaders are hamlet chiefs (hamlets or *dusun* are a part of villages or *Desa* and villages are a part of District or *Kecamatan*). These hamlet chiefs are responsible for the collection of tariff in their territory.

The organizational culture in BPSAB Koja Aje resembles the pattern of "hierarchy culture" as dicussed by Kim and Cameroon; an organizational culture with command structure albeit relatively flexible and adjusting rules to social context. In its best form, the hierarchial culture safeguards stability within organization. Leadership has important role in enforcing rules, but is adjusted with the social context. In other words, hierarchy culture puts forward organic solidarity, consolidated with strong administrative network.[88] Within this culture, power contestation rests with the leader. The leader is a figure capable of protecting the society. Hierarchy culture also maintains loyalty and commitment to tradition. Social consensus is the primary vehicle to fulfill collective needs.[89]

The pattern of hierarchy culture is symbolized in the central figure of BPSAB Chairman, Agus Meo. This is visible from his ability in creating the sense of shame for non payment of water services. This can also be seen in his persistent role in enforcing disconnection policy in standpipes – which in turn shut downs water connection to 4 or 5 households which the standpipe serves. According to the CBO rules, stand pipes can be shut down if one household fail to pay water charges for several months. This is implemented up to

[85] Talan, 'Interview with Yoseph Kesu,Nabe Head Village,Nabe Head Village Office,16 November 2014'

[86] AlAfghani, *Interview with Bennedictus Bera (Mosalaki),Mosalaki`s House,Ende,12 November 2014*

[87] *See Afghani*

[88] Kim Cameroon and Robert Quinn, *Diagnosing and Changing Organizational Culture* ( (Reading: Addison-Wesley, 1999)
1999)

[89] Ibid *80-93*

the zone level. This hierarchy of enforcement appears to be effective – in addition to the role of the leader – also because of routine meetings and visit to household premises.[90]

On the other hand, despite similarities in organizational structure between Koja Kumi and Koja Aje, "hierarchy" does not appear to be sufficiently formed in Koja Kumi CBO.[91] During its formation, the CBO based most initiatives on consensus and is incapable of enforcing effective sanctioning mechanism in cases of non-payment. Sanctions in terms of non payment are therefore negotiated bilaterally on a case by case basis.

" I have no idea why things no longer functions around here; only one person remains active, and that is me. I singlehandedly cleaned bronkaptering and stand pipes. There is no more common responsibility."[92]

The hierarchy within the organizational structure appears to be dysfunctional since the it is not led by strong and dominant figure, thus leaving only one person from the technical unit to be in charge of technical matters:

"There are chairman and organizational structure but none of them are working. I am the only one who is left in charge of two villages…. Historically, the maintenance of faucets rests on the community. However, oftentimes they do not fix lekages. So we do not let water flow for 24 hours [in order to maintain continued flow]"[93]

In gravity-fed systems such as the Pro Air model, it is important to maintain pressure. Failure to attend to damages in faucet will cause low pressure and stop water flows.

Weak hierarchy caused various compromise to the system: some consumer negotiated disconnection, some choose to pay in lump-sum and some are allowed to pay in arrears and so there are no certain revenue target from tariff.[94]

The Koja Kumi organizational structure does not create a leadership figure that can protect the ineterst of the locals such as in Koja Aje.[95] This in turn shuts down the organization and left the technical person to be in charge of the declining infrastructure.

"Some people has not pay for years, but we no never collect the fees. But people always demand [water] without adhering their obligation [to pay]"

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[90] Afghani
[91] Talan, 'Interview with Yoseph Kesu,Nabe Head Village,Nabe Head Village Office,16 November 2014'
[92] Talan, *Interview with Vinsensius Mei,personal house, 16 November 2014*
[93] Ibid
[94] Talan, 'Interview with Yoseph Kesu,Nabe Head Village,Nabe Head Village Office,16 November 2014'
[95] Talan, *Interview with Vinsensius Mei,personal house, 16 November 2014*

Interviews from our informant, Vinsentius May, revelaed that collective decision making forum no longer operates.

#### 2.1.3.2 *The Mosalaki*

"When the government came to ask [to ask for permission to build water infrastructure]; we think, if we don't give them [the permission] what would happen to the community? We live with water. If it is the benefit of many people, we give them. Culturally we still own [the land]." (Benedictus Bera, Mosalaki of Koja Aje, Maukaro)[96]

Based on observation and in depth interviews, the role of Mosalakis are vital in at least three aspects of the social life: (1) cultural ownership of natural resources; (2) agents of cultural change and socialization of community programs. The Mosalaki, collectively, has influence in changing community behavior since their action and wishes are regarded by the locals as a representation of a sacred (and oftentimes absolute) authority for cultural and economic decisions; (3) The authority in terms of social sanctionings in various economic activities such as agriculture, logging and other types of natural resources activities.

The authority of Mosalaki came from history of ancestors' migration, alliance, wars and and past conflicts. The current Mosalakis mandates are thus derived from their ancestors traditional power.[97] In some ways, the patterns of conflict, competition and cooperation of their ancestors in the past, determines the strength of Adat in today's Lio-Ende society. Mosalakis whose ancestors won their territory from tribe wars tend to have stronger role in their local community.

The Mosalakis are involved in all traditional ceremonies.[98] Thus, despite the presence of modern bureaucratic structure such as village heads and district heads, the Mosalakis remain important non formal decision makers who decides matters jointly with the formal bureaucracy.[99]

The power relation between Mosalaki and the community is most visible in two ways: the respect of the community on the directions of Mosalakis, in terms of agricultural method and from the tradition of "tributes" from the community to the Mosalaki after harvesting period. Olaf Smedal categorizes Mosalakis structure into seven types:

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[96] See Talan, *Interveiw with Benediktus Bera, Mosalaki`s House, Ende,15 November 2014*

[97] As a comparation see Johannes Emmed Prioharyono, 'Kekuasaan Politik dan Adat Para Mosalaki di Desa Nggela dan Tenda, Kabupaten Ende, Flores ' Vol 33 no 3 September-Desember 2012 Journal Anthropology of Indonesia 180

[98] AlAfghani, *Interview with Maukaro`s Head District,Maukaro District Office,Ende,12 November 2014* See also Mohamad Mova AlAfghani, *Interview with Yohanis Nislaka,BPMD`s Office,Ende 15 November 2014* (Yohanis Nislaka, 2014) also Talan, 'Interview with Yoseph Kesu, Nabe Head Village,Nabe Head Village Office,16 November 2014'

[99] See also John Petrus Talan, 'Fieldnote on Maukaro district 11 November 2014'

*mosa kaba laki wéa. Mosa laki* who is in control of food gold and livestock, who has the right to be given "tribute" after harvests

*mosa tana laki watu* atau *mosa watu laki tana. Mosa laki* is in charge of land use, usually the authority which approves infrastructure developments, the building of roads, bridges, plantations including forestry affairs

*mosa nua laki bo'a.* Mosa laki who is charge of village maintenance (lesser Mosalaki). The role is somewhat equal to village chief in Java. Although they have small territory, they are the socializing agents of traditional values in a village

*mosa wiwi laki lema. Mosa laki who takes the role of delivering social messages, values*

*mosa toa laki wela. Mosa laki who is in charge of religious rites*

*mosa pedu laki rona* OR *mosa péu laki rona* OR *Mosa wiu laki pi'u* OR *mosa pedu laki pada.* Mosa laki who is in charge of regulation, avices and literal traditions, myths, legends, internalization of beliefs

*mosa po laki péra or pu'u* (Grand Mosalaki). *Mosa laki who takes the role of political leader* and has the authority to command other mosa laki.[100]

All these seven categories depict the relationship between Mosalaki and the community.[101]

#### 2.1.3.3 Divergence with Adat

The Mosalakis important, sacred and dominant role in the society also brings influence in development of CB Water. During the pre-construction stage, the Mosalaki has the role in permitting water source to be used for CB water project and to be managed by CBO. The Mosalaki released their ownership of water sources although the land surrounding it are still within their control and possession. Benediktus Bera, the Mosalaki we interviewed stated:

"According to the Adat, all Mosalaki has to be present and witness [during the pre-construction ceremony]. So before we injure the land (*luka tana*[102]) the Mosalakis must hold the hoe or machete together. The machete must touch the pig [used for sacrifice]. The Mosalakis charged with water/land affairs must do this together with other Mosalaki. Thus we can no longer claim the water source, since it has been

[100] Olaf Smedal, *Hierarchy, Precedence and Values: Scopes for social action in Ngadhaland, Central Flores. Dalam Precedence : social differentiation in the Austronesian world* (ANU E-Press: Canberra 2009) Pp 209-227
[101] Ibid 209-227
[102] The land is considered sacred and a soure of life. Any infrastructure or agricultural activities, such as ploughing the land, planting it, building foundations are activities which "injure the land". Such activities must obtain the permission of the Mosalaki, especially, those tasked with land affairs.

transferred to the CBO. If anyone dare to take back the spring, it will be their own risk. Because we swore an oath to our ancestors, to the land, we cannot take back, it is "pamali" (an activity which can entail negative conseqeunces according to their belief). If one dares to take back, they will be in danger [from sickness or health]. CBOs always invited us if they gather for a meeting.[103]

As previously discussed, Koja Aje CBO is the only Pro-Air CBO which is still organizationally functional in Maukaro District. However, they also face challenges in terms of the relationship with Mosalaki. The Mosalakis does not want to pay for the water fee for their Hamlet and opt to offset the payment with their incentive as Zone leaders. In the Pro Air system, zone leaders are given incentives due to their part in collecting fees. This situation has consequences to the CBO's financials and cause disturbance in the system, since the Mosalaki's hamlet will receive special status.[104]

In Koja Aje, the CBO finally had to accommodate and compromise with the Mosalaki's hamlet. This discrimination may in longer term jeopardize the CBO's organizational culture and effectiveness in sanctioning. [105] However, this compromise seemed to be inevitable. The Mosalaki has been given separate standpipes not far from their homes during construction stages. [106] The privileged standpipe is a manifestation of actual inequality on the underlying power structure in traditional communities. The Mosalaki's refusal to pay fee for his hamlet is another manifestation of this inequal power.

We thus conclude that the CBO, an epitome of a "modern"organization system, is still unable to trump the orginal hierarchial power structure. Agus Meo's CBO hierarchy culture, which is effective in many ways, still needs to adjust, accomodate and compromise with the Adat system.[107]

The Mosalakis are not given an adequate role in the day-to-day water services. Furthermore, they are structurally placed at the same level with other ordinary community members. The project also introduced modern sanctioning systems, drafted through a public consensus and meetings, in the form of penalties and disconnection. Through these actions, the holders of actual social sanctioning systems become vacant. Modern regulation and consensus at the CBO and village level have not been able to replace and re fill the traditional system.

The *patronage* of the Mosalaki has a strong influence in the utilization of water resources. The inequal power relation between Mosalaki and the community bring impact on the sustainability of the CBO. Although modern regulatory systems are in

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[103] Talan, *Interveiw with Benediktus Bera, Mosalaki`s House, Ende,15 November 2014* See Wawancara dengan Mosalaki Owa Oje, Benediktus Bera pada tanggal 12 November 2014
[104] John Petrus Talan, *Fieldnote report 30 November 2014* Observation on BPSAB ratesuba `s zone on 15 November 2014
[105] Talan, *Interveiw with Benediktus Bera, Mosalaki`s House, Ende,15 November 2014*
[106] Ibid
[107] Ibid

place, the fate and sustainability of the water systems are -- informally-- still largely dependent on the Mosalaki.

Modern regulatory systems relies "compliance" through financial incentives – in the form of fines, for example. This is fundamentally different from the traditional sanctioning mechanisms which have been known for centuries in the Ende regencies, in terms of methods and ways of agriculture, treating forests, land and harvests, which relies on "obedience" towards tradition.

On the other hand, the role of the Mosalaki during the pre-construction stage, manifested in the relegation of control over water spring to the CBO and the vow to protect catchment area from deforestation has been very effective. The locals confirmed that no one dares to violate the sancity of the forests, which has been protected through adat ceremony. Benediktus Bera, a Mosalaki adds that:

"Fines are a must. Based on adat law, [the violator shall provide] one pig and one sack of rice (called *are guni*). The pig must be a big one. It is forbidden [to cut trees], because they (forest/tree) are the place for the spring. If a tree is cut, we, Mosalaki, will call all of our elders [to deal with the problem]."[108]

Thus, the role of the Mosalaki in protecting raw water sources are confirmed.

However, removing Mosalaki from day-to-day affairs in the post-construction stage creates problems. Replacing Mosalaki governance with modern system, such as fee collection, public meetings, written rules such as articles of associations, sanctioning through penalty does not seemed to be effective in the context of rural Ende.

The failure of modern "compliance" system when compared to "obedience" with traditional culture can be seen from Vincetius Mei's (the technical person at Kuja Kumi) statement as follows:

"I do not wish to seek enemies, if they say open, I will open (the valve) although they do not pay (the fee). I do not want this to become personal enemy. Only when there are not enough water in the reservoir I am forced to turn off the valve (in order to create pressure)."[109]

From this statement, the modern system is not adequately effective in ensuring "compliance" which is necessary for the sustainability of water CBOs. Conflicts arise and the CBO system is unable to maintain stability and orderliness in the social sphere. This is diametrically different from the "obedience" of the local population towards the

[108] AlAfghani, *Interview with Bennedictus Bera (Mosalaki),Mosalaki`s House,Ende,12 November 2014*
[109] Talan, *Interview with Vinsensius Mei,personal house, 16 November 2014*

Mosalaki's order not to disturb the trees and the forests surrounding water springs, which remains effective until today.

We thus conclude that water projects can be sustainable if they are sufficiently integrated with local traditions. In the case of Maukaro, integration is successful in the *resources side* -- in ensuring raw water security. Conversely, the lack of integration on the *services side* has implications towards conflict, lack of effectiveness in sanctioning systems which contributes to weaknesses to other operations and maintenance cycle.

The Mosalakis are a form of traditional "bureaucracy" system, which, as a collective, have been a sacred symbol of social orderliness for local communities for centuries. Imposition of new, modern organizational systems, such as water CBOs by donor agencies and NGOs, introduces and creates a new power structure in the community. This new power structure often overlaps with the traditional and governmental bureaucracy which results in conflict.

It is thus fundamental that water projects are sufficiently integrated with local institutional endowment, rather than creating new power structures which may place them at odds with older structures. The types and methods of integration between Adat and water projects and how to place post-construction structure of rural water services within the context of Adat and Mosalaki's structure requires further research.

### 2.2 EAST JAVA PROVINCE

The East Java province have been supportive of the development of Community Based Water and Sanitation. This support is manifested through provincial-by-law on Medium Term Development Plan (*RPJMD*) which covers also the implementation of AMPL programs in 2005. The province is predominantly moslem, with the majority being the Nahdlatul Ulama and Muhammadiyah schools of Islam. Governor's instruction number 11 on 1985 mandates the creation of drinking water user group or Himpunan Penduduk Pemakai Air Minum ("HIPPAM").[110]

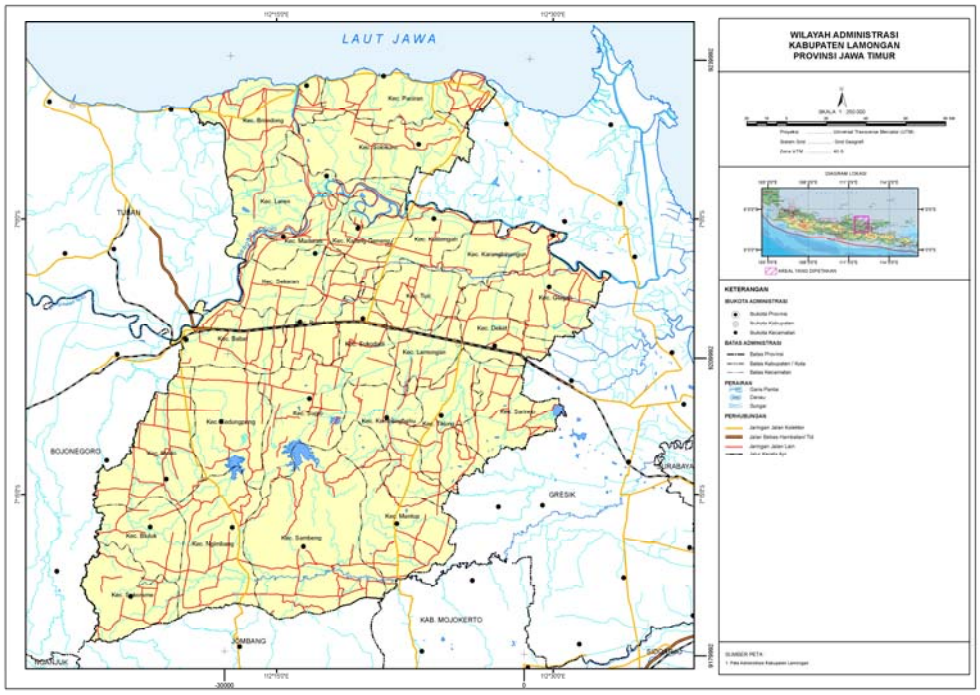
Indonesia's 2nd largest city, Surabaya, is located in the East Java province. Many prominent national figures, including three Indonesian presidents, were from East Java. The province has been the center of Indonesia since the past. The capital of a once large empire, Majapahit, was located in East Java. Thus, East Java is deemed to be quite familiar with Java-oriented bureaucratic culture in Indonesia.[111] Generally, the infrastructure of East Java is much better than that of eastern Indonesia, such as NTT. However, some road networks are relatively new, as they have been built only recently after the 1998 reform. East Java is selected in order to compare the infrastructure

[110] Statuta, 'Instruksi Gubernur nomor 11 Tahun 1985 tentang pembentukan Himpunan pemakai air minum '

[111] Hans Antlov, *Village and Sub-District Functions in Decentralized Indonesia* (2012)

governance of Java and Eastern Indonesia. The influence of Adat on infrastructure governance is also not as complex as NTT. East Java adheres to the values of centrality of power, manifested in the micro-form, in the form of villages.

### 2.3 LAMONGAN REGENCY




The Water Supply and Sanitation for Low Income Communities Project (WSLIC2) in Lamongan is deemed to be quite sustainable. In terms of quality and function, their sustainability score is high, whereas in terms of financial and management, they are a little above the sustainability line.[112] Lamongan is located in the northern coast of East Java. Part of the coastal regions are on the landslide area, which is a continuation of the northern carst mountains. 72,5% of its regions are plains with 0-2% gradient. The Lamongan Regency have population around 1.186.458 people and also consist of 14.843.138 on GDP, Economics development increase up to 6,90 percent and 5% rate of open employment.[113]

Community Based Watsan is developing rapidly in Lamongan, providing around 70-80 percent of total access. In comparison to Ende, the success in Lamongan is due to, partially, proximity to metropolitan city – especially Surabaya -- which provides CBOs

[112] See laporan LP3ES "Kajian cepat terhadap program-program pengentasan kemiskinan pemerintah Indonesia: Program WSLIC-2 dan PAMSIMAS.Jakarta,2007 hal 3-19
[113] See http://lamongankab.bps.go.id/ diakses pada tangal 25 Februari 2015 pukul 17.00

with adequate access to materials and human resources required to sustain water services.[114] CBOs in Lamongan have direct access to suppliers in Surabaya. The village head office states that:

"We get them (materials) quickly. We directly take them from Surabaya. My friend will call and if the materials are ready, we will immediately go to get them. We have alot of consumers."[115]

The public works department has a roster of technical people in Lamongan city or nearby which can be provide professional technical assistance to CBOs for repairs.

Lamongan has also been a focus of attention of donors and NGOs, and this also contributes to some of the CBO success stories, as will be discussed below. According to Panggeng Siswadi, his CBO has received supports from WSLIC2 (World Bank) and Second Generation Project (INDII).[116]

Research by Prabhaharyaka – conducted in Demak and Lamongan – concluded that three factors are detrimental to CBOs sustainability: reliability of flow, tariff, and capacity ratio. Capacity ratio is the comparison between target capacity as planned and its realization in the amount of household connections. Several other factors affecting sustainability according to Prabhaharyaka are the need of "mentoring" in CBO critical age (up to 2 years); weariness, due to lack of lack of reward and lack of legal schemes to alter the form of CBO from one legal form to another.[117]

Professionalisation and the need for a regulatory framework was discussed in the Multi Village Pooling Project (MVP). According to Sy, et.al, formalisation "*…brings a level of security to CBOs*" – in the form of legal protection, property rights, raw water security, limitation of liability. In addition, "compliance" is perceived to make CBOs trustworthy – in the eyes of Banks or other financiers. Thus, formalities are perceived as one of the prerequisites of professionalization. [118]

Since the CBOs in Lamongan are relatively sustainable and some are quite modern in terms of management, we will explain the Lamongan field context through the lens of "professionalisation". Authors have developed analytical frameworks in looking at professionalisation. Lockwood suggested several steps towards professionalisation: (1) formal recognition of rural water management structures within local government by-

[114] Mohammad JIbriel Avessina, *Interview with Choirul Aziz,village head office, Lamongan,14 January 2015* (Choirul Aziz, 2015)
[115] Ibid
[116] Mohammad Jibriel Avessina, *Interview with Panggeg Siswadi,Panggeng Siswadi`s House,Lamongan,13 January 2015* (Panggeng Siswadi, 2015) Mohammad Jibriel Avessina, 'Interview with Panggeng Siswadi,Researcher homestay,Lamongan 18 January 2015'
[117] Indrawan Prabaharyaka, *Kajian Efektivitas Kinerja Kelembagaan UPS-KPS (Unit Pengelola Sarana – Kelompok Pengelola Sarana) Perdesaan* (2014) Pp 1-11
[118]Et al Jemmima SY, *Multi-Village Pooling Project in Indonesia* (October, 2011) Hal 1-25

laws and national legislation and policy guarantee of legal standing of water management committees (2) approval towards delegated management as an alternative service provider model to community-based management (3) clarification of roles and responsibilities between service authority, the service provider and day-to-day operators, (4) capacity building in order to permit future replication and scaling up, (5) the existence of support service authorities (within districts or municipalities) and finally, (6) commitment to sufficient funding and human resources for implementation.[119]

Meanwhile, Weiss-Gal and Welbourne suggested these indicators of a "profession": (i) public recognition of professional status; (ii) professional monopoly over specific types of work; (iii) professional autonomy of action; (iv) possession of a distinctive knowledge base; (v) professional education regulated by members of the profession; (vi) an effective professional organisation; (vii) codified ethical standards; and (viii) prestige and remuneration reflecting professional standing. [120]

Formal recognition towards water in regional by-laws is absent in Lamongan. We made this concluson based on legal analysis and interviews. According to one government official: "*… perhaps, what is more important than regional by laws is for everything to function properly… and that we can provide guidance and mentoring to the communities….*[121]

Based on our observation, CB watsan policies in Lamongan are implemented through informal communications between governmental actors and CBOs, rather than through legislation. Indeed, even without regulatory frameworks, they are relatively effective. In Kiswanto's words, "*…the culture has already been built, but the structure is not*". He adds:

"This discussion is not enough to answer whether BUMDes is good or not. The issue is very comprehensive as there is a relation between higher and lower regulations. At the lower level (local level), there is clear assistance. The culture is unclear and the influence is very significant and sometimes overruns the regulation. That is why assistance at the regency level is important because it develops culture, not structure. This is because PAMSIMAS has been maximised to develop structure, but it has not succeeded because the culture is not ready. Therefore, a balance should be created in order to reach sustainability. Vice versa., If it is only culture that is being developed and structure is being ignored, it also does not work. In Lamongan,

[119] Harold Lockwood, 'Professionalising community-based management for rural water services' IRC, December 2011

[120] Idit Weiss-Gal and Penelope Wellborne, 'The professionalisation of social work: a cross-national exploration' Int J Soc Welfare 2008:17 : 281–290 INTERNATIONAL JOURNAL OF SOCIAL WELFARE
ISSN 1369-6866

[121] Mohammad Jibriel Avessina, *Interview with Galih Yanuar (Bappeda Official), Hilmi (Bappeda Official), Agus Pindo (PU Official),Bappeda Office,Lamongan,9 Januari 2015*
(Galih Yanuar, Hilmi, Agus Pindo 2015)

culture has been developed but there is no structure. This is not right and other places will not be able to replicate this model."[122]

One CBO chairman -- which becomes one of the primary focus of our fieldwork – suggested:

"….. our CBO becomes a Champion of provincial CBO championship for East Java. The best in East Java. … I have been working as a teacher for 23 years, but never been awarded championship. But I served in CBO for 4 to 5 years and I was awarded as a champion. I was invited here and there and my plane tickets are paid in full, this because I serve with the CBO[123]

Government officials from East Java province told us that regular competition involving HIPPAMS are held annually and no CBO can hold the champion title more than once. Thus, although formal legal recognition is absent, the East Java government tried to foster CBO development through competition.

In Tlanak, East Java, due to its success and recognition both internally and externally, CBO officials become a new village elite. The former CBO secretary participated in village head elections and won. These recognitions and the new power-status provide prestige for the CBO. However, remuneration does not appear to be a motivating factor. Both the CBO Chairman and the former Secretary (who now take office as the Village Head) considered that what they do is motivated by *Ibadah* (the worship of God under Islamic tradition).

The Village Head, Madam Rahayu commented:

"… the project advisors asked me: Do you sister have any other activies? I said of course. Are you not sorry joining this? I said God Willing, No. From the beginning, my intention is for Ibadah. [At the beginning was difficult] we faced tough challenges and skepticism from the community.. )

While Panggung Siswadi argues in following statement:

"I never calculate **[**remuneration**]**, never. [As a consequence] good fortune will follow. I work on it based on ikhlas (whole-heartedly because of God). If I don't have anything in return, [God] will replace it with something. That's all, it is very simple."[124]

Panggeng Siswadi also explained, The tarrification of water in Tlanak is quite sophisticated. While most CBOs employ only flat tariff/retribution, Tlanak has several

[122] Avessina, *Interview with Association Officials (Kasdan, Kiswanto, Atekan Yossy), Asosiasi HIPPAMS Lamongan Office, Lamongan, 9 January, 2015*
[123] Mohammad Jibriel Avessina, *Interview with Panggeng Siswadi,Panggeng SIswadi`s House, Lamongan,13 January 2015* (Panggeng SIswadi)
[124] Ibid

tariff layers. Basic fee is at 2000 rupiah and then progrssively raising up to 6000 rupiah, depending on the volume of water use.

The legal form employed in Tlanak is an association (*Perkumpulan*). Its coverage is 6250 people with 24/7 continuity.[125]

Roles and responsibilities of CBO personnel in Tlanak are well specified. Planning is conducted primarily by the Chairman. Technical jobs are executed by the technical staff, which includes, development of more wells, electricity connection, construction of tower reservoir and pipe networks.[126] To this extent the supply of water is stable, both during the rainy and drought. There is a specific counter designated for payments of charges, located at the HIPPAMS office next to the Village Meeting Hall. The progressive tariff is stipulated in Village Regulation.[127]

The billing mechanism and accounting use computer software. Each customer is coded with certain number. The database contains data on the position of water meters collected by technical staff. The margin of the meter data indicates the volume of water that must be paid. The administrative personnel also takes the role of bill collector. Failure to pay the bills in three consecutive months will result in disconnection.[128] Late fees are imposed, in the amount of 1500 Rupiah. The overall collection rate is 90%, which indicates that the CBO is financially sustainable.

There is a lack of formal customer service standard in Tlanak. However, there is a convention with repect to the following: repair works beyond metering device (outside of home network) is the responsibility of the CBO. Water access is available for 24 hours. Water is physically clean and clear and finally, the water is not brakish.

The CBO in Tlanak appears to have been quite succesful in enhancing technical and administrative capacity. According to the technical person, he obtain knowledge in terms of developing electricity panel, counting of water flow to customer. "*At first there were only 125 household connections, now we improve into 400*".[129] The Water Sanitation Program (INDII/WorldBank) assisted the CBO with accounting skills and was followed by the treasurer. Customer database and billing system are now conducted by an accounting software they purchased. [130]

In both Tlanak and Kemlagilor, the public appears to recognize CBO's work. Audy, a HIPPAMS/CBO consumer states this following statement:

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[125]Avessina, 'Interview with Panggeng Siswadi,Researcher homestay,Lamongan 18 January 2015'
[126] Mohammad Jibriel Avessina, *Interview with Choirul Aziz,Warung Kopi TegalLondo,Lamongan, 15 January 2015* (2015)
[127] See dalam buku paduan HIPPAMS Tirto Agung Tlanak yang diususn pada tahun 2013
[128]
[129] Mohammad JIbriel Avessina, *Interview with Village Head Tlanak, Rahayu* (Rahayu, 2015)
[130] Mohammad JIbriel Avessina, *Interview with Dimas Indriani,CBO/HIppams Treasurer,personal house,Lamongan 15 January 2015* (Dimas Indriani, 2015)

" The goal of HIPPAM was to eradicate poverty, so that the poor people can use clean water and not bathe in a river, because we used to bathe in the river. At present, the community members are not bathing in the river anymore. [Water supplied by HIPPAM] can be accessed at home".[131]

" It depends on the user. If they get used to consuming tap water, then the taste of water from the lake would not be good, and vice versa. In Mblaji village, they have a lake with good water quality. Although HIPPAM exists in that village, the people prefer to take water from the lake. They got used to taking it from the lake. However, compared to their water, our water here is better."[132]

Job functions within the CBO appears to be well-specified. Chairman, secretary, treasurer and technical personnel all have well-defined functions and role. However, in Kemlagilor, chairman and sceretary must also understand and conduct technical work. The CBO officials state that:

" Actually there is a regeneration before the turn over of personnel happened. Therefore, before a person is replaced, 1 or 2 new members are hired and trained. The senior one will give lessons [training the new members] before his working period finishes. In terms of technician, although there is a structural changes, the technician is still on duty. However, in order to do drilling, we need to find [ other people] from outside, who should be experts. Also, if there is significant damage, we will ask [ other people] from outside, because we don't dare [to do it by ourselves]."[133]

In terms of knowledge basis, most CBO officers do not have formal education required to perform their tasks. Most obtain knowledge through trainings which are sometimes provided by NGO and government and from their experience, rather than through formal education. There is no such thing as formal "professional education" for CB watsan officers. By comparison, the Association of Drinking Water Utility (Perpamsi) has technical schools intended to educate PDAM employees. There are also national level association for water and environmental engineers.

There is no professional organization "supervising" CB Watsan – as commonly found in medical or legal profession. Lamongan is fortunate, since an association of CBOs is? present – and oftentimes conduct technical assistance and the supply of materials to CBO (for a fee). However, the CBO association in Lamongan does not function as a professional organization. It functions primarily as supplier for materials used in CB

[131] Mohammad Jibriel Avessina, *Interview with Audy,Community Leader,Warung Kopi, Lamongan 15 2015* (Audi, 2015)
[132] Iwan Statement from researcher interview, Mohammad Jibriel Avessina, *Interview with Masrukin,Iwan and Fadheli,CBO official at Kemlagilor, Kemlagilor village head official,Lamongan,24 January 2015* (2015)
[133] Mohammad Jibriel Avessina, *Interview with Masrukin and Fadeli,CBO Official,Kemlagilor village head office,21 January 2015* (Pengurus Kelompok Pengelola Sarana (KPS) Kemlagilor (Masrukin dan Fadeli), 2015)

Watsan infrastructure and technical support for maintanance and repair works. The CBO association's business model, however, may be under threat. CB Watsan currently has direct access to technical and material resources to other actors in the region, which charge them with competitive price. [134]

We do not find the existence of an "ethics code" normally found in established professions. Indeed there are technical guidelines developed by donor organizations – but they are far from functioning as some sort of agreed ethics code intended to oversee the profession.

Prestige and remuneration appears to be a contradiction when it comes to watsan CBO we studied. In Tlanak, prestige certainly does not come from remuneration. In Tlanak, the officers are paid around IDR 700.000 (54 USD) per month, whereas in Kemlagilor, around IDR 300.000 (23 USD) per month. Note that most of the CBO chairman have full-time jobs. Prestige comes from public recognition and the elevated social status of CBO officers in the decision making process of village affairs. Recognition from government (in the form of awards, etc), NGOs and even researchers who come to their village to study their management are also important elements of prestige. In a way, the water movement in Tlanak appears to produce a new ruling elite. After the former CBO secretary was elected as village head, the CBO leaders and the CBO itself enjoys more prestigious status.

[134] Wawancara dengan Asosiasi HIPPAMS Lamongan pada tanggal 9 Januari 2015 di Kantor Asosiasi HIPPAMS Lamongan

# CHAPTER 3: Role of Government Actors

The policy and regulatory framework of water services (including Community-based Water and Sanitation) are shaped and influenced by a number of government actors. The House of Representative (*Dewan Perwakilan Rakyat*) enacted primary legislations ("Undang-Undang"). Legislations enacted by the House is subject to constitutional scrutiny by the Constitutional Court. Legislations are often invalidated – partially or entirely by the Constitutional Court for being incompatible with the Constitution.

Lead ministries shapes implementing regulations in the water sector. The Ministry of Public Works is the lead ministry for both water resources and services. Implementing regulations, in the form of Government Regulation (a secondary legislation right below *Undang-Undang*) in the water sector is drafted by the Public Works Ministry – with some coordination other ministries. The Public Works, in addition to building some of the infrastructure, also issue standard for water services. The Ministry of Health is in charge with drinking water quality regulation and the Ministry of Environment is in charge of effluent standards. The Ministry of Home Affairs issues regulations in relation to regional autonomy affairs, including thise pertaining water tariff and region-owned enterprises.

## 3.1 Judicial Review of Law No.7/2004 and Its Implications

### 3.1.1 THE JUDICIAL REVIEW

The national government – including its judiciary -- is the primary actor in regulatory and policy making in the water sector. Judicial review of parliamentary enacted legislation by the Constitutional Court, including the Water Law have important implications to the practice of water services.

On February 18, 2015, the Indonesian Constitutional Court invalidated Law No. 7/2004 on water resources. Prior to that date, in 2005 the court had decided that the law was conditionally constitutional, meaning that the law could be petitioned for another judicial review or even invalidated sometime in the future if the implementing regulation contradicted the court's prescriptions, which are mostly about commercialization, privatization and full cost recovery principles that were deemed to contradict Article 33 of the Constitution.

Due to the invalidation, implementing regulations of the law including GR No. 16/2005 regarding SPAM, GR No. 43/2008 regarding groundwater, etc, are legally null and void. Thus, the framework for conservation and management of water resources in Indonesia no longer exists.

In order to prevent a legal vacuum, the court reinstated Law No. 11/1974 on Irrigation, which was aimed to induce food self-sufficiency (swasembada pangan) rather than to protect and manage the water resource.

The 2005 constitutional court decision provides a corridor for the water management in Indonesia. The 2005 decision was referred by the court's 2015 decision. The 2015 decision includes six basic principles regarding water management in Indonesia, as follows:

1) The water commercialization shall not impede, override, and/or abolish the right of the people to the land, water and the natural riches contained therein. They shall be controlled by the State and exploited to the greatest benefit of the people;
2) The state shall fulfill the people's right to water since the access to water is a human right. Article 28 I (4) Constitution 1945 stipulates that "Protecting, advancing, upholding and the fulfilling the human rights are the responsibility of the state, especially the government."
3) Environmental sustainability is a part of human rights; therefore, Article 28H (1) Constitution 1945 states "Every person shall have the right to live in physical and spiritual prosperity, to have a home and to enjoy a good and healthy environment, and shall have the right to obtain medical care".
4) Based on Article 33 (3) Constitution 1945, water, which is an important sector of production that affects the lives of the people shall be under the powers of the State, and shall be used to the greatest benefit of the people. Therefore, the supervision and the control by the state regarding water is absolute;
5) Another form of control by the state due to the importance of water that affects the lives of the people, is prioritizing permits for water commercialization to the State Owned Enterprise (BUMN) or Region-Owned Enterprise (BUMD);
6) In the event all the restrictions above have been fulfilled and there is an availability of water, the Government may grant permits to private enterprises to commercialize water based on strict requirements.

In order to prevent legal gaps in the water management sector, in the short term, the government has drafted three government regulations regarding water and sanitation (RPP SPAM), commercialization (RPP Pengusahaan), and Management of Water Resources (RPP PSDA). However, there were discussions that matters pertaining management of water resources will be regulated in ministerial regulation, rather than a government regulation (RPP SDA). The content of the drafts are not publicly available. In the long term, the government plans to draft a new law on water management.

Analysis of invalidated water legislations remains relevant since in theory, not every parts of the law are unconstitutional and thus, the provisions can be reincluded in the new water regulations. The analysis is important in the context of legal history, in order to provide government's perception and understanding of CB Watsan's role in national legal system and to provide an analytical framework for future regulation.

### 3.1.2 THE IMPLICATIONS FOR CBOS

The Indonesian government has set a target date of 2019 for universal access to water and sanitation, in which, it is estimated that 60% of it will depend on the CB watsan network. The court decision affects the sector of drinking water and sanitation for its citizens as part of sustainable development goals. There is a wide loophole regarding the CBO Watsan due to the invalidation of the Law No. 7/2004. Several concerns regarding CBO watsan are:

There is a need for clarification regarding the license category applied to CB-Watsan. The principle recommended by the court decision is as follows: *"…..the main priority that is granted for water commercialization is the BUMN or BUMD*", Following the Judicial Review, the prerequisites for obtaining commercialization has become more stringent and preference for water commercialization is given to state-owned and regionally owned enterprises. To this extent, there is no clarity on which licenses will be applied to water and sanitation in general. The licensing framework for both CB and PDAM are thus still unclear.

There is a need for clarification regarding the role of private enterprise. The principle recommended by the court decision is as follows: "*In the event all the restrictions above have been fulfilled and there is an availability of water, the Government may grant permits to private enterprises to commercialize water based on strict requirements*". The role of private sector/enterprise will be limited with strict requirements. However, there is no further explanation regarding "private," whether it covers cooperative (*koperasi*), an individual company, and other business entities including various small-scale industries that utilize water as a medium or raw material. If the small scale industries and communities are categorized as "private," it means that their roles have to be limited with strict requirements.

CB watsan's role in fulfilling the daily basic water needs of the people must be clarified. The court states that access to water is a human right. Water as a human right refers to the General Comment 15 (GC-15) which interprets the International Covenant on Economic Social and cultural Rights (ICESCR) which is ratified by Indonesia.[135] The GC-15 declares:
*"In the Committee's view, at least a number of core obligations in relation to the right to water can be identified, which are of immediate effect:*
*a. To ensure access to the minimum essential amount of water, that is sufficient and safe for personal and domestic uses to prevent disease*". It can be concluded that the highest priority in the fulfillment of the human right to water is for daily needs of a person and a household in order to prevent disease. It is a core or basic obligation that needs to be fulfilled by the state. The court states that the fulfillment of water for daily needs is the highest priority in water allocation. Based on the GC-15 and the court decision, water

[135] United Nations Committee on Economic Social and Cultural Rights ref for the GC15?

for daily needs, whether it is withdraw directly from the spring/groundwater/surface water or piping network should be set as the highest priority in the water allocation.

There is a need to clarify the water withdrawal license for CBOs. In general, CBOs provide water for daily basic needs – and according to the Constitutional Court water for daily needs should rank as top priority in the water allocation framework – the CBOs are actually fulfilling the state's duty on the right to water. Thus, in general, a water license for daily basic needs, including those extracting water directly from its source or from networked pipes (drinking water provision system or SPAM) should not be categorized under a commercialization license. It would be more appropriate to devise a general SPAM license for PDAM, CBOs and other providers. Licensing for CBOs could be placed under this category, but in a more simplified form compared to that for PDAMs.

In terms of a CBO's access to water supply, the key issue will be the categorization of the CBO's license under Law 11/74 ("Law 11").[136] Law 11 (which consist of only 17 articles) does not specify and detail the typology of water licenses – although it mentions that licenses could be issued for designation, utilization and provision of water and water sources.[137] The regulation on "commercialization" on the other hand, is rather detailed and dedicates one provision for it.[138] Its definition however, is unclear.[139] According to Law 11, commercialization is any activity that fulfills two aspects: (1) provides value adding activities and (2) provides profit motives.

There is a need to harmonize the types of permits at the local level with the national legal framework. Different types of permits exist (i.e. Water Abstraction License (SIPA), Groundwater Abstraction License (SIPAT) and Surface Water Abstraction Licence (SIPAP) at the local level that are not concurrent with the national framework. It is important to categorize these into a proper permit category.

### 3.2 Discriminatory Regulation at the National Level

National-level water and sanitation (watsan) regulations have been criticised for being discriminatory towards community based watsan systems.[140] The rules have been

[136] Undang Undang No.11 Tahun 1974 Tentang Pengairan
[137] Ibid Article 3(2) a, b and c
[138] Ibid Article 11 Chapter 6
[139] Ibid elucidation of Article 11
[140] John Petrus Talan, *Meeting Note Focus Discussion Group, Kantor Bappeda Lamongan, East Java, January 26, 2015* (2015) also Avessina, *Interview with Association Officials (Kasdan, Kiswanto, Atekan Yossy), Asosiasi HIPPAMS Lamongan Office, Lamongan, 9 January, 2015* Mohammad JIbriel Avessina, *Annuat Meeting CBO Tlanak, Village Head Office,Lamongan,10 January,2015* (Panggeng Sisyadi,Rahayu,Kasbulloh, 2015) ; Al'Afghani and Avessina, 'Focus Group Discussion Report' A high ranking official in our FGD suggests that some of the factors that affects CB successes and failures are external. PDAM and CB should be treated equally. As regards to the distinctions in the laws, in which CB cannot be regarded as an "undertaker" he consider it as a form of discrimination towards community.

regarded as biased towards "institutional" (essentially, PDAM-based) watsan, despite the prevalence and potentials of community systems in Indonesia. Law No.7 Year 2004 on Water Resources Management and Government Regulation 16 Year 2005 on Drinking Water Provision System were the primary instrument for regulating water and sanitation, both for community and non-community based systems. This section will answer the question: "How are community-based water and sanitation systems regulated under national legislation?"

### 3.2.1 PRIMACY OF PDAM UNDER THE REVOKED WATER LAW

As Al'Afghani notes[141], there is only one provision under Water Law 7/2004 which regulates water services, namely, Article 40. The Article on para 3 states that "*State Owned Enterprises and Regional Owned Enterprise are the undertakers*[142] *of drinking water provision system*". In para.4 of Article 40 it is stated that "C*ooperatives, privately-owned business enterprises and the community* [**Masyarakat**] *may participate in the development of drinking water provision system"*.[143]

Al'Afghani has established that the drafters of the law may have intended to signify its preference over who is eligible to manage water services.[144] The law was enacted amid a heated debate on privatisation. This provision – which stipulates State Owned Enterprises as *undertaker* - is meant to serve as a safeguard against privatisation. As we can see in the provision, the role of the private sector, the community and the cooperatives are secondary to that of State Owned Enterprise. This provision will have important policy and regulatory implications – as will be discussed below.

### 3.2.2 COMMUNITIES' MARGINALISATION UNDER GR-16 (VOID)

In understanding the provisions of GR 16, it is worth mentioning that PDAMs statutes – which are often but not always in the form of a regional by-law, grants a natural-legal-monopoly to PDAMs. What this means is that PDAMs – and no other companies – have been designated a service area for it to operate. Service area does not always

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[141] Al'Afghani, 'The Role of Legal Frameworks in Enabling Transparency in Water Utilities Regulation'

[142] The original Bahasa Indonesia of Article 40.3 of Law 7/2004 reads: "Badan usaha milik negara dan/atau badan usaha milik daerah merupakan penyelenggara pengembangan sistem penyediaan air minum". The underlined phrase "merupakan penyelenggara" is the subject of the discussion here. Others have translated the underlined phrase as "will be the organizers of" and "shall carry out the development of.." (LEAD Translation). "Penyelenggara" is a noun, which can be translated into either Organizer or Undertaker, whereas, "merupakan" is a statement of being. The author regards that "are the undertakers of" is the closest expression in English that reflects the original Indonesian phrase.

[143] This article has been dubbed a "disguised privatisation" by a Constitutional Judge. See Al'Afghani, 'Anti Privatization Debate, Opaque Rules and Neglected 'Privatised'Water Services Provision: Some Lessons from Indonesia'

[144] Ibid also Al'Afghani, 'The Role of Legal Frameworks in Enabling Transparency in Water Utilities Regulation' Chapter 5

correspond to coverage area, of course. However, principles of natural monopoly regulation dictates that it is often non-economical for more than one company to operate in area, hence, the natural and legal monopoly status.

The definition of undertaker in GR 16 is more accommodative than the Water Law. According to GR 16 Article 1 (8): "The undertaking of drinking water systems – hereinafter regarded as "Undertaker" – are State Owned Enterprises/Region Owned Enterprises, Cooperatives, the Private Sector and/or community groups conducting developments of drinking water systems."[145] This provision is different than the Water Law Article 40 above as it groups every actors including private sectors, SOE and the community in one sentence and regard them all as "undertaker".

Albeit being accommodative, article 1(8) demonstrates inconsistency with Article 40 of the Water Law. Presumably, during the drafting of GR-16, the drafters realize that non state actors – including the community – have in reality provided substantial services and will continue to be as such in the future.

However, the debate over the position of CB Watsan in GR 16 does not end with Article 1 (8). Community Based Watsan is also regulated in Article 37, which stipulates:

(2) The undertaking of drinking water provision system is conducted by State Owned Enterprise (SoE) or Regional Owned Enterprise (RoE) specifically established to develop drinking water provision system;

(3) In the event that such SoE or RoE mentioned in para (2) above is unable to increase the quantity and quality in its service area, then, SoE or RoE may, with the approval of the supervisory/commissioner board, include **cooperatives**, private sectors and/or **communities** in the provision of drinking water system. [emphasis by author]

Both "cooperatives" and "communities" are emphasized in the article below since they are both legal forms for CB-watsan.

Thus, Article 37 (2) reiterates the primacy of State Owned Enterprises over other actors, including the community. Article 37(3) above positioned community, cooperatives and the private sectors into a "residual" role in delivering water services. State or regional owned enterprises can *include* cooperatives, private sector or the community in the undertaking of the drinking water provision system ***only when*** their own services are not reliable. Furthermore, this inclusion is **subject to** the approval of SOE/ROE's commissioner or supervisory boards.

Article 37(2) which stipulates that undertakers can only take the form of SoEs, is inconsistent with Article 1(8) but is consistent with Article 40 of the Water Law. Such

[145] Peraturan Pemerintah No. 16 Tahun 2005 (GR-16) Article 1 (9)

inconsistencies are quite common in Indonesian legislations and reflects the confusions of the drafters of the law as to the actual policy of the state.

It can be argued that Article 37 is meant to regulate the PDAMs internally, in case they would like to involve CBs or the private sector in water provision. However, the position of the Article under Chapter V regarding roles and responsibility, part 1 (general provision), indicates that this article is meant to regulate not only PDAMs but also other actors such as the government. The Article is in line with Article 40 of the Water Law which establishes the primacy of PDAM over other actors, as discussed earlier.

When Article 40 of the Water Law is read in conjunction with Article 37 of the GR-16, it is actually ***technically illegal*** for any CB initiative to be carried out without the approval of PDAM's supervisory bodies.

No less important is Article 64 of GR 16, which reads: "the cooperatives and/or privately owned business enterprise **may** participate in the development of drinking water provision **system in regions which are not yet covered** by services provided by SOE or regional SOEs". Although this article may not be intended to regulate CB Watsan directly, it is important to note that CB Watsan can also take the form of Cooperatives.

It has been argued elsewhere by Al'Afghani[146] that Article 64 may have two different interpretations: it may appear either to suggest that (i) participation of cooperatives and business enterprise is allowed only for *Greenfield* projects, in regions which are not entirely covered by SOE, or, it may suggest that (ii) business and cooperatives are allowed to operate in both an entirely Greenfield project and in regions where SOE coverage is already present, but full coverage is not yet achieved. The interpretation above depends on the intended meaning of "not yet covered" – a service area or actual service?

Article 64 may have been intended to capture contractual relationships between regional governments and business, a form of private sector participation, thus, consistent with interpretation ii above. Paragraph 3-7 of the Article specifically regulates its procurement, the contents of the cooperation agreement and the requirement to transfer the assets back to the regional government after a period of time stipulated in the agreement – thus, a form of built-operate-transfer or repair-operate-transfer schemes.

Why are cooperatives – which are often used as a legal vehicle by communities -- regulated in the provision, similar to business? It appears that the drafters realize the difficulties in capturing the complexities of "private" sector participation. Cooperatives often grow quite large with strong business interests. "Private" can take so many forms, from corporations to cooperatives.

[146] Al'Afghani, 'The Role of Legal Frameworks in Enabling Transparency in Water Utilities Regulation'

Development of water provision systems by communities to fulfil their own needs are allowed by GR-16. In Article 65, GR-16 clarifies that: "(1) Cooperatives, private business enterprise and/or communities may undertake drinking water provisions systems to fulfil their own need. The undertaker as mentioned in (1) are entitled to obtain technical and nontechnical *pembinaan* (guidance) from the government as well as assets protection, (3) Such undertaking as referred in (1) must be based on a license issued by the Government or Regional Government in accordance with its authorities as prescribed by law.

Although Article 65 does not directly refer to other articles discussed earlier, it can be postulated as some form of exception to those articles, in situations where the development of drinking water provision is for internal needs ("internal supply"). Article 65 is also consistent with Article 1(8) which suggests that cooperatives and communities are undertakers too. Thus, when Article 1(8) is read in conjuction with Article 65, it actually confers the title of "undertaker" to communities and cooperatives – in the event of internal supply. This is still, however, inconsistent with the higher law, Water Law Article 40 which does not contain such exception.

Will this exception under Article 65 solves the legality problem? Not quite. The status of "undertaker" is only possible for internal (self) supply. Thus, cross-border supply is not permitted. The conditionality of "internal supply" bores another question – internal to who? For a corporation, a delineation of internal could be relatively easy. For example, mining companies produces water for internal consumption – it is easy to identify who are its users. However, for rural communities, determining "internal" is difficult. The contours, topography and water security conditions in rural areas often means that internal supply for one village is not possible. Water sources are located miles away in different villages. Supplies are often conducted cross-administrative borders (even regencies border as we have discovered in Maukaro).

Article 37 and 64 of GR 16 as well as Article 40 of the Water Law are "safeguard mechanisms" built in place due to anxieties towards private sector participation. These safeguards are built to protect the interest of SoEs and to restrict the expansion of private sectors. Article 40 of the Water Law built the safeguard by reaffirming the primacy of SoE over other actors in water provision. Article 37 built its safeguard by requiring other actors to obtain approvals from SoE's supervisory board before they can enter and engage with SoEs. Article 64 built its safeguard by restricting participation to regions "not yet covered" by SoEs.

Although this safeguard is in place to restrict the advances of the private sector, it has the untended consequences of "marginalising" community initiatives as well. This is because communities are – legally speaking – "private" entities, just like corporations.

### 3.2.3 RIGHTS AND OBLIGATIONS OF AN UNDERTAKER AND CUSTOMER

Undertakers enjoyed certain 'rights' – as regulated under Article 68 -- such as in obtaining land sites in accordance with rules and legislations, receiving retribution/tariff

payments, determining penalties for late payment, continuously obtaining quantity and quality of raw water, disconnecting customers and instituting legal proceedings against parties which cause damages to water infrastructure. The term 'rights' tends to be used incorrectly in this provision, for example when addressing disconnection – in this case the appropriate legal terminology is 'authority'. In order to understand these rights (or authorities), an entity must have the legal status as an 'undertaker'.

The same article also contain obligations of an undertaker. Although the article is silent as to whom the obligation is owed to, it becomes clear by reading the paragraphs that the obligation is owed primarily to customers (*pelanggan*). The obligations are, among other: to ensure that services fulfils prescribed standard, to provide information required to any interested parties regarding an occurrence or special circumstances which can potentially alter the quality or quantity of service, operate the infrastructure and provide services to all qualified customers, unless in force majeure, provide information on the execution of services, provide appropriate compensation to customers for the losses it suffers, obey legal process and participate in the protection and conservation of water source.

It is also important to discuss the rights and obligations of customers as stipulated in Article 67. The article stipulates that all customers are entitled to obtain drinking water services which fulfilled certain quality, quantity and continuity as prescribed by relevant standard. They are entitled to obtain information pertaining tariffs structure and their bill, initiate legal proceeding to a court and obtain compensation. Meanwhile, they are obliged to pay for services, use 'service product' wisely, maintain water infrastructure, follow prescribed procedure and obey the law.

Although GR-16 repeatedly mentions "prescribed service standard", it is silent regarding its content. Thus, no national legislation in Indonesia actually regulates the actual content of drinking water standards.[147] Some regions such as Bogor – through the initiative of an International Financial Institution enact a by-law that contains the content of the service standard.[148] But the condition is different regions to regions.

Several things deserves some notes here. First, GR-16, especially in Article 67, envisages an undertaker-customer relationship in water provision. This is commonly to be found in large scale utilities such as PDAM. However, such a relationship is more complicated in rural, community based water provisions, in which neither the officers of a CBO view themselves solely as professional service providers nor water users views themselves solely as customers. This is because certain communities may view water provision as a common joint effort, not simply "I-pay-the-price-you-fix-the-pipe". Indeed, there are

[147] In other countries, there is a separate legislation or regulation. See OFWAT, *The guaranteed standards scheme (GSS) Applicable to England and Wales from 1 April 2008* (2008) ; The Water Supply and Sewerage Services (Customer Service Standards) Regulations 2008, SI 2008 No. 594 also Essential Services Commission, *Customer Service Code Metropolitan Retail and Regional Water Businesses* (Issue No 7, 15 October 2010, 2007)

[148] Peraturan Daerah Kota Bogor Nomor 5 Tahun 2006 Tentang Pelayanan Air Minum Perusahaan Daerah Air Minum Tirta Pakuan Kota Bogor

talks about professionalization [149], but regulation must not force this upon the communities and must provide for options, stages and transitional mechanisms.

Secondly, the mechanisms for providing compensations and determining penalties are common for PDAMs but not so for rural CB watsan. Some CBOs are already in financial distress and thus, an obligation to provide compensation in the event of a breach of service standard will strain them even more. On the other hand, the penalty mechanism for late payment may not be sociologically suitable for rural communities. Penalties are common for urban people but not so for rural communities. The effective regulatory mechanism and interlinkages between penalty and standard at the community level is different from that of large scale utilities.

### 3.2.4 STATE AND GOVERNMENT'S RESPONSIBILITIES

The (invalidated) Water Law 7/2004 at Article 5 stipulates that the state "…***guarantees the right to obtain water for minimal daily needs to fulfil a healthy, clean and productive life***." This article is a general principle of state responsibility towards water provision and is considered as a manifestation of Indonesia's recognition on the human right to water.

The operationalization of this provision under GR 16 is somewhat different. According to GR-16 Article 37: "The development of Drinking Water Provisions System becomes the responsibility of State and Regional Governments in order to **guarantee everyone's right to obtain water for minimal daily needs to fulfil a healthy, clean and productive life** in accordance with prevailing rules and regulations."

Thus, according to GR-16 Article 37, it is not the provision itself that becomes the responsibility of government, but its development (*pengembangan*). For human rights activists, this article may somewhat constitute a retrogression from Article 5 of the Water Law which clearly lays the burden of fulfilling daily water needs to the government – rather than its development. Nevertheless, Article 37 defines the position of the Government in terms of drinking water development.

GR-16 also regulates government's responsibility in terms of raw water provision. Articles 39 and 40 both stipulates that regional governments [should] 'facilitate' bulk water supply needed to develop drinking water systems. No less important is the role of

[149] Lockwood M. Ohnishi and K. Nakamura, 'Capacity building of local governmental and non-governmental organizations on environmental hygiene through a community-based training workshop program' 23 J Interprof Care 4; *Interview with Non Governmental Organizations, Jakarta, December 20-30, 2010*

Village Governments. According to GR-16, village governments have the authority and responsibility to (a) facilitate and provide licenses for groups and communities in its territory, for the development of drinking water systems; (b) supervise the utilization of water source at the community/group levels and (c) confer such reports to city/regency governments.

Towards all undertakers, including SoEs, business enterprise, private sectors and community groups, GR-16 at Article 69 mandates the government (national and local) with the task of providing norms, standard, guidelines and manuals as well as providing them with guidance, supervision, consultation, education and training. More importantly, the same article provides national and local governments with authority to take over – temporarily – the undertaking of water services if undertakers are unable to meet performance standard. The GR-16 is silent as to how this provision should be implemented and choose to enumerate further in a ministerial regulation.

Article 70 of GR-16 stipulates that national and regional governments should supervise all stages in the development of drinking water provision system. Such supervision shall be conducted by appropriate agencies and by involving communities. Article 70 also stipulates that communities participate in supervision activities by lodging reports or complaints to the government – and the government should take action towards a community's complaint or report. Finally, the Article also requires that undertaker provide community or customer complaint mechanism.

Our legal analysis above is consistent with the results of our FGD. One of the central figures in the CB movement and a key government official even said: ***"This is what I regard as a form of discrimination to [community]"***.[150] This is a very important remark which highlights a significant problem in Indonesian Water Law. Another participant added: "*…if it is the case, all HIPPAM would be illegal*".[151] This regulatory discrimination does not only create problems in terms of sustainability, but is potentially unconstitutional in itself since the 1945 Constitution guarantees certain rights for the community and society.

### 3.2.5 COMMUNITY SYSTEMS AS AN "AD-HOC" AND "TEMPORARY" SOLUTION

Our FGD revealed that there are unresolved fundamental differences among regulatory stakeholders, in terms of whether CB should be perceived as a temporary "approach" with the overall intention to integrate it to the PDAM or "institutional" system in the future or whether it stands equally to the existing "institutional" system.[152] This difference has created tensions and confusion in practice, but more importantly, brings negative impact to policy and regulatory reform.

[150] Al'Afghani and Avessina, 'Focus Group Discussion Report'
[151] Ibid
[152] Ibid

According to a government official some PDAM consider that CB Watsan is a temporary solution in their business plan – thus Community watsan network is regarded as parts which can be coopted and taken over, since PDAM considers that the only one who is entitled to provide services are PDAM and the rest can only provide services through concession with PDAM.[153]

In addition, community watsan projects may, to some extent, contravene the exclusive natural-legal-local monopoly granted to PDAM. Furthermore, there is indication that some successful community watsan intitiative have grown large in a way that could match or even surpass existing PDAM.[154] How these community watsan initiatives could coexist with existing PDAMs or – to maintain the economies of scale – be merged with or acquire existing PDAMs is a problem yet to be solved.

The importance of modeling behaviors and future development in order to develop understanding of the relationship between PDAM and CB was a common response across the FGD. Two fragment-scenarios may be a suitable approach to be able to foresee regulatory developments. The first is to view community watsan as a "temporary" entity which exist only for a certain period and can be "annexed" by PDAM for certain reason such as economic scale or environmental conditions such as surface water quality in which CB model would no longer be compatible and larger scale investment would be required for treatment. The temporary approach is consistent with existing regulation -- since existing laws considers that the only one who is entitled to provide services are State or Regional Owned Enterprises -- whilst the other may only provide services in concession with PDAM. If this scenario is to be taken, then regulatory reform should focus on short term solutions with the overall objective of integrating the whole system to PDAM.

The second scenario is to perceive CB as a completely different model that can develop, expand and supersede PDAM or other "institutional" system. CB is thus treated equally with "institution". As, at present, there is no CB model above district [*Kecamatan*] level, this model would be quite speculative. In this model, the regulatory framework should acknowledge the diversity of models in services provision and allow either CB or institutional model to acquire each other. FGD participants challenge the conceptual distinction of CB/"institution" based on assets size, coverage or natural monopoly. Thus, in this scenario, the regulatory framework should be able to foresee the CB model transformed into large scale water utility.

According to Woodcock:[155]

"In terms of relation with PDAM – PDAM, in Banjarmasin, almost 100%, Palembang 97%, if this is the condition then CB movement must cooperate with PDAM and due

[153] Ibid
[154] Ibid
[155] Ibid

to economics of scale, may need to be merged with PDAM. Thus, I consider that the relationship between PDAM and CB is very important. I believe that in the end, small CB projects may not be able to be sustained due to economies of scale. Furthermore, after 2008 restructuring, PDAMs are more powerful and have better results compared to previous years."

While Hernowo was of the opinion that[156]:

" Some CB initiatives are successful some are? not. Some of the factors are external. For example, some of the cases they are acquired by PDAMs as units, although actually they are both on the same level, both are doers [undertaker], the only differences is that PDAMs have laws and regulations while CBs are not; PDAMs are regarded as "undertaker", they are not."

No less important, is the opinion of Legowo as follows:

"We can make that assumption, if the variables are constant. For a certain period, it can stay that way. But there might be environmental conditions – such as in surface water quality – [which requires modern treatment] in which CBs would no longer be compatible and larger scale investment would be required. Thus, a "dynamic modelling" might be required. For certain intervals are OK, but not forever. If they don't have clean bulkwater then what can they do?[157]

It is worth noting that our interviews with PDAMs in Lamongan and Ende shares more or less the same view with Legowo's – in which CB Watsan may have constraints on its long term sustainability.[158]

### 3.3 Role of Pokja AMPL

Pokja AMPL is an ad hoc institution. It is a multi stakeholder forum for coordination and communication for the development of water and sanitation [159]. Its role is assisting in the beginning of the program, overseeing the implementation and to supervising the post construction[160]. However, there is no clear mechanism regarding the post construction supervision. At the national level, the main function of the Pokja AMPL are: a) formulating policies, b) formulating strategy and program for the drinking water and sanitation development, c) coordinating and controlling the implementation of drinking water development, and d) disseminating the information regarding AMPL. The Pokja shall engage all stakeholders.

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[156] Ibid
[157] Ibid
[158] Mohamad Mova AlAfghani, *Interview with Alvian, PDAM Office, Lamongan, January 14, 2015* Muhammad Aftaf Muhajir, *Interview with Darsono, PDAM Office, Ende, November 10, 2014*
[159] http://www.ampl.or.id/about/pokja-ampl-nasional/34
[160] See the opinion of Yos Dasimuda Mohammad Mova AlAfghani, 'Focus Group Discussion, Aspek Regulasi & Keberlanjutan AMPL BM, Ende, 20 November 2014'

At the regional level, the role of Pokja AMPL is to coordinate and facilitate the development of CB Watsan at the local level (province, regency/city, village). The role of Pokja AMPL at the regional level that relates to the post construction among other are: duty to implement and evaluate the implementation of the development of AMPL-BM at the Provincial and Regency/City level [161]; to monitor, verify and evaluate community members behavior [162]; to coordinate the plan, implementation, maintenance, monitor and evaluate the implementation of the policy [163]. In Ende, regency, the establishment of Pokja AMPL is based on Ende Regent Decree No. 21/KEP/HK/2014, dated 16 January 2014. The members of the Pokja are from various SKPD.

The challenges of Pokja AMPL to sustain the CB Watsan services are [164]: a) the lack of intensive discussion/coordination among the SKPD therefore the role of monitoring and supervising is not optimal, b) the lack of coordination among the members of Pokja AMPL, private sectors, NGOs and other stakeholders, c) rotation within the bureaucracy (members of Pokja) which impact the operation of Pokja and sustainability of the program, d) Pokja AMPL is an ad hoc institution but the governing members are part of the government institution which makes the activities/implementation of the program not optimal (involving bureaucracy and not flexible), e) there is no Pokja AMPL at the village level, therefore it needs the attention of the Pokja AMPL at the regency/city level or relevant government institution to the CB Watsan project at the village level, f) there is not enough incentive for the Pokja, g) top down approach development which should be anticipated by the Pokja AMPL , g) positioning of the Pokja AMPL for more strategic role.

### 3.4 ROLE OF PROVINCIAL GOVERNMENTS

The source of CB Watsan funding from the government is allocated from the central government budget, provincial and city government budget. Other sources of funds are from grants (donor institution), NGOs (international and national), community members and the revenue from the CB Watsan services.[165]

[161] Governor Regulation East Nusa Tenggara Province No. 10/2012 Psl 10 (3)
[162] Peraturan Bupati Alor Nomor 14 Tahun 2014 Tentang Pelaksanaan Sanitasi Total Berbasis Masyarakat Article 15
[163] Perda East Sumba Regency No. 2/2013 Psl 17(1)
[164] Vinsen Sangu/Direktur FIRD Ende, also Pencerah Nusantara AlAfghani, 'Focus Group Discussion, Aspek Regulasi & Keberlanjutan AMPL BM, Ende, 20 November 2014'
[165] Article 15 (3) Governor Regulation East Nusa Tenggara Province No. 10/2012, Article 38(2) Peraturan Daerah Kabupaten Sumba Timur Nomor 2 Tahun 2013 Tentang Air Minum dan

The source of CB Watsan funding from the government is allocated from the Provincial and Regency/City APBD. The Provincial APBD is dedicated to finance dedicated items that have been stipulated by the finance bureau and Bappeda of the Provincial Government. The items are: training, honorarium, travel expenses (local and regional transport and national), operational and management costs for office. The Regency/City APBD funds several items such as: project management, training, travel honorarium, monitoring, office operational cost and other work infrastructure at the regency/city level and the village level, Dana Daerah untuk Bersama (DDUB) minimum 10% from the total RKM in each villages to fund activities based on RKM (Rembug Kesiapan Masyarakat), incentive to replicate the program, monitoring and evaluation of the project[166].

In order to obtain funding for CB Watsan activities, it is important to have support from the regional parliament (DPRD) in the process of formulating the AMPL regional action plan (RAD AMPL/Rencana Aksi Daerah AMPL). The support is important in order to prioritize the CB Watsan and integrate the RAD with RKPD, to get budget allocation in the APBD. RAD (Rencana Aksi Daerah) is a reference to implement AMPL at the local level. RAD AMPL covers the program and priority activities. The funding is partly provided by APBD Regency/City based on RKPD (Rencana Kerja Pembangunan Daerah) Regency/City.

The formalization of RAD AMPL can be done through Regent/Mayor Regulation, and/or memorandum of understanding between DPRD and the government[167]. For the CB Watsan at the village level, it is important to advocate the process of formulating RPJM Desa, therefore the budget allocation would be accommodated by APB Desa. At least 3 days prior to the stipulation of the village regulation regarding the APBD, the head of the village should convey the draft to the regent/mayor to be evaluated. The evaluation result from the regent/mayor is written in form of the regent/mayor regulation and it should be given to the head of the village within 20 days. In the event the evaluation by the regent/mayor is overdue, the head of the village can stipulate the draft regulation regarding APB Desa to the village regulation.[168].

The CB Watsan planning and inclusion at the RPJMDesa can support its sustainability and provide access to *Alokasi Dana Desa (ADD*).. In Ende, the role of the village level does

Penyehatan Lingkungan Berbasis Masyarakat , Article 24(2) Peraturan Bupati Alor Nomor 14 Tahun 2014 Tentang Pelaksanaan Sanitasi Total Berbasis Masyarakat

[166] Sekretariat CPMU Pamsimas, *Petunjuk Teknis Pedoman Pengelolaan Program Pamsimas* (2012)

[167] http://pamsimasjateng.com/berita-2-replikasi-kunci-utama-keberlanjutan-program-pamsimas.html

[168] Pengelolaan Keuangan Desa, https://docs.google.com/presentation/d/12Vtf5yFKt3NSwAmfDF59-UHymejr0uXejECZX4oY6ww/edit#slide=id.i677

not appear in the development of CB Watsan, furthermore CB Watsan is not included in the RPJM Desa[169].

ADD is a regional fiscal balance funding (dana perimbangan) received by regency/city in the APBD after it is deducted by special allocation fund (DAK)[170]. The allocation of village fund (ADD) is calculated based on the amount of villages, poverty rates, width area and geographical difficulties.[171] The aims of ADD are: a) to improve development planning and budgeting at the village level and community empowerment, b) to improve the infrastructures development in the villages, and c) c) to improve public service to the community members in order to develop economic and social activities.[172] ADD is dedicated to cover operational and empowerment costs. The operational costs includes: a) fixed income of the head of villages and the village officials, b) overhead (operational costs) of the village's government, c) overhead (operational cost) of BPD. In the meantime empowerment cost covers: a) the development of BUM Desa, b) village's infrastructure, c) operational assistance for RT, RW, Dusun), d) extracurricular education, and etc.[173]

The spending of village funds (dana desa) should refer to the RPJMDesa and Village Government's workplan (Rencana Kerja Pemerintah Desa/RKP Desa).[174] RKP Desa is formulated by the head of the village and the Badan Permusyawaratan Desa (BPD). RKP Desa is an elaboration of RPJM Desa.

Financing the CB Watsan post construction is challenging in term of providing funding to pay incentive/honorarium for CB Watsan assistants. Nomenclature for the type of payment for incentive is not exist in the APBD and there is no regulation pertaining to this matter. One of the examples is the facilitators of STBM in Pulau Ende cannot continued as the incentives are not provided by the government[175].

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[169] *Emanuel Laba/Sekretaris Dinas Pertambangan dan Energi AlAfghani, 'Focus Group Discussion, Aspek Regulasi & Keberlanjutan AMPL BM, Ende, 20 November 2014'*

[170] Article 1 (9) Peraturan Pemerintah Nomor 43 Tahun 2014 Tentang Peraturan Pelaksanaan Undang Undang Nomor 6 Tahun 2014 Tentang Desa

[171] Pasal 5 (2) ibid

[172] Pengelolaan Keuangan Desa, https://docs.google.com/presentation/d/12Vtf5yFKt3NSwAmfDF59-UHymejr0uXejECZX4oY6ww/edit#slide=id.i677

[173] Pengelolaan Keuangan Desa, https://docs.google.com/presentation/d/12Vtf5yFKt3NSwAmfDF59-UHymejr0uXejECZX4oY6ww/edit#slide=id.i677

[174] Article 20 Peraturan Pemerintah Nomor 60 Tahun 2014 tentang Dana Desa yang Bersumber dari Anggaran Pendapatan dan Belanja Negara

[175] Petrus H. Djata, AlAfghani, 'Focus Group Discussion, Aspek Regulasi & Keberlanjutan AMPL BM, Ende, 20 November 2014'

## 3.5 ROLE OF MUNICIPAL GOVERNMENTS

### 3.5.1 LACK OF CLARITY ON ROLE, TASKS AND RESPONSIBILITY

Based on local regulations, the roles of local government are as a facilitator, donor and regulator (enacting laws and regulations)[176]. Nevertheless, the description of the role is very broad.

Stakeholders in both East Java and East Nusa Tenggara agree that there is no clarity as to the role of city/regency governments in CB Watsan. One stakeholder remarked that CB Watsan is like an illegitimate child; the "father" (in the government) is not clear. This is especially shown during the post-construction stage [where government may demonstrate "hands-off" attitude once infrastrcuture are built]. Stakeholders uttered that CBOs requesting for technical assistance have often been subjected to bureaucratic 'ping-pong' by local government agencies.[177]

Four local agencies have primary competencies over rural CB Watsan: the Public Works Cipta Karya Agency (Dinas PU Cipta Karya), The Village Community Empowerment Agency (Badan Pemberdayaan Masyarakat dan Pemerintahan Desa/BPMPD), The Health Agency (Dinas Kesehatan) and the Regional Planning Agency (Bappeda). Stakholders told us that since CB initiatives are mostly coordinated and led by Regional Planning Agencies, other agencies often refer CBOs to them for repair works. The Bappeda then refused – for it have no capacity. CBOs also often comes to PDAM for help, only to receive another refusal.

According to one stakeholder, village water supply and sanitation have actually been a part of the Public Works Agencies' Tugas Pokok dan Fungsi (Primary Duties and Functions – the stipulation of an agency's main roles and functions in Indonesian bureaucracy). However, this arrangement was not effective since the agencies are undermanned and under resourced.

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[176] Article 8 Peraturan Gubernur Nusa Tenggara Timur Nomor 10 Tahun 2012 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat, Article 10 Peraturan Bupati Alor Nomor 14 Tahun 2014 Tentang Pelaksanaan Sanitasi Total Berbasis Masyarakat , Article 27 and 28 Peraturan Daerah Kabupaten Ende Nomor 13 Tahun 2014 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Ende , Article 12 and 15 Peraturan Daerah Kabupaten Sumba Timur Nomor 2 Tahun 2013 Tentang Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat

[177] Avessina, *Interview note with Reza Hendrawan,Bakoel Koffie Cikini,Jakarta,25 August 2014* see also Mohammad Mova Al Afghani, 'Interview with Poernomo and Wisnu at Kupang,NTT 17 November 2014'

After evaluating regent's regulations (Peraturan Bupati) in several regions, it does appear that the functions for development, monitoring and evaluation of water supply rests on the hand of the Public Works-Cipta Karya Agency. However, the clarity and specificity of such roles and function may differ region to region. In Lamongan, the function of water infrastructure development, provision of technical guidelines, monitoring, evaluation, reporting, guidelines, maintenance, operation and utilization – including other tasks – is to be carried out by the Penyehatan Lingkungan dan Permukiman/PLP (Community Health and Housing) section at the Cipta Karya Agency of the Public Works.[178]

The stipulation of Public Work's role in Lamongan is quite comprehensive and broad but not specific enough as it does not refer directly to community-based watsan. In addition, it may overlap with the functions of local PDAM. Moreover, a "section" would typically consist of only 1-4 people and thus may not be adequately resourced to oversee several hundred CBO initiatives within a regency. Despite this, according to stakeholders from CBO, the Public Works/Cipta Karya Agency in Lamongan is very proactive and "present" for the CBO.[179]

Other regions choose to allocate the responsibility of water services to a technical unit (Unit Pelaksana Teknis Daerah or UPTD). At the national level, technical units tends to be independent – albeit still a part of a ministry; given the authority to manage its own finances and oftentimes occupies its own office. This independency is stipulated by a regulation.[180] At the regional level, this guarantee of independence is not sufficiently clear.[181] Nevertheless, since the formation of an UPTD is regulated through a Regent Regulation, each regent will have some leeway to determine the independency and resources of an UPTD – subject to prevailing regulations. Unfortunately, we have yet to discover technical units which are designated specifically for providing assistance to CB Watsan. These technical units are mostly set up to deliver piped water, similar to PDAMs.

Ideally, there should be local government agency(ies) which are tasked with monitoring and evaluation of CB Watsan, in terms of service standard (quality, quantity, affordability), technical aspects including the protection and inventarization of assets, institutional and managerial aspects, as well as representing their interest in case of disputes with third parties or business entities. These duties needs to be carefully specified in the definition of their tasks and responsibilities (*tupoksi*).

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[178] Peraturan Daerah Nomor 28 Tahun 2008 Tentang Kedudukan, Tugas dan Fungsi Dinas Pekerjaan Umum Cipta Karya Kabupaten Lamongan Article 12(3)

[179] Mohammad Jibriel Avessina, 'Focus Group Discussion at Lamongan, Bappeda Office, 26 January 2015 ' Mohammad Jibriel Avessina, *Interview with Association official (Kasdan,Kiswanto,Atekan Yossy)* (Kasdan,Kiswanto,Atekan Yossy, 2015)

[180] Peraturan Menteri Negara Pendayagunaan Aparatur Negara Nomor Per/18/M.PAN/11/2008

[181] Peraturan Menteri Dalam Negeri Nomor 57 Tahun 2007 Tentang Petunjuk Teknis Penataan Organisasi Perangkat Daerah also Peraturan Pemerintah Nomor 41 Tahun 2007 Tentang Organisasi Perangkat Daerah

### 3.5.2 REGIONAL BY-LAW ON CB WATSAN

One of the main roles of municipal governments is of course its regulatory role. Regional autonomy legislation clearly mandates the provision and management of local drinking water as the task of municipal governments.[182] In regulatory terms, this mandate is implemented through regional by-laws.

In our observation, there are two kinds of regional by-laws enacted to regulate drinking water sector in a municipality. The first, is a set of regional by laws regulating "institutional" watsan. This is manifested in the form of regional by laws on the establishment of PDAMs[183] and regional by-laws regulating water services – which are also applicable only to institutional/PDAM settings.[184] The second is regional by laws intended to regulate "community-based" watsan or Perda AMPL.[185]

Community-based watsan regional by-laws are relatively new phenomenon. To our knowledge, 4 (four) regions have enacted Perda AMPLs. From the data we've collected, the first of these Perda AMPLs were enacted in 2010 in Aceh Besar.[186] The other three were enacted by regions in East and West Nusa Tenggara Provinces: Bima, Dompu and Ende. There were advocacy for the Sikka parliament to enact Perda AMPL, but this effort have not been successful.[187]

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[182] Undang Undang Nomor 23 Tahun 2014 Tentang Pemerintahan Daerah See Annex, section C.1

[183] See for example Peraturan Daerah Khusus Ibukota Jakarta No. 13 Tahun 1992 Tentang Perusahaan Daerah Air Minum Daerah Khusus Ibukota Jakarta (PAM Jaya) Peraturan Daerah Kota Bogor No. 4 Tahun 2004 Tentang Perusahaan Daerah Air Minum Tirta Pakuan Kota Bogor Peraturan Daerah Kabupaten Takalar No. 15 Tahun 2003 Tentang Perusahaan Daerah Air Minum Peraturan Daerah Kabupaten Sragen No. 8 Tahun 2004 Tentang Perusahaan Daerah Air Minum Kabupaten Sragen Peraturan Daerah Kota Sukabumi No. 3 Tahun 2009 Tentang Perusahaan Daerah Air Minum Peraturan Daerah Kabupaten Maros No. 4 Tahun 2011 Tentang Perusahaan Daerah Air Minum

[184] See for example Peraturan Daerah Kota Bogor Nomor 5 Tahun 2006 Tentang Pelayanan Air Minum Perusahaan Daerah Air Minum Tirta Pakuan Kota Bogor Peraturan Daerah Khusus Ibukota Jakarta No. 11 Tahun 1993 Tentang Pelayanan Air Minum di Wilayah Daerah Khusus Ibukota Jakarta

[185] See Peraturan Daerah Kabupaten Ende Nomor 13 Tahun 2014 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Ende Qanun Kabupaten Aceh Besar Nomor 8 Tahun 2010 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat Peraturan Daerah Pemerintah Daerah Kabupaten Bima Nomor 6 Tahun 2011 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Bima also Peraturan Daerah Kabupaten Dompu Nomor 8 Tahun 2012 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat

[186] Qanun Kabupaten Aceh Besar Nomor 8 Tahun 2010 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat

[187]Rancangan Peraturan Daerah Kabupaten Sikka Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat

It is interesting to note that most of these Perdas – if not all – were enacted in regions receiving community watsan support from donor institutions and NGOs. Indeed, in East Nusa Tenggara, these Perdas were enacted at the initiative of NGO/IGO which also provides some funding for its advocacies to members of local parliaments.[188] In the case of Ende, the cost of advocacy for Perda AMPL are co-financed between NGO and the parliament's budget.

Why would an NGO/IGO advocate for the enactment of Perda AMPL? The clear and straightforward answer from both interviews with stakeholders are their expectations for post-project sustainability. [189] Academic drafts of the Perdas and the Perdas themselves appears to justify this.[190]

As sustainability becomes a complex issue in post-construction stage, there appears to be some sort of realization among CB Watsan movement (especially NGO/IGO activists in the field) that after the projects are finished and they leave, a proper arrangement needs to be in place to ensure that what has been built or achieved will last long and further improve. Their expectation seemed to be placed on local government. Perda AMPL is the mechanism to channel such expectations.

Herbertus Gani, a former member of Ende Parliament who, together with NGOs advocated the Perda is of the opinion that Perda AMPL are practically useful in the following sense: (1) it creates awareness and changes the way politician and bureaucracy in looking at watsan problem; (2) it avoids watsan to be regarded as a "sectoral" problem, but viewed in holistic manner, (3) it provides stronger legal and advocacy basis for the drafting of regional action plan and allocation of watsan budget in regional budget – especially since water seldom comes as a priority in Musrenbang (consultation and planning meetings).[191]

Gani admitted however, that the change in local parliament elections may have some effect on Perda AMPL's advocacy potentials, since politicians who were aware of the issue and involved in the drafting of the Perda were no longer in office.

NGOs and funding institutions do not have specific formula to sustain the CB Watsan after the construction. They apply different strategy. In Ende, Pro Air assists the

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ibid Mohamad Mova Al'Afghani, *Laporan Penelaahan Ranperda AMPL-BM Kabupaten Sikka* (Dropbydrop and Pokja AMPL Sikka, 2012) Kabupaten Sikka

[188] See Mohamad Mova AlAfghani, *Interview with Dormaringan Saragih, Waspola Facility, Jalan Lembang 11 A, Menteng, Jakarta, September 25, 2014* Mohamad Mova AlAfghani, *Interview with Reza Hendrawan, Jakarta, August 26, 2014* also Mohamad Mova AlAfghani, *Interview with Herbertus Gani, Ende, November 16, 2014*

[189] AlAfghani, *Interview with Reza Hendrawan, Jakarta, August 26, 2014* and

[190] *Naskah Akademik Rancangan Peraturan Daerah Kabupaten Ende Tentang Air Minum Pembangunan Lingkungan Berbasis Masyarakat, 17 Juli 2014* ; Kabupaten Sikka also Peraturan Daerah Kabupaten Ende Nomor 13 Tahun 2014 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Ende

[191] AlAfghani, *Interview with Herbertus Gani, Ende, November 16, 2014*

formulation of various legal documents/regulation as an exit strategy such as assisting the community members to formulate articles of association that are legalized by notary [192]. It is suggested that the NGOs and funding institutions should involve community member's participation starting from planning, implementation and post construction program. This is because they know what they need[193] and it is they that have to sustain the CB Watsan for their need. The disconnection between the program of NGOs and international funding should be avoided. For example, in Ende the sustainability of the program often faces problems with regulation due to the nonexistence of nomenclature to allocate payment for incentives. In this case the NGOs and international donor pay for the incentive during the project but after they leave there is no incentive and this influences the performance of the operation. Another challenge is that after the NGOs and international funding institutions completed their programs, the Government assumes that the goal has accomplished and it does not provide further assistance[194]. In this case the Government should have a mechanism and be able to maintain or oversee the program after the NGOs and international funding institutions have left to ensure its sustainability.

### 3.6 ROLE OF VILLAGES

Articles of association of Hippams Tirto Agung does not mention the role of the village apparatus regarding the post construction. Article 15 of the article of association only provides general requirements of the village's apparatus. The requirements include: a) assisting and developing businesses so that it grows to be business entities and enterprises that are useful for the community members in Tlanak village, b) improving fair and equitable service for the consumers, c) building cooperation with various institutions, d) maintaining cohesiveness within the HIPPAMS and preventing the possibility of misuse the village/rural enterprises for personal or group interests. Furthermore, the roles of BPD of Tlanak village are as follows: a) monitoring and protection HIPPAMS from the things that may damage the continuance and image of HIPPAMS, for the benefit of Tlanak village community members[195]. In addition the head of LPMD role is a supervisor of HIPPAMS and responsible to provide administrative and technical advice[196].

[192] Andreas Worho, AlAfghani, 'Focus Group Discussion, Aspek Regulasi & Keberlanjutan AMPL BM, Ende, 20 November 2014'
[193] Interview with Meti, Yayasan Tana Nua, Flores
[194] AlAfghani, *Interview with Petrus H Djata Ende, 10 November 2014*
[195] *Anggaran Rumah Tangga Himpunan pengelola air minum dan sanitasi (HIPPAMS) Tirto Agung* Article of Associations Article 16 (1) and (2)
[196] Ibid Article of Associations Article 16 (3)

### 3.7 ROLE OF PDAMS

The relationship between PDAM and CBO could be in the form of conflict or cooperation. Cooperative relationship includes: situation where PDAM purchases water from CBO since it is considered cheaper, PDAM providing assistance to CBOs in the form of training, managerial skills and technical expertise[197], access to PDAM network in which CBO will become retailers of PDAM's service, and PDAM becomes bulk water supplier to CBOs. It is to be noted that none of these models are found in our field study sites in both Ende and Lamongan, but we have been informed by stakeholders that they are occurring in East Nusa Tenggara and East Java. Based on the focus group discussion in Lamongan, it was stated that:

"There is a competition between HIPPAMS and PDAM in Malang and Pasuruan. In Lamongan, the relation of PDAM-HIPPAMS depends on the persons".[198]

By conflict, we do not mean "open conflict", as stakeholders would normally deny that conflict exist. A PDAM Lamongan officer states that:

"PDAM in the near future will not be able to provide [water service]. [In this case it needs] a help from HIPPAM so that [the water service] do not redundant. This principle concurs with the Lamongan government's view in order to increase the service coverage. Besides HIPPAM, there is also PJT. In the field, if the HIPPAM exists and then PDAM gets in [the location], the HIPPAM's staff do not mind, because people choose the best quality. In Turi, for example there is a HIPPAM and the people [costumers] have moved to PDAM, and it is not a problem." [199]

We observe two kinds of conflict: in the form of competition over water resources and in terms of competition over marketplace, which can take the form of competition over service area (which is in essence, a competition-for-the market) or over customers (a competition within an already natural monopoly market). Most conflict that we observe occurs on district capital or regency capitals, whereas, most actors tend to agree that for village level, CB Watsan is the most appropriate system. An official adds that:

"There are problems sometimes with respect to the relationship between PDAM and CB. In Kodi, PDAM supports CB in terms of traning, etc. However, in Makassar, PDAM and CBO becomes competitor. Sometimes PDAM purchase CBO water for its supply because it is cheap. In some other regions, PDAM provide guidances to CBO. Because some CBOs are quite large, there are CBO who borrow up to 500 million IDR to a bank and they can build a system up to 800 million." [200]

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[197] Al'Afghani and Avessina, 'Focus Group Discussion Report' See the opinion of Zainal Nampira
[198] Avessina, 'Focus Group Discussion at Lamongan, Bappeda Office, 26 January 2015 '
[199] Mohammad Aftaf Muhajir, 'Interview with Ivan Julianto, PDAM Lamongan Officer on 15 January 2015'
[200] Al'Afghani and Avessina, 'Focus Group Discussion Report' see the opinion of Zainal Nampira

It is to be noted that water services is a natural monopoly and some PDAM are granted with natural-legal-monopoly through a regional by-law which specifies the PDAM's area of operation. When this is the case, legally, no other operation can take place within PDAM's service area without PDAM's permission. This leads to a conflict over service areas.

When both PDAM and CBOs are operating in the same region, the conflict over service area can sometimes develop into a conflict over customers, in which customers can choose whether to connect to PDAM pipes or to CBO's pipes. The provision of multiple water services in a single region may not be economically efficient due to economic of scale and scope.

The occurrence of some conflict between PDAM and CBOs in several regions are confirmed in our 2013 national FGD, our local FGD in Lamongan, and our interviews with officials in East Java province, Ende and Lamongan regency.

Mr Zainal provided an example that in Kodi, PDAM supports Community watsan on training and managerial skill. In another example, in Makassar, PDAM and CBO becomes competitor. (FGD 2013) Our interview with officials from East Java provinces revealed that it is often the case that PDAM becomes irritated with CBO operation in their area of service. (Bappeda Jatim).

On the other hand, there are views that PDAM should be tasked – by providing support and raw water supply – to CB Watsan while overlooking its financial and resources implications to PDAM. [201] This is despite the fact that the present legislation on regional corporations is quite stringent, in that it could penalize PDAM directors for causing losses by providing non-commercial services.[202] This view was manifested in a draft regional-by-law, which, at the time of writing this report, has not been enacted by the local parliament.

Another effect of institutional duality is with respect to PDAM's business plan. According to a PDAM official in Lamongan, the existence of CBOs does have effect on PDAM's business plan, although – in the case of Lamongan – it is possible to reallocate PDAM's idle capacity to another area. [FGD Lamongan]. Meanwhile, a PDAM official in Ende expressed his concern over the occurrence of CB watsan projects in regions already served by PDAM. According to him, "*… it is like a sale, one is for free while the other* [CB Watsan Project] *is at a fee. Will this eventually put an end to PDAM business …? All of the systems there should be handed over to PDAM…. Pokja AMPL should regulate this …. PDAM should be supported.*[203]

[201] Rancangan Peraturan Daerah Kabupaten Sikka Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat
Al'Afghani, *Laporan Penelaahan Ranperda AMPL-BM Kabupaten Sikka* Kabupaten Sikka
[202] Undang Undang No.5 Tahun 1962 Tentang Perusahaan Daerah
[203] Muhajir, *Interview with Darsono, PDAM Office, Ende, November 10, 2014*

Indeed, in areas where PDAM are present (albeit probably not full coverage); it becomes an issue as to whether aid funds should be channeled to CB Watsan or channeled directly to PDAM to finance its expansion. Continuity, sustainability and the region's future prospect and development should be taken into account.

However, "aid politics" on the local level may be preventing this from occurring. Oftentimes it will not be possible to direct watsan aid to PDAM although it could be more efficient in certain circumstances, since the aid are targeted towards communities. Thus, rather than not receiving aid, interest groups at the local level may instead choose to suppress PDAM's interest.

It is also suggested that competition over customers does not always occur between PDAM and CBOs operating in the same area. In a way, although both CBO and PDAM provide water, their services could be differentiated in terms of quality, continuity and price. Based on the focus discussion group in Lamongan, it is stated that:

"PDAM Lamongan served from [the area of] Bengawan Solo, Dam, to Kedumpring. The management was bad. It [suffered from the financial] loss. We handed over the assets to HIPPAMS at the sub district (kecamatan). In Pasuruan, the water quality of HIPPAMS and PDAM is good."[204]

In many cases, due to minimal treatment, CBO serves water with lower quality but cheaper price compared to PDAM and customers may choose to be served by them. However, continuity appears to be a deciding point. Both PDAMs and CBOs can face a problem with continuity. Nevertheless, with stronger financial and institutional backing, PDAMs may be more capable to resolve continuity issues which are caused by declining raw water supply compared to CBOs. According to one official, when CBOs' raw water supplies are no longer reliable, PDAM should enter and serve the market.[205]

" Indeed**,** the quality of the water is not so good. At the end there are a lot of customers move to PDAM, [where the] continutiy [of water supply] is clear. The problem is, the installaton that had been established is not being used by PDAM. "

In most situation, PDAM serves only urban regions, but there are districts in urban regions which have been served by CBOs. Based on a focus diccussion group in Lamongan it is stated that:

[204] Avessina, 'Focus Group Discussion at Lamongan, Bappeda Office, 26 January 2015 ' see zulkha statement

[205] Avessina, *Interview with Galih Yanuar (Bappeda Official), Hilmi (Bappeda Official), Agus Pindo (PU Official),Bappeda Office,Lamongan,9 Januari 2015*

" The amount of districts in urban regions are a lot. In the event that the pipes do not enter that area, it (the water service) will be covered by HIPPAM, such as Sukomulyo. [206]

In these instances PDAM services will be in direct competition with CBOs. Officials argued that PDAM, Public Works and the Bappeda needs to sit together and avoid miscoordination. Officials of the Public Works Agency adds:

" So far, there is no problem. This is because we need to sit together with PDAM, PU, BAPPEDA to take care of everything. If there is a problem, they will be informed, so that there is no misscoordination." [207]

One of the officials we interviewed commented that it is important for the regulatory framework to remain flexible in terms of defining service area. "*It is important that* [PDAM or HIPPAM] *service area are not specified* [in the regulatory framework] *for it will cause problem in case they are not able to provide service. Another possibility is for it to be specified in the regulation, but with some flexibility which allows other parties to serve* [in case the other cannot serve].[208]

There are disagreement as to whether district capital (IKK) should be served by PDAM or CBO. According to a PDAM official in Ende, ideally district capital should be served by PDAM, especially when perceived from the area's development potential.[209] Another stakeholder in Ende considered that PDAMs – instead of taking over operation from CBOs – should assist them in developing water supply systems. [Interview mas Wisnu, Kupang] However, there are also cases where PDAMs are unable to serve district capital and "transfer its assets" to CBO. This findings – that IKK (district capital) is somewhat a grey area - is consistent with our earliest national FGD in 2013.[210]

In one district capital in Lamongan a pumping station was transferred to the local CBO since PDAM considered that servicing those area are not efficient.[211] We did not confirm if only the asset's operation was transferred to CBO whereas its ownership remains with PDAM. However, a protocol needs to be drafted to regulate these occurences.

Another form of cooperation is to allow tapping of PDAM pipes to be used for retail distribution by CBOs. One official in Kupang suggested that PDAM could use master-

[206] Avessina, 'Focus Group Discussion at Lamongan, Bappeda Office, 26 January 2015 '
[207] Mohammad Jibriel Avessina, *Interview with Zulkha and Agus Pindo,Public work Agency Office,13 January 2015* (Zulkha dan agus pindo, 2015)
[208] Avessina, *Interview with Galih Yanuar (Bappeda Official), Hilmi (Bappeda Official), Agus Pindo (PU Official),Bappeda Office,Lamongan,9 Januari 2015*
see Hilmi's opinion
[209] Muhajir, *Interview with Darsono, PDAM Office, Ende, November 10, 2014*
[210] Al'Afghani and Avessina, 'Focus Group Discussion Report' Especially the opinion of Handi Legawa
[211] Avessina, 'Focus Group Discussion at Lamongan, Bappeda Office, 26 January 2015 '

meter and charge the lowest tariff while operation and maintenance of the remaining infrastructure remains at the hands of CBOs.[212]

According to stakeholders, this form of cooperation has been in place in several regions in East Java. [213] However, in order for this model to be practiced widely, issues pertaining to leakage management by CBO in addition to other maintenance problems will need to be tackled. Stakeholders perceived that for this to work, CBO needs to be professionalized.[214] Reduction of non-revenue water by CBOs appears to be essential in these cases, as well as the issues of replenishing aging pipes, as taking water from PDAM sources will certainly increase CBO's operational cost especially when compared to extracting water from natural sources.

Therefore, before this model is implemented, it is important to compare the efficiency gain between retailer model and direct provision by PDAM (vertical integration) – on a case by case basis. It is also important to evaluate if CBO will have the capacity, both managerial, technical and institutional required to become retailers. After it is implemented, a set of rules differentiating the responsibilities between CBO as retailers and PDAM as suppliers will need be developed and stipulated in the form of agreement between the two.

Another model of relationship suggested is the provision of technical and institutional services from PDAM. PDAM is perceived to be more flexible than public works department in terms of using its financial resources esepecially since expenditures in Public Works Department will need careful planning in compliance with the budget cycle.[215] In addition, it perceived to have adequate capacity in conducting technical works.

In the Sikka Draft Regional By-Law, there is a clause requiring PDAM to supply water to CBO network – in the event the CBO does not have access to raw water sources.[216] This should be materialized through a contract. In addition, the Sikka Draft By-Law also require PDAM to support CBO in terms of technical aspects in the areas of planning, maintenance and supervision.[217] Nether Sikka's academic draft nor its By-Law regulates specifically on which party should borned the cost of such supplies. We did not find such a clause in Ende, Bima and Aceh Besar regional By-Laws on AMPL.

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[212] Afghani, 'Interview with Poernomo and Wisnu at Kupang,NTT 17 November 2014'
[213] Avessina, 'Focus Group Discussion at Lamongan, Bappeda Office, 26 January 2015 '
[214] Ibid
[215] Avessina, *Interview note with Reza Hendrawan,Bakoel Koffie Cikini,Jakarta,25 August 2014*
[216] Peraturan Daerah Kabupaten Sikka Nomor 16 Tahun 2007 tentang Jenis Urusan Pemerintahan Yang Dapat Diserahkan Kepada Desa Rancangan Peraturan Daerah Kabupaten Sikka Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat
Kabupaten Sikka
[217] Rancangan Peraturan Daerah Kabupaten Sikka Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat Article 25

For PDAM, the duty to supply CBO can be differentiated from the universal duty of supply towards individual customers, since CBO is an independent entity, different from customer.[218] Thus, the duty to act as raw water suppliers to CBO is more appropriate to be viewed as a business-to-business arrangement instead of supply duty to customer.

In view of PDAM's independence, business arrangements should ideally be entered in an arm's length manner. Therefore, the requirement to serve CBOs may constitute a violation of the arm's length principle. If the CBO connection cause loss to PDAM, any employers and directors of PDAM may, by law, held liable for the loss.[219] Ideally, such Public Service Obligation arrangement should be accompanied by reimbursement clause, in the event of loss.[220]

Integrated and coordinated planning is one way to prevent conflict between CBO and PDAM. In Lamongan, coordination was done *informally* between CBO and PDAM, facilitated by the Public Works department, through Pokja AMPL/Pokja Sanitasi. For network expansion plans, the public works will first check if the region has been served by either CBO or PDAM. In a focus group discussion in Lamongan, an official states that:

"The Department of Public Works (PU) has assessed the potenciality [of CBOs and PDAM]. RI-SPAM prioritises PDAM. In this matter, PDAM and HIPPAM need each other. PDAM may be better but the continuity is not good. While the quality [of water] from HIPPAM may not be good, the continuity is better**.** I would like to highlight that the regulation should include a technical adviser in the Department of Public Works (PU), so that there is an assistant at the Pokja AMPL BM".[221]

The ministerial guideline on drinking water plan (RI SPAM) is quite accommodative in terms of including community watsan initiative and listing cooperatives as well as other form of entities used by the community as "undertaker". [222] The guideline also incorporate both networked (*perpipaan*) and non-networked (*non perpipaan*) infrastructure, thus bringing both PDAM and non PDAM services into the auspices of the RI SPAM. However, the guideline is silent in terms of coordination between PDAM and CB-Watsan.

Neither in Lamongan nor in Ende, RI SPAM touched the issue of CBO. Our 2015 national policy FGD concluded that RI SPAM is still "PDAM-oriented". [223]. In the past there have been ideas towards enacting a community-based water supply planning framework, but

[218] On supply duties, see Hendry, 'An Analytical Framework for Reform of National Water Law' Part II

[219] Undang Undang No.5 Tahun 1962 Tentang Perusahaan Daerah Article 20

[220] For example, State Owned Enterprises Act 1992 (Victoria), No. 90 of 1992, Version No. 036 sections 45 and 72

[221] Avessina, 'Focus Group Discussion at Lamongan, Bappeda Office, 26 January 2015 ' see Agus Pindo Opinion

[222] Peraturan Menteri Pekerjaan Umum Nomor: 18/PRT/M/2007 Tentang Penyelenggaraan Pengembangan Sistem Penyediaan Air Minum

[223] Mohammad Mova Al Afgahni, 'Focus Group Discussion Report, Akmani Hotel, 26 March 2015'

there have been no agreement on the issue. According to one stakeholder, rather than developing a new planning framework, the CB framework should be integrated with existing RI SPAM.[224]

[224] Ibid

# CHAPTER 4: LEGAL FORMS OF CBOs AND THEIR IMPLICATIONS

## 4.1 THE NEED FOR A LEGAL ENTITY

In order to be able to be accorded with rights and carry out responsibilities, a community based organization must be incorporated as a legal entity. Lack of clarity on asset ownership is also one of the most crucial issues in community watsan and has far reaching consequences on sustainability. Our FGD reveals that in some large scale projects, the assets still belong to the ministry of public works as they have not been transferred and thus, is accounted as liability and subsidy.[225] FGD participants agreed that "*Assets transfer is Indeed a big homework. The legal frameworks need to be completed."*[226]

Community watsan actvist considered that assets should be owned by the "communities"[227] whereas for according to some other, it should be owned by the village.[228] The national policy on community-based watsan on the other hand, advocates "community" ownership[229] and suggests that a legal framework be conceived by the government to smoothen the transfer of assets ***from the government to the "community"***.[230] On the Pamsimas technical manual it is suggested that it is the operation that is transferred, but not the asset owenership.[231]

Legally, it may be difficult for a community to own water services assets. A legal entity, in which individuals from the community are registered as members, however, can own assets. This situation is different from Adat community or indegenous ownership of land and natural resources which is guaranteed by national law. In such situation, such Adat communities or indegenous groups directly own land, water bodies or natural resources as a collective.

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[225] Al'Afghani and Avessina, 'Focus Group Discussion Report'
[226] Ibid
[227] Hendrawan
[228] Adifan see also the debate in in Al'Afghani and Avessina, 'Focus Group Discussion Report'

[229] Bappenas and others, *Kebijakan Nasional Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat* see p.3 and p.20
[230] Ibid p.3 and 20
[231] Sekretariat CPMU Pamsimas, *Petunjuk Teknis Pedoman Pelaksanaan Pamsimas Tingkat Masyarakat* p.65

For community watsan, the practice to date is for the community to "own" assets through the intermediaries of legal entities such as "cooperatives" and "association with legal entity" – thus, not directly as the case with Adat communities.[232] However, these cooperatives and associations are imported from the Dutch colonial law and thus may be considered alien for the local community. The relationship between a community and infrastructure assets, how community sees themselves as "owning" such assets and whether the role of Community based Organizations (CBO) as intermediaries pose a problem that on its own warrants some exploration.

The establishment of legal entities could also be too cumbersome and too bureaucratic for local communities. If the establishment of such entities is too cumbersome, the majority of CBO may not have the status of legal entity. If the majority of CBO does not have the legal entity status, their assets become ownerless and prone to takeover from third parties.

One of the most crucial issues in community-based watsan is on the ownership status of assets and how their infrastructure should be managed. For some activists, they aspire that the assets should be owned by the "communities".[233] For some other, including community members involved in the formation of the Sikka-regency draft regional by law, the assets should be owned by the village.[234] Neither the Aceh Besar regional by law nor the Bima regional bylaw regulates asset ownership although the latter does stipulates the requirement for villages to facilitate and form institutions that will operate watsan assets.[235]

Meanwhile, the national policy on community-based watsan seemed to advocate "community" ownership – despite the fact that it does not stipulate what it means by "community".[236] The said policy even suggests that a legal framework be conceived by the government to smoothen the transfer of assets ***from the government to the "community"***.[237] Indeed, the wording of the policy is dubious, one could even say that it may be intended to transfer the "operation" of assets to the community, but not necessarily its ownership, although it is a bit too far-fetched. The Pamsimas technical manual on the other hand suggest the transfer of the assets "operation" to the communities, hence, not its ownership.[238]

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[232] Undang Undang Nomor 25 Tahun 1992 Tentang Perkoperasian
[233] Hendrawan
[234] Adifan
[235] Qanun Kabupaten Aceh Besar Nomor 8 Tahun 2010 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat Peraturan Daerah Pemerintah Daerah Kabupaten Bima Nomor 6 Tahun 2011 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Bima
[236] Bappenas and others, *Kebijakan Nasional Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat* see p.3 and p.20
[237] Ibid p.3 and 20
[238] Sekretariat CPMU Pamsimas, *Petunjuk Teknis Pedoman Pelaksanaan Pamsimas Tingkat Masyarakat* p.65

If there is no legal clarity on the ownership of assets, then there is no guarantee that assets that has been built through foreign and national funds with community involvement will be secured. Unsecured assets mean that third-party claim or expropriation might arise on later days, rendering all the previous development efforts useless.

As we have previously discussed in section 3 above, this confusion is due to the ambiguity of the concept and terminology of "community" in Indonesian Laws. As section 3 elaborates, the term community is often asserted when a rule confers participatory rights, for example, in water resources or river basin planning. At this stage, confusion over which legal subject is actually conferred by the rights already arises. However, the real confusion becomes clearer when it comes to ownership. What do we actually mean by "*…the assets are transferred from the government to the community*."? [239] When we say that "*community should own watsan assets*", *who* are they? Legal theory stipulates that in order to own property, the owner must be clearly defined.

The Indonesian legal system does recognize "*Komunitas Hukum Adat*" or *Adat* (Customary) Law Communities. The national water law at Article 6 stipulates that the state recognizes adat law communities' control [and ownership] over water resources to the extent that it does not conflict with national interest and regulations and that it is stipulated by a regional by-law.[240]

Scholars conceptually distinguish between raw water (water resources) and water supply infrastructure (water services). [241] Indeed, as Bakker notes, "community ownership" may loom over the two concepts, for example, in the form of communal water rights (water resources) and in cooperatives (water services). Nevertheless, Article 6 of the water law is meant to cover *water resources* that are normally attached to a particular geographical area, rather than water services. That said, there is no clarity under the national water law that an *Adat* community could own water services infrastructure.

There are forms of entities that are close to what scholars termed as "community ownership", these are "cooperatives"[242] and "associations".[243] The latter is enacted by a

[239] Bappenas and others, *Kebijakan Nasional Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat* p.20

[240] UU No. 7 Tahun 2004 (Water Resources Law) Article 6; This caveat under the law– that in order to be acknowledged it must be approved by a regional by law and not contradict national interest spark a debate at the Water Law's Judicial Review. See Al'Afghani, 'Constitutional Court's Review and the Future of Water Law in Indonesia' also *Judicial Review of Law Number 7 Year 2004 regarding Water Resources*, *Judgment of 13th July 2005*, *No. 058-059-060-063/PUUII/2004* (Constitutional Court of the Republic of Indonesia)

[241] See K. Bakker, 'The ambiguity of community: Debating alternatives to private-sector provision of urban water supply' 1 Water Alternatives 236 also Hendry, 'An Analytical Framework for Reform of National Water Law'

[242] Undang Undang Nomor 25 Tahun 1992 Tentang Perkoperasian

[243] Indonesian Civil Code, the "Burgerlijk Wetboek" Book III, Chapter IX

national legislation whereas the latter derived from the Dutch civil law. It is rather unfortunate that none of these forms of entities are indigeneous.

Government guideline refers to *Lembaga Keswadayaan Masyarakat* (LKM) as the preferrable form of community-owned entity.[244] Under the law, LKMs are a form of association under the civil law which can have legal personality through a certain notarial procedures. [245] LKMs which are accorded with legal personality could own insfrastructure assets, such as buildings or pipes, like other legal subjects such as corporation or cooperatives and would be able to enter into agreement on behalf of itself.

The problem with LKMs is that, similar to corporations, they will be represented by their executives which have the legal authority to encumber, transfer or even dispose of assets. Thus, the extent to which LKMs adhere to democratic principles would depend entirely on its article of association which will regulate the decision-making processes including the management of its assets.

From the above exposition we can see that the ideal concept of "community ownership" can have difficulties when materialized into the existing legal framework. Legally, it is never the community – as a group of people – that directly owns the watsan assets. Rather it is a certain entity – in which a certain community is organized – which owns the watsan assets. Whether or not the said community members "own" the entity would depend on its internal governance mechanism.

Therefore, to suggest that LKM is a form of "community ownership" would be "jumping to conclusion" as one must first evaluate its articles of association. Only when power asymmetry is addressed and democratic decision-making process is guaranteed can one conclude that the LKM model is a form of "community ownership".

The review of the Sikka regency draft by-law thus recommends that the Sikka government accomodate this institutional diversity. It opens possibility for an asset to be owned by a village or by any other legal entity.[246] The review also outlines a simple framework for a transfer of assets owned by a legal entity to villages, but this is subject to the legal entity's approval.[247]

[244] See for example Sekretariat CPMU Pamsimas, *Petunjuk Teknis Pedoman Pelaksanaan Pamsimas Tingkat Masyarakat*
[245] Staatsblad 1870 Nomor 64 Perkumpulan Perkumpulan Berbadan Hukum
[246] Al'Afghani, *Laporan Penelaahan Ranperda AMPL-BM Kabupaten Sikka*
[247] Ibid

### 4.2 ISSUES IN SELECTING THE APPROPRIATE LEGAL FORM

In determining the appropriate form of a CBO, several elements are necessary to be considered: (a) accommodation of the "community-based" concept; (b) financials and profit and (c) the degree of independence and (e) assets security.

The concept of community-based, as discussed in Chapter 1 contains the following elements: (i) similarities in terms of locality, values and problem faced (ii) participation and decision making on the planning process (iii) cost sharing, in kind or in cash by the community in the construction process and (iv) operators are appointed from, by and are accountable to the community. A CBO would need to select a legal form which accommodates this communitarian concept.

Previous research conducted by various Institutions such as Pokja AMPL research lead by Indrawan Prabhaharyaka, also Handbook for Community-Based Water Supply Organizations for Multi-Village Pooling Project in Indonesia provide by Water Sanitation program[248] indicates that profit has correlation on sustainability. Thus, the ability to retain profit could be important for a CBO. Furthermore our field informant, Panggeng Siswadi argues that he adopted cooperative as a "formal legal entity" is important for financial loan access.[249] According to him:

"A legal entity of a cooperative is made because it was needed for ESKIPI [SGP or Second generation Program provide by INDII]. The fund from ESKIPI cannot be processed if [the CBO] does not have a legal entity. In Malang, the legal entity [of the CBO ] is a foundation".

Furthermore, Panggeng argues that a selective form to adopt legal formal entity is also important to obtain access on certain government program able to provide "supplement" to develop the CBO.

Finally, as our field study demonstrates, the independence of a CBO is one of the topics that is being debated in the field. Successful CBO, such as that in Tlanak, prefer legal forms that will ensure their independence from local politics. Meanwhile, from another point of view, local government should be provided with avenues to intervene in CBOs which do not perform. Panggeng Siswadi ,the CBO leader, states that:

"In terms of BUMDes, it can be interfered with by the head of the village. This is because BUMDesa belongs to the village, thus the HIPPAM cannot be independent [if it is in the form of BUMDes]. In addition, the legal form that is suited for the context of Lamongan is cooperative, not BUMDes. I provide input that it is better [that HIPPAM is] not in the form of BUMDes**.** On the other hand, the head of the village prefers BUMDes. I argued that if it is [ HIPPAM] in the form of BUMDesa, the village has to have a 40% share. It means that the village has to invest 40% of its share in it. In this case, we do not have

[248] Prabaharyaka pp-5-7 and also Jemmima SY pp 23-27
[249] Avessina, *Interview with Panggeng SIswadi,Researcher Homestay,Lamongan, 17 January 2015*

any share. So far [we got funded] by members. I told the head of the village that even though the legal form [of HIPPAM] is in the form of a cooperative [rather than BUMDes] it still belongs to the village, because the village has a 25% share. However, the management must be independent. If not, the organisation will collapse." [250]

The research question we pose in this section is: what are the implications for selecting certain legal forms for a CBO?

| Public | | Private | |
|---|---|---|---|
| PT Desa | BUM Des | Cooperative | PT |
| | | Association | Foundation |

### 4.3 Village Technical Units (*Pelaksana Teknis Desa*)

The new law on village specifies three major parts of a village bureaucracy: (1) Village Secretariat (*sekdes*), (2) Technical Unit (*pelaksana teknis*) and (3) Territorial Units (*pelaksana kewilayahan*, also known as *Kepala Dusun*).[251] It is possible to position clean water project as a part of the technical unit.

Does embedding a watsan project under village technical units fulfil the "community-based" criterion? Most of the criteria of "community-based" can be fulfilled, however, as a part of village bureaucracy, the manuevarability of the technical unit might be limited.

If watsan project is positioned directly under technical units, watsan assets will be owned directly by village and village would be responsible for its maintenance and operation. This provides greater clarity as to assets ownership. This will also provide opportunity for accessing the new village's fund, which is pledged at 10% from municipality "balancing fund".[252] Nevertheless, our field study indicates that water and

[250] Ibid
[251] Undang Undang Nomor 6 Tahun 2014 Tentang Desa
[252] Ibid Article 72

sanitation may not be among the priorities of village spending.[253] Vinsentius Mei in Ende states that:

"There was a fund at the village, and then it was given to the treasurer. Unfortunately I don't know where the money is. The budget allocation for the village is based on ADD (Alokasi Dana Desa/village allocation fund), which is 5 million Indonesian Rupiah per month. So far, there is no explanation regarding the asistance fund, and where the money is."[254]

Positioning watsan initiative under village technical unit however, may compromise its independence. Under technical units, participation and decision making will be a part of the general village-level deliberation process and the issue of watsan could be marginalized among other issues. Village chiefs can easily replace officials of the technical unit since legislation only requires Village Chief Decree for their appointments and dismissals.[255]

There will also be a clear compromise in terms of financial ring-fencing. The accounting system of the watsan program will form a part of the general village accounting system. Regulation requires all village income to be channelled through the village cash account and its utilization stipulated in the village's budget.[256] Thus, if positioned under technical units, watsan operator will not have the liberty to decide on expenditure. Their income stream may even be utilized for expenditures not related to water and sanitation. This is probably one of the most important downsides in positioning water operator directly under village government's bureaucracy.

### 4.4 BUM DESA

Village Owned Company (*Badan Usaha Milik Desa or BUM Des*) is often proposed by government actors to be the legal form for watsan CBO. Indeed, after Law 6/2014 on Village and its implementing regulation GR 43/2014 (jointly, the "New Village Regulations") enacted, there is a burst of enthusiasm on village governance, including BUM Des.

BUMDes have been previously regulated through Government Regulation 72/2005 on Village and the Ministry of Home Affairs (MOHA) regulation 39/2010 on Badan Usaha Milik Desa ("Old Village Regulations"). The Old Village Regulations require regional government to enact regional by-laws to regulate the establishment and management of BUM Des.[257]

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[253] John Petrus Talan, *Interview with Visentius Mei,personal house, 16 November 2014*
[254] Ibid
[255] Peraturan Pemerintah Nomor 43 Tahun 2014 Tentang Peraturan Pelaksanaan Undang Undang Nomor 6 Tahun 2014 Tentang Desa Article 64d
[256]Ibid Article 91
[257] Peraturan Pemerintah Nomor 72 Tahun 2005 Tentang Desa Article 81(1)

As a result, several regions have enacted by-laws regulating BUM Des.[258] The Old Village Regulations require BUM Des to have legal entity.[259] It also prescribes that the form of legal entity should be regulated by regional-by-laws although it is silent on *which* form of legal entity should be applied to BUM Des. This results in incoherent regulation. In one regional-by-law, it is stipulated that the legal entity for the BUM Des should be a limited liability company (*Perseroan Terbatas*).[260]Indeed, some believed that Old Village Regulations allowed the BUM Des to be constructed as a limited liability company (*Perseroan Terbatas*) or a public purpose company (*Perusahaan Umum or Perum*)[261] or as cooperatives.[262]

Under the New Village Regulations, the legal entity character of the BUM Des is still not clear. The elucidation of Law 6/2014 states that BUM Des "…*specifically cannot be equalized to legal entities such as limited liability company* [Perseroan Terbatas]*, CV or cooperatives*."[263] In other part of the elucidation, the law says: "*In case where BUM Des business is developing well, there may be a time where BUM Des takes the form of legal entity as prescribed by laws and regulations*". This paragraph appears to suggest that BUM Des can actually take the form of private legal entities, such as limited liability company or cooperatives, but is somewhat contrary to the previous elucidation.

As previously quoted, according to Panggeng Siswadi a CBO Leader, also our key informant at Tlanak Village, he argue that "independency" of CBO-HIPPAMS would be limited by the head of village authority, as told above :

"In terms of BUMDes, it can be interfered with by the head of the village. This is because BUMDesa belongs to the village, thus the HIPPAM cannot be independent [if it is in the form of BUMDes]. In addition, the legal form that is suited for the context of Lamongan is cooperative, not BUMDes. I provide input that it is better [that HIPPAM is] not in the form of BUMDes**.** On the other hand, the head of the village prefers BUMDes. I argued that if it is [ HIPPAM] in the form of BUMDesa, the village has to have a 40% share. It means that the village has to invest 40% of its share in it. In this case, we do not have any share. So far [we got funded] by members.

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[258] See for example Peraturan Daerah Kabupaten Bantul Nomor 03 Tahun 2014 Tentang Tata Cara Pembentukan dan Pengelolaan Badan Usaha Milik Desa Peraturan Daerah Kabupaten Bantul Nomor 11 Tahun 2009 Tentang Pembentukan dan Tata Cara Pengelolaan Badan Usaha Milik Desa Peraturan Daerah Kabupaten Banyuwangi Nomor 21 Tahun 2011 Tentang Tata Cara Pembentukan dan Pengelolaan Badan Usaha Milik Desa Peraturan Daerah Kabupaten Luwu Timur Nomor 07 Tahun 2008 Tentang Pedoman Pembentukan dan Pengelolaan Badan Usaha Milik Desa (BUMDes)

[259] Peraturan Pemerintah Nomor 72 Tahun 2005 Tentang Desa Article 78(3)

[260] Peraturan Daerah Kabupaten Bantul Nomor 03 Tahun 2014 Tentang Tata Cara Pembentukan dan Pengelolaan Badan Usaha Milik Desa

[261] Ibid Amelia Sri Kusuma Dewi, 'Alternatif Bentuk Badan Hukum yang Tepat dalam Pendirian Badan Usaha Milik Desa (BUMDes) sebagai Upaya Meningkatkan Pendapatan Asli Desa (PADes)' 3 Pamator

[262] Bambang Ismawan, 'Badan Usaha Milik Desa (BUM-Des)' (*Indonesiafightpoverty*, 2014) <http://x.crpg.info/1AMKOZ4> accessed February 26, 2015

[263] Undang Undang Nomor 6 Tahun 2014 Tentang Desa

I told the head of the village that even though the legal form [of HIPPAM] is in the form of a cooperative [rather than BUMDes] it still belongs to the village, because the village has a 25% share. However, the management must be independent. If not, the organisation will collapse." [264]

Furthermore, the New Village Regulations stipulates that any losses suffered by BUM Des shall be the liability of the BUM Des' operators.[265] This indicates that BUM Des – in itself – is *not* a legal entity, as it does not limit liability into itself. The New Village Regulations makes no mention of cases where BUM Des is taking the form of limited liability company or other legal entities. In the context of watsan CBO, then any liability, contractual or non contractual—resulting from CBO activities – such as the risk of poisoning in the water system – will be borne by CBO officials.

BUM Des are able to raise capital from village, village communities or government aid (both national and local).[266] The New Regulations stipulates that BUM Des assets and wealth are separated from village. The elucidation further clarifies that BUM Des has its own accounting system, separated from village. Financial ring-fencing of the watsan CBO is thus possible through BUM Des.

BUM Des' access to external financing sources are somewhat limited. It can obtain loan, but subject to the approval of village government.[267] Regulation also limits the possibility of bankruptcy by stipulating that it can only be subjected to bankruptcy through a request to the village chief.[268] This difficulties in insolvency proceeding may mean that BUM Des' attractiveness to financiers is somewhat limited.

BUM Des' governance is based primarily on the arrangements made in its articles of association and internal bylaw. Internal Bylaw of a BUM Des regulates appointment, dismissal and term of office of its officials.[269] It is thus possible to stipulate in the Internal Bylaw that appointment and dismissal are to be the prerogative of the village chiefs. Meanwhile, use of profit is regulated through the articles of association. Both instruments should be drafted through the mechanism of Village-level Deliberation and then enacted by the village chief.[270]

While a BUM Des must be enacted through a Village Regulation (*Peraturan Desa*), the regulation does not clarify if BUM Des articles of associations and internal bylaws should also be enacted through a village regulation or through village chief decision or village

[264] Avessina, *Interview with Panggeng SIswadi,Researcher Homestay,Lamongan, 17 January 2015*
[265] Undang Undang Nomor 6 Tahun 2014 Tentang Desa Article 139
[266] ibid Article 135; Peraturan Pemerintah Nomor 43 Tahun 2014 Tentang Peraturan Pelaksanaan Undang Undang Nomor 6 Tahun 2014 Tentang Desa
[267] Undang Undang Nomor 6 Tahun 2014 Tentang Desa Article 137; Peraturan Pemerintah Nomor 43 Tahun 2014 Tentang Peraturan Pelaksanaan Undang Undang Nomor 6 Tahun 2014 Tentang Desa
[268] Undang Undang Nomor 6 Tahun 2014 Tentang DesaArticle 140
[269] ibid Article 136
[270] Ibid Article 136; Peraturan Pemerintah Nomor 43 Tahun 2014 Tentang Peraturan Pelaksanaan Undang Undang Nomor 6 Tahun 2014 Tentang Desa

chief regulation. In principle, village regulation is the highest form of regulation and the most difficult to change. As the present regulation is not really clear on this, then it is possible for the village chief to intervene and change BUM Des articles of association and internal bylaw, provided that it has gone through the village deliberation mechanism.

BUM Des' independence (including financial ring fencing) is therefore dependent on the dynamics of village politics, as reflected in village deliberation processes. It also depends on the village chief, who has the final say in any modification of the articles of association and internal bylaw. If BUM Des are to be selected as watsan CBO's legal form, it is recommended that a model of watsan CBO's articles of association and internal bylaws be developed and formulated in such a way that could limit the intervention of village chief and local politics in the CBO's finances and management.

### 4.5 COOPERATIVES

Cooperative is the most communitarian of all legal forms discussed here. Legislation clearly stipulate that the entity's purpose is: to increase "collective" welfare. [271] Cooperatives are a "common endeavour" based on the family principle and economic democracy – the law emphasized.[272]

One of the most important evidence of economic democracy and collectivism in cooperatives – and the one that makes it fundamentally different from limited liability company – is the one man one vote system. Cooperatives emphasize deliberation for decision making and will only decide by voting as a last resort. However, when votes are cast, every member only has one vote.[273] On the contrary, in a limited liability company, every share has one vote. Shareholder's voting power will be determined by the proportion of their share.

In our field studies, we find that one of the primary motivation and driving force for CBO top officials are the sense of achievement and social recognition. [274] Panggeng Siswadi states:

"I never calculate **[**remuneration**]**, never. [As a consequence] good fortune will follow. I work on it based on ikhlas (whole-heartedly because of God). If I don't have anything in return, [God] will replace it with something. That's all, it is very simple."[275]

[271] Undang Undang Nomor 25 Tahun 1992 Tentang Perkoperasian 3
[272] ibid Article 4(d)
[273] Ibid Article 24 (3)
[274] Avessina, *Interview with Panggeng Siswadi,Panggeng SIswadi`s House, Lamongan,13 January 2015*
[275] Ibid

CBO chiefs we interviewed stress that their work for CBOs are voluntary and that financial incentives they receive are only for "appropriateness." A CBO HIPPAMS tresurer adds that:

"Overall, the staff [consists of] 47 people and the total salary is Rp.4,700,000. The salary for the new staff, Maya, is the lowest one. We plan that someday (her salary) can be raised. However, we have been paid Rp. 700,000 for several years, below the UMR (Upah Menengah Regional/minimum wage regional salary)."[276]

Indeed, all CBO leaders have permanent jobs elsewhere. Panggeng Siswadi states that:

"Frankly speaking, it is up to me whom I would recruit. I choose people who have commitment, such as people with a strong economy background. I am [totally committed] to take care of the water affairs. Luckily I am a civil servant, so I don't take my honorarium immediately. I take it later."[277]

The government have attempted to "modernize" cooperatives through Law 17 Year 2012 on Cooperatives. This was done, among other, by introducing provisions on sallaries; certificate of capital, the prohibition to distribute surplus (*selisih hasil usaha*)[278] from transaction with non members to members and the requirement to focus on one particular business field. The prohibition in distributing surplus to members for transaction gain with non members are meant to increase cooperative's capital base.[279]

While the Constitutional Court does not consider the provision on salaries to be in violation of the Constitution, the other provisions are deemed to be incompatible with the Constitution. The Court then decided to invalidate the 2012 law and reinstated the 1992 law which is valid to this date.

Unlike the repealed 2012 law, the present law on cooperative does not regulate salaries. It is thus possible that cooperative managements are not paid, although, it is still possible to regulate remuneration on its articles of association and internal bylaw. According to critics, the absence or lack of salary is one of the contributing factors in the lack of growth in cooperatives.[280] Salaries adds to the burden of expenses and is perceived to reduce surplus. This is unpopular among the members. Most cooperatives are run as "part-time" jobs with management having full time roles in government agencies or companies.

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[276] Avessina, *Interview with Dimas Indriani,CBO/HIppams Treasurer,personal house,Lamongan 15 January 2015*
[277] Avessina, *Interview with Panggeng Siswadi,Panggeng SIswadi`s House, Lamongan,13 January 2015*
[278] *Selisih Hasil Usaha* or surplus is the cooperative's net revenue in a particular year deducted by expenses, tax, depreciations and liabilities in that year.
[279] Undang Undang Nomor 17 Tahun 2012 Tentang Perkoperasian (Dicabut) Article 78(2)
[280] Ibid Article 57

Critics aside, the current law on cooperatives are quite flexible in accommodating the voluntary model of cooperatives, that consist no standard salary for employee, and equal distribution of profit which would be consistent with watsan CBO practices on voluntarism we found on our field research.

The repealed 2012 law sought to prohibit surpluses generated from transactions with non-members but the Constitutional Court considered this provision to be in violation with the Constitution.[281] The Court's argument was that obtaining surplus, irrespective of whether it is for transaction with member or non member, is a member's right.[282] As a result, Cooperatives may not have the incentive to retain profit, which would be necessary – in terms of a watsan CBO – for network expansion.

The current law stipulates that surpluses should be announced every year-end and that surpluses, after being deduced by retained earnings (*dana cadangan*), should be distributed to members in accordance with their services to the cooperatives, through a member's assembly.[283] It is possible to regulate retained earnings and the distribution of surpluses through cooperatives' article of association[284], however, the law stipulates that Member's Assembly shall take place once a year and in such assembly, surplus distribution should be decided.[285] It would thus be possible for Member's Assembly to derogate from the rules of surplus distribution on its Articles of Association and decide otherwise. The emphasis on surplus distribution is probably one of the drawbacks of using cooperative as a legal form for watsan CBO.

### 4.6 ASSOCIATION

Association (*perkumpulan*) is the majority legal form adopted by CBO in our field study. This is probably because its formation (in the form of non legal entity association) is the easiest and its members can choose to "upgrade" into association with legal entities at later day. In addition, there are (currently) no official format of articles of association and internal bylaws. Thus, founders of associations have the liberty to formulate their own structure and internal governance although several notaries would refer to the format and structure of a foundation. It is probably these flexibilities – and the fact that it is one of the oldest form of entity - that makes it the majority used in this country, especially for Non Governmental Organization.

The rules on association with legal entity is still based on Dutch colonial law of 1870 and has never been reformed.[286] The procedures of incorporation is elaborated in a 2014

[281] See Putusan Mahkamah Konstitusi Nomor 28/PUU-XI/2013 Tentang Pengujian Undang Undang Nomor 17 Tahun 2012 Tentang PerkoperasianArticle 78(2).
[282] Ibid
[283] Undang Undang Nomor 25 Tahun 1992 Tentang Perkoperasian Article 45
[284] See ibid Article 8j
[285] Ibid Article 45
[286] Staatsblad 1870 Nomor 64 Perkumpulan Perkumpulan Berbadan Hukum

Ministerial Regulation.[287] Both the 1870 Law and the Civil Code are silent in terms of whether associations can generate profit. However, the 2014 Ministerial regulation defined association (with legal entity) as "…*a group of people established to materialize the similarities of intention and purpose in the social, religious and humanitarian fields and does not distribute profit to its members*". Water CBO would fit into the "*humanitarian*" category on the above definition.

There is no explicit prohibition (a definition is not a prohibition *per se*) under the 1870 law and regulations and the Ministerial Regulation can in theory be challenged since higher laws does not contain prohibition on the distribution of profit. It is important to note that the 1870 law stands side by side with a 2013 law on mass organization. The mass organization law stipulates that mass organizations takes the form of either association (with or without legal entity) or foundation.[288] The mass organization law define mass organization as "voluntary, social, independent, *non-profit* and democratic entity.[289] There is still no general prohibition on profit distribution however. The 2013 law only prohibits profit-seeking motive for mass organizations which takes the form of foreign foundation.[290]

Although there are no explicit prohibitions on all three regulations/law mentioned above, the definitions provided there sufficiently reflect government's intention to align association with non-profit entities such as Foundation.

As there are no clear regulations about association's internal governance, more than any legal entities, its governance mechanism will be determined almost entirely by its article of association and internal bylaws. If association are to be selected as a legal form for CBO, its articles of association and internal bylaws needs to be carefully drafted. This includes a specification of its executive body – as they may be required to represent the association in and out of court, the rules on voting and the limitation of liability in the event of dissolution.

Associations consist of members and they typically have equal voting power – as regulated in their article of associations. This fact, coupled by the fact that legislations tend to define association as humanitarian, not for profit entities, makes association the compatible legal form to incorporate the "community-based" concept.

Like any other private entities, associations are independent. It is possible to regulate the use of surplus in the internal bylaws. As distribution of profit is somewhat discouraged, it would be possible to regulate in the bylaws that surpluses should be utilized for network expansion or other programs.

[287] Peraturan Menteri Hukum dan Hak Asasi Manusia Republik Indonesia Nomor 6 Tahun 2014 Tentang Pengesahan Badan Hukum Perkumpulan
[288] Undang Undang 17 Tahun 2013 Tentang Organisasi Kemasyarakatan Article 11
[289] Ibid Article 4
[290] ibidArticle 45

Associations with legal entities can engage in debt financing – but certainly not equity financing since they are not constituted of shares. As they can own real property and can be subjected to insolvency proceedings like other private entities, it is assumed that they will have some value to the financiers.

### 4.7 FOUNDATION

Some water CBOs take the form of a foundation (*Yayasan*). After the 1998 reform, the foundation has been restructured as a purely modern, not for profit entity. This was due to the fact that the foundation has been misused in the past as semi for-profit business entities and for self-enrichment of its founders.[291] According to our key informan, Panggeng Siswadi, a prominent Community based Organisation (CBO) in malang adopt legal form as a foundation. He adds that:

"The legal form of a cooperative came up because it is needed by ESKIPI. The fund of the ESKIPI cannot be processed if [the CBO] does not have a legal form. In Malang, the legal entity [of the CBO] is a foundation."[292]

In the original 2001 law, the law even prohibits any mode of transfer of wealth from the foundation to its executives, advisory and oversight body, including the payment of salaries.[293] In 2004 this condition was relaxed and foundations are allowed to pay salaries to its executive – but not to its advisory and oversight bodies.[294] At the moment, a case is still being adjudicated at the Constitutional Court for the petition to allow foundation to pay salary to the oversight and advisory boards.[295]

Is the foundation a communitarian concept? Not exactly. Foundation organs are the oversight body, the advisory body and their executives, the rest are employees. The executive should consist of at least 3 personnel and can serve for only two 5-year terms.

It appears that the modern foundation law designed the foundation as a purely private charity model. The advisory body is the highest organ and it has the power to appoint and dismiss the members of the executive body.[296] The advisory body also has the

[291] Avessina, *Interview with Panggeng SIswadi,Researcher Homestay,Lamongan, 17 January 2015* according to Panggeng Siswadi, his colleague has established a Foundation as a legal form of CBO in Malang Regency, East Java
[292] Ibid
[293] Undang Undang Nomor 16 Tahun 2001 Tentang Yayasan Article 3 and 5 and its elucidation
[294] Undang Undang Nomor 28 Tahun 2004 Tentang Perubahan Atas Undang-Undang Nomor 16 Tahun 2001 Tentang Yayasan Article I
[295] Panji Erawan, 'Tuntut Hak, Pembina Yayasan Perbaiki Permohonan Uji Materi UU Yayasan' (2015) <http://x.crpg.info/17XKsVw> accessed March 06, 2015
[296] Undang Undang Nomor 16 Tahun 2001 Tentang Yayasan

"reserved power" for anything not delegated to the executive body such as that pertaining to the amendment of the articles of association.

Decision making process within a foundation occurred internally between and inside its organs. This is different from that of the cooperatives and the associations, in which "members" can have a say on the decision making process.

Foundation could be an appropriate form of water CBO, is it is backed by strong patronage of wealthy individuals that endows its assets for water infrastructure through the CBO, However, this is by no means a "community-based" model since one of the prerequisite of a community based model is "cost-sharing", whereas, foundations are the typical top-down charity model.

### 4.8 LIMITED LIABILITY COMPANY (*PERSEROAN TERBATAS*)

The law stipulates that the purpose of a limited liability company (*Perseroan Terbatas or PT)* is to conduct "business activities".[297] It is by definition an aggregation of capital, which are entirely constituted of shares.[298] Other countries such as England recognize a form of "corporation limited by guarantee" which could be designated as non-profit entity for a water utility.[299] This is not (yet) possible under Indonesian company law.

In terms of voting, the default rule is one share one vote – although the articles of association can determine otherwise.[300] Thus, those with the majority share will normally have majority voting power. The fact that PTs are constituted of shares and considered only as "for business" makes it incompatible with the community-based concept.

Community-based concept requires the element of cost sharing, in PT, this must be translated into share ownership. In community based concept, everyone has equal votes, whereas in PT, voting power depends solely on the number (and/or class) of share ownership. In terms of accountability mechanism, a PT's directors and commissioners are accountable solely to the shareholders and not to the "communities".

In terms of access to finance, compared to other legal forms above, a PT is probably the strongest. It can harness both equity and debt financing. It is also independent and its financial reporting must comply to Indonesian accounting standard.[301] The company law also incorporates several corporate governance principles. We have yet to discover a water CBO in the form of a PT. However, for a completely professionalized arrangement, a PT is the most appropriate form of entity.

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[297] Undang Undang No.40 Tahun 2007 Tentang Perseroan Terbatas Article 1
[298] Ibid Article 1
[299] Al'Afghani, 'The Role of Legal Frameworks in Enabling Transparency in Water Utilities Regulation'
[300] Undang Undang No.40 Tahun 2007 Tentang Perseroan Terbatas Article 84 (1)
[301] Ibid Article 66 (3)

Although a PT in itself is not compatible with the community-based concept, multiple structure solutions in which a PT would become the subsidiary of a cooperative, a foundation or an association could be envisaged. The first two (a PT as a subsidiary of cooperatives or foundation) is a common form, however an association who owns a PT is a lesser known form.[302]

[302] Mohamad Mova Al'Afghani and Jibriel Avessina, 'Focus Group Discussion Report' (The Role of Regulatory Frameworks in Ensuring Sustainability in Community Based Water and Sanitation, Center for Water Governance and Jejaring AMPL, Hotel Alila Pecenongan, Jakarta, October 11, 2013) In our first phase of research we conduct a Focus Group Discussion for national stakeholder response for regulation on community watsan issue, we do not find any data consist of prominent CBO using Perseroan terbatas as its legal form.

# CHAPTER 5: REGULATING CBO'S OPERATION, MAINTENANCE AND EXPANSION

## 5.1 ASSETS OWNERSHIP

As described in Chapter 2, the status of asset ownership and how the infrastructure should be managed have consequences towards sustainability. Community ownership does not entail that a community is not supported by other sources. In Indonesia, the community watsan may receive support from international/national funding institutions, NGOs, and the government in various forms such as subsidies, technical support, training, etc. However, community ownership implies that it is the community itself that needs to own the system, make the decisions, determine when to call for assistance/support and exercises control over access to the system.[303]

Community ownership and management is a strategy towards an empowered community based on genuine partnership to advocate for water and sanitation services. In this case, communities are able to actively participate in the entire process of acquisition and operation of the facilities rather than being a passive consumer. This chapter will discuss the legal arrangement and practices regarding the CBO watsan operation, maintenance and expansion in our field research.

### 5.1.1 CBO OWNED

It is argued that during the first generation project implementation[304] the assets have been under the legitimate possession of CBOs. CBOs have legitimate rights of use of those assets to generate value. The equity created through labor and enterprise of CBOs are regarded as very substantial and often in the form of cash. In Maukaro for example, the community was involved in the planning and the development of BP SAB facilities under the Pro Air programme.[305] However, legally, the assets do not belong to the CBO or the communities until they are formally transferred. The local level regulations being

[303] WHO, *Community Management of Rural Water Supply and Sanitation System, Points for Practitioners* (World Health Organization, Regional Office for Africa 1996) see also Peter A Harvey and Robert A Reed, 'Community-managed water supplies in Africa: sustainable or dispensable?' 42 Community Development Journal 365

[304] World Bank, 'The Hard Way to the High Road: Transition of Community-based Water Groups to Professional Service Providers in Indonesia ' Water and Sanitation Program <http://x.crpg.info/1dJKUd5> accessed May 02, 2015

[305] Bambang Suryokusumo, 'AIIRA Internal Workshop Presentation, Bogor, Novotel,10 February 2015 '

analysed[306] do not clearly regulate the ownership of the assets, although they set the requirement to facilitate and form institutions that will operate watsan assets.[307] It is argued that the lack of clear regulation provides flexibility to the community to adjust the ownership arrangement pertaining to their local context. However, the non-existence of clear rules creates confusion in CB Watsan practices at the village level which brings implications for the arrangement of assets and their protection. We observe discrepancy between the practices, community's understaning and perception of ownership and the legal documents.

The arrangement regarding ownership of the facilities in Maukaro District can be found in several documents. Both the articles of association and the establishment deed of the BP SAB Koja Aje stated that the water facility that has been developed in several villages (Kebirangga, Kebirangga Tengah, Kolikapa, Bolenggo villages) is owned by the BP SAB Koja Aje -- according to the record of transfer (Berita Acara Serah Terima Sarana Air Bersih) from ProAir (as a funding agency) to the BP-SAB.[308] The rules of association of the BP SAB Koja Aje state that the assets include immovable goods such as clean water facilities donated by the Indonesian Government and Germany, amounted to Rp. 4,090,405,000, and the land which is voluntarily donated by the members of the water service is used for the location of the facilities.[309] Movable property can be regarded as

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[306] Qanun Kabupaten Aceh Besar Nomor 8 Tahun 2010 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat,Peraturan Daerah Pemerintah Daerah Kabupaten Bima Nomor 6 Tahun 2011 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Bima Peraturan Daerah Kabupaten Dompu Nomor 8 Tahun 2012 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat , Peraturan Daerah Kabupaten Sumba Timur Nomor 2 Tahun 2013 Tentang Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat East Sumba Regency regional regulation No 2/2013

[307] Peraturan Daerah Kabupaten Dompu Nomor 8 Tahun 2012 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat Article 19 and 20, Peraturan Gubernur Nusa Tenggara Timur Nomor 10 Tahun 2012 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat Article 12, Peraturan Daerah Kabupaten Sumba Timur Nomor 2 Tahun 2013 Tentang Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat Article 20, Peraturan Daerah Pemerintah Daerah Kabupaten Bima Nomor 6 Tahun 2011 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Bima Article 19 and 20.

[308] *Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 10 Maret 2010* and see *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 17 Maret 2010*

26 (2) Sarana Air Bersih yg telah dibangun di Desa Kebirangga, Kebirangga Tengah, Kolikapa dan Dusun Bolenggo dan meliputi zona Kebirangga, Kebirangga Tengah, Kolikapa dan Dusun Bolenggo Desa Magekapa dimiliki secara sah oleh Badan Pengelola Sarana Air Bersih Koja Aje yang dpt dibuktikan dgn Berita Acara Serah Terima Sarana Air Bersih antara Pihak ProAir dengan Badan Pengelola Sarana Air Bersih.

[309] , *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 17 Maret 2010* , article 14 Butir 1 "Aset berupa barang tidak bergerak berupa SAB sumbangan

CBO assets, however, if the CBO is not constituted as a legal entity, such movable property is contractually owned only by individuals whose name are listed in the articles of association.[310]

In addition, there is a provision regarding transfer of land in order to build facilities from the community members to BP SAB Koja Aje. The facility includes the broncapturing, the sump well, the reservoir, the break pressure tank, and the public hydrant.[311] In a written statement (as an attachment to the articles of association), the donors of the land, Simon Seto on behalf of Mosalaki Kebirangga, stipulate that the land is for the development of an office which is given to the BP SAB Koja Aje[312] .

However, although the article of association provides information regarding the use of Adat land for the water facilities, the status of ownership is still unclear; from the positive law, it is unclear if the transfer process is about the transfer of ownership or the transfer of the rights to use the Adat land. The research does not find any formal legal certificate made by notary regarding the transfer of land's title.

These compexities further reflect the tension between a modern CBO – as introduced by donor, which may have legal capacity to "own" land -- and on the other hand, the Adat system. Modern "assets security" mechanism such as notarial deed may not not be necessary since such land has been permitted by Adat for CBO operation. Assets security can be achieved by relying on the protection of Adat.

It is to be noted however, that in terms of Adat – as explained in Chapter 2--- the entrustment of springs from Adat to CBO is secure. Thus the Adat elders will refrain from interfering with the use of land facilities by the CBO – to the extent that it is used to provide water services.

Finally, the form of BP SAB Koja Aje, as a CBO, is an association (*Perkumpulan*) and it is not yet a legal entity, meaning that the BP SAB has not been registered to the Ministry of Law and Human Rights Affairs. This prevents them from controlling real property and other assets and consequently prevent them for accessing lending facilities.

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pemeritah indonesia & pemerintah Jerman senilai Rp. 4.090.405.000", dan Psl 14 (2) Lahan tempat lokasi sarana air bersih yang merupakan sumbangan sukarela dari masyarakat anggota cakupan; AD BP SAB Koja Aje Psl 25 butir 1 Sarana Air Bersih dibangun di atas lahan dan/ atau melewati lahan milik warga cakupan secara perorangan maupun milik umum.

[310] Indonesian Civil Code, the "Burgerlijk Wetboek" Article 526

[311] , *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje*, *Desa Kolikapa*, *Desa Kebirangga Tengah*, *Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende*, *17 Maret 2010* Anggaran Rumah Tangga BP SAB Koja Aje Psl 12 butir 1 Berdasarkan surat –surat penyerahan lahan dari masy utk pembangunan Broncap, Bak Pengumpul, Reservoir, Bak Pelepas Tekanan (BPT) dan tugu kran Umum menjadi milik/asset yg sah dr BP SAB Koja Aje utk dikelola & dipergunakan sebaik-baiknya bg pemenuhan kebutuhan air bersih anggotanya.

[312] *Surat pernyataan penyerahan lahan untuk pembangunan Direksi Kit/Program ProAir Ende, Ratuseba 10 Juni 2008 (Simon Seto)*

To sum up, in terms of *utilization* of assets *from the perspective of Adat*, the CBO is relatively secured – as there are guarantees from Adat leaders to the extent that its land, building and right of ways are utilized for providing water for the benefit of the community. While the spring is tranferred to CBO by Adat (thus, legally from the eyes of Adat, their ownership, see Chapter 2), other assets remained within posession of Adat although CBO's have rights to utilize them, However, *in terms of the positive law*, they have no control over assets. Forcing the CBO to fulfill modern legal formalities with notarial deeds may not work and it may even cause a conflict with the Adat. We believe that assets security can be guaranteed through further integration with Adat. The drawback with this arrangement is that the CBO will not be able to access lending facilities, as they have no adequate control over assets. Thus, other "financing" schemes must be conceived.

### 5.1.2 VILLAGE OWNED

In addition to CBO, a village is able to own the assets. The practices in Lamongan, East Java are different from Ende regency. Tlanak Village Regulation No. 3/2008 **has a clause** regarding the establishment of the Community Association of Drinking Water and Sanitation Users (HIPPAMS) Tirto Agung in the Tlanak village, Lamongan regency[313]. The institutional arrangement of HIPPAMS is complicated. In 2010 the HIPPAMS was established in the form of a multi-purpose cooperative (Koperasi Serba Usaha)[314]. The multi-purpose cooperative was declared a legal entity by 4 November 2010 through the decision of the Minister of Cooperative, Small and Middle Scale Businesses.[315] However based on the notary document dated 20 July 2013, it is stated that the HIPPAMS Tirto Agung is in the form of association[316]. Nevertheless, neither document includes provisions regarding assets ownership. However, based on the interview it is stated that the village owns the assets collectively.[317] The land was bought jointly. The land certificate – temporarily -- is on behalf of the head of HIPPAMS, Mr Panggeng Siswadi and the transfer of the title to the village government (pemerintah desa) is still in process.[318] Mr. Panggeng Siswadi told us that in the village, no one cares who owns the assets. Thus, in order to prevent future conflict, he took the initiative to secure the land assets where the spring is located by certifying it.

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[313] *Peraturan Desa Tlanak Kecamatan Kedungpring Kabupaten Lamongan No. 3/2008 Tentang Pengelolaan dan Penggunaan Air Minum dan Sanitasi Desa Tlanak* Pasal 11

[314] *Akta Pendirian Koperasi Serba Usaha HIPPAMS Tirto Agung No. 42 tanggal 20 Oktober 2010*

[315] Keputusan Menteri Negara Koperasi & Usaha Kecil & Menengah No: 518/BH/XVI.10/550 /413.111/2010 tentang Akta Pendirian Koperasi

[316] *Establishment deed HIPPAMS Tirto Agung,Tlanak* (2008)Akta Pendirian Perkumpulan Penduduk Pemakai Air Minum dan Sanitasi (Hippams) Tirto Agung

[317] Avessina, *Interview with Panggeg Siswadi,Panggeng Siswadi`s House,Lamongan,13 January 2015*

[318] Ibid

Similar to Tlanak, in Kemlagilor village, the land and the facilities are declared as the village's asset. Nevertheless, there is no certification process regarding the ownership of the village on the assets.

In addition, in Sikka regency, East Nusa Tenggara, according to the community members involved in the formation of the Sikka-regency draft regional by-law, the village should own the assets[319]. According to the review of the Sikka regency draft by-law, it is recommended that the Sikka government accommodate this institutional diversity. This makes it possible for an asset to be owned by a village or by any other legal entity.[320] In terms of the assets owned by a village, the assets should be transferred by a legal entity to villages, based on the legal entity's approval[321]**.** After the transfer process, the head of village needs to conduct an inventory of the watsan assets in the village. The inventory data can be used to assess the operation and maintenance costs and to determine where the budget can be allocated[322].

Neither in Tlanak, Kemlagilor nor Sikka, a protocol of maintenance and operation is available, in situation where assets are owned by village and operated by CBO. In such situation, it would be desireable that O/M protocols are enacted through village regulation.

Finally, it is worth noting that assets ownership by villages also have advantages and drawbacks. The advantages are that village will have some moral obligation to take care and inventarize its assets and – depending on the dynamics of village budgetting – *may* apportion some of the fund for OME activities. The drawbacks would be that the assets would be regulated by village accounting rules (which, at the point of writing there is no clarity with respect to its regulation) and that, because of this, CBO would have more restricted room in terms of its planning. Village politics may govern how assets would be utilized. Meanwhile, banks may be reluctant in accepting those assets as collateral, due to the lack of familiarity with new Law on villages – as compared to when assests are owned directly by CBO.

[319] Max Adifan, *Group Discussion, September 1-14, 2012*
[320] Al'Afghani, *Laporan Penelaahan Ranperda AMPL-BM Kabupaten Sikka*
[321] Ibid
[322] Mohamad Mova Al'Afghani, *Korespondensi Milis AMPL, Manajemen Infrastruktur AMPL BM, Sep 10, 2012* (2012)

### 5.2 PROTECTION OF ASSETS INFRASTRUCTURE

The national and regional regulations do not have provisions regarding the protection of CB Watsan infrastructure. At the village level, the article of association of BP SAB Koja Aje provides very limited provisions which relate to this matter. It states that no parties are allowed to change the function or the status of the facilities in a manner that would be detrimental to the BP SAB Koja Aje[323].

Of all regional regulations being assessed, only Regulations of Ende Regency No. 13/2014 and East Sumba Regency No. 2/2013 explicitly state the responsibility of maintaining and improving the facilities. The Ende Regency regulation imposes the responsibility of individuals and groups to maintain the facilities and SPAM to sustain them[324]. In addition, the local government and community members are responsible for repairing the facilities and improving the drinking water quality[325]. On the other hand, the East Sumba Regency regulation states that the main tasks of the BP SPAMS are in developing, implementing, maintaining, overseeing, and managing the infrastructure towards the sustainability[326]. Most of these provisions are normative, however, which means that it does not entail any positive or negative incentives to subjects that are carrying out the tasks and responsibilities.

In the Maukaro district, the article of association of BP SAB Koja Aje states that the members are involved in controlling, maintaining and protecting the water facilities from any possible damage as a result of human action, animals or natural disaster[327].

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[323] , *Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 10 Maret 2010* Article 26 (3) Sarana Air Bersih sebagaimana di maksud dalam pasal 26 butir 1 dan 2 adalah untuk dikelola dan dipergunakan sebaik-baiknya demi pemenuhan kebutuhan air bersih bagi anggota cakupan dan tidak diperkenankan dari pihak manapun untuk mengalihkan fungsi dan statusnya yang dapat merubah atau merugikan Badan Pengelola Sarana Air Bersih.

[324] Peraturan Daerah Kabupaten Ende Nomor 13 Tahun 2014 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Ende Article 9 (1) "*"Masyarakat baik perorangan maupun kelompok bertanggungjawab atas pemeliharaan sarana maupun SPAM untuk keberlanjutan".*

[325] Ende regional regency regulation no 13/2014 Article 9 (2) *"Pemerintah daerah dan masyarakat bertanggung jawab atas upaya-upaya perbaikan sarana dan kualitas air minum."*

[326] East Sumba Regency regional regulation No 2/2013East Sumba Regency Regulation Article 16 (2) *"Tugas pokok BP-SPAMS yaitu: d. membangun, melaksanakan, memelihara, mengawasi & mengelola sarana yg dibangun demi keberlanjutan"*

[327] , *Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 10 Maret 2010* **article 28 point 1 "**Anggota cakupan terlibat untuk mengontrol, menjaga, memelihara dan melindungi sarana air bersih dari segala kemungkinan kerusakan baik tindakan manusia, hewan maupun bencana alam".

Furthermore, the schedule and the forms of activities regarding the system and clean water network maintenance will be regulated in the operational and maintenance guideline[328]. Based on the deed of establishment of BP SAB, the management of the BP SAB is responsible to repair the facility and guarantee their security[329]. Sanctions can be imposed on anyone who: a) damages or destroys any part of the water facility such as the spring areas, broncapturing, the reservoir, the pressure reducing tank (bak pelepas tekanan), or the public hydrant, b) breaks, drills into or perforates the transmission pipes, the distribution pipes, or the public hydrant and accessories. Anyone who is sanctioned must replace the damaged facility with a new one with the same quality that was provided by Pro Air. In addition the person charged is also responsible, based on customary law, to provide food and drinks, including a pig (the size should require 8 people lift it) to the entire community membership. The sanctioned party must also pay Rp. 200, 000 in cash, plus an additional payment of Rp. 150,000 to install the new infrastructures or make necessary repairs (this money will be given to the 2 technical staff of BP SAB). Furthermore, these actions are considered a criminal offence and will be processed further by the sector police (Polsek) or post police (Polpos) [330].

In the Tlanak village, the village regulation obligates a person who owns the land/resides in the area where the public tap water is located (or other designees) to maintain and manage the use of the public tap water[331]. Furthermore the deed of establishment of HIPPAMS Tirto Agung states the activities to be conducted by the HIPPAMS among others are maintaining and sustaining the water facilities so that they function well[332].

In Rendoraterua village (East Nusa Tenggara), based on the relevant literature, there is a regulation that obligates community members (as a group or as individuals) to clean and maintain their surroundings, which includes the water well, the rain water tanks and stocks, as well as handle all repairs[333].

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[328] Ibid **Article 28 point 2** Jadwal dan bentuk pengelolaan kegiatan perawatan sistem dan jaringan Sarana Air Bersih diatur dalam petunjuk operasional pemeliharaan.

[329] , *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 17 Maret 2010* **article 9 point 1 (b)** Memperbaiki kerusakan SAB segera setelah mendapatkan informasi/mengetahui tentang terjadinya kerusakan/pengrusakan SAB **and (c)** Menjamin keamanan SAB,

[330] Ibid article 20 point 7

[331] **, *Peraturan Desa Tlanak Kecamatan Kedungpring Kabupaten Lamongan No. 3/2008 Tentang Pengelolaan dan Penggunaan Air Minum dan Sanitasi Desa Tlanak*** **article 35** Pemeliharaan, pengelolaan dan pemanfatan kran umum adalah tanggungjawab orang yang ditempati kran umum atau yang ditunjuk.

[332] 'Akta Pendirian Perkumpulan Penduduk Pemakai Air Minum dan Sanitasi (Hippams) Tirto Agung' article 5(c) Melaksanakan pemeliharaan dan melestarikan sarana penyediaan air agar berfungsi dengan baik

[333] UU No. 7 Tahun 2004 (Water Resources Law) *Peraturan Desa Rendoraterua No. 03/2008 Tentang Air Minum Penyehatan Lingkungan Berbasis Masyarakat* Article 4(1) Masyarakat wajib merawat dan menjaga kebersihan lingkungannya, sumur gali air tawar, PAH, dan JAGA serta

Based on the description above, it can be concluded that the community members and the CBO share the general responsibility of the operation and maintenance, although the assets are owned by the CBO or village.

Koja Aje has the most complete regulatory features for assets protection, although the legal form of its regulation – the Articles of Association - is inadequate. Assets protection should be regulated in a "public" law instrument whose enforcement is easy, cost efficient and effective as compared to articles of association, which is a private, contractual arrangement relying on Courts for its enforcement. That said, the provisions of Adat sanctions in Koja Aje is positive, as it reflectes some integration with Adat in terms of assets protection.

### 5.2.1 BULK WATER SECURITY

The source of water for BP SAB Koja Aje comes mainly from springs. To secure access to the springs, there was a transfer of ownership of two springs (Koja Aje spring and Ae Bhika spring) from the owners[334] to the infrastructure management unit of the village's administration (UPS Desa) in Kebirangga village, Kebirangga Tengah village, Kolikapa village, Bolengo and Magekapa village. The social units (UPS) represent the community's interest in the three villages to develop a water facility. The UPS is an embryo for the development of BP SAB Koja Aje. The springs are used by the BP SAB to provide clean water for the members[335]. There is no formal transfer of ownership regarding the springs from the UPS Desa to the BP SAB Koja Aje. However, the BP SAB Koja Aje article of association states that the springs are formally/legally owned by the BP SAB to be used as a raw water source to provide clean water for the members[336]. The BP SAB and its

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kandang ternaknya dan memperbaiki segala kerusakannya dengan baik secara perorangan maupun kelompok;

[334] , *Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 10 Maret 2010* article 23 butir 1 Sumber Mata Air Koja Aje yang dimiliki oleh Bapak Yohanes Jogho Bie -Mosalaki Owa Joje di Dusun Kotakadhe Desa Kebirangga, Kecamatan Maukaro, dan Markus Ora - Mosalaki Owa Joje Dusun Ndetundopo Desa Kolikapa Kecamatan Maukaro. Sumber Mata Air AE BHIKE yang dimiliki oleh Hendrikus Bhera - Mosalaki Owa Joje, dusun Ndetundopo desa Kolikapa Kecamatan Maukaro. Kedua Mata air tersebut, telah diserahkan secara sah kepada UPS Desa Kebirangga, Desa Kebirangga Tengah, Desa Kolikapa dan Dusun Bolenggo desa Magekapa yang mewakili warga cakupan di desa-desa tersebut di atas untuk membangun Sarana Air Bersih pada tanggal 11 April 2008.

[335] ibid Article 23 (2) Sumber Mata Air Koja Aje dan Ae Bhike dimanfaatkan oleh Badan Pengelola Sarana Air Bersih Koja Aje.untuk kepentingan penyediaan air bersih bagi anggota cakupan.

[336] , *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 17 Maret 2010* Article 11 butir 2. Sumber mata air tersebut pada butir 1 menjadi milik / asset yang sah dari BPSAB Koja Aje untuk digunakan sebagai sumber air bagi system air bersih Koja Aje

members are responsible to preserve and maintain the spring[337]. To preserve the raw water, the members are obligated to turn off the water tap after they have finished using the water[338]. In order to protect the springs there are various sanctions for violations. They will be categorized as criminal actions and police will enforce the law in the case that a person/persons: a) intentionally introduce toxic substances into the spring or other water facilities or litters the area around the springs[339]; b) cuts down one tree in the springs area. In addition, the guilty party must plant 20 new trees and take care of them for at least 2 years[340]; c) causes a forest fire, either intentionally or through acts of negligence, in the springs area. In addition, the person also has to "green" the areas that have been burnt[341].

In Tlanak, the source of water for HIPPAMS Tirto Agung is from ground water. There are two drilled wells with the depth of 100 meters and 106 meters to pump the water out[342]. At present, the volume of the ground water is enough to fulfill the needs of the HIPPAMS to provide service for its members during the dry and rainy season[343]. There was a potential conflict between the village that owns the water ground and the village that has water infrastructure (where the infrastructure is located). Nevertheless, this conflict has been neutralized through the formulation of a memorandum of understanding (MoU)[344].

Again, the provisions for raw water protection in Koja Aje is the most comprehensive, although it should have been regulated in a Village Regulation and further integrated with Adat.

Such regulations require "promulgation" – the act of announcing it to the public with the intent of binding them, which could be conducted in village meetings and Adat ceremonies. This is especially important since even village regulation isoften ignored, since people are not aware of its existence.

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[337] ibid Article 11 butir 3. BPSAB dan seluruh anggotanya mengambilalih kewajiban memelihara dan menjaga kelestarian sumber mata air tersebut .

[338], *Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 10 Maret 2010*, Article 29 (3)

[339] , *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 17 Maret 2010* Article 20 (4)

[340] Ibid ART BP SAB Psl 20 (5)

[341] Ibid ART BP SAB Psl 20 (6)

[342] Avessina, *Interview with Choirul Aziz,village head office, Lamongan,14 January 2015*

[343] Mohammad Jibriel Avessina, *Interview with Sutrisno (HIPPAMS Consumer),Personal House,Lamongan,15 January 2015* (Sutrisno, 2015)

[344] Avessina, *Interview with Panggeng SIswadi,Researcher Homestay,Lamongan, 17 January 2015*

### 5.3 Technical Resources and Budget Allocation for Operation and Maintenance

In Maukaro, there is a formal appointment of a Technical Unit within the BP SAB organisation[345]. The responsibility of the unit also covers assisting the head of the village in regards to managing the operations and maintain the system, being responsible for using the equipment in the construction, system operation and maintenance, monitoring and/or controlling the clean water facilities, repairing the water facilities, coordinating with other members in the management regarding the maintenance and repairing the clean water facilities[346]. The budget for the operation and maintenance is allocated from the maintenance savings (*Tabungan Pemeliharaan*). The fund is taken from 4% of the members' contribution prior to the facilities development[347]. Another sources is the obligatory members' contribution (iuran wajib anggota) for the facility's maintenance. The amount of the contribution is calculated based on the total operational costs of BP SAB and the need of the system, which will be further stipulated through the annual member meeting (Rapat Anggota)[348]. The one who is responsible for collecting the contributions is the head of the hamlet (Kepala Dusun), who will then give the collected contribution to the treasurer. [349] In this matter, the treasurer is responsible for overseeing the head of village regarding the collection of contributions from the members, as well as from other sources, in order to maintain the facilities[350]. The withdrawal of funds for monthly operational costs and maintenance of clean water facilities is conducted by the treasurer with the agreement from the head and secretary of BP SAB along with the recommendation from the review board[351]. From the total contributions received every month, the funds for the maintenance of the facilities and the operational costs of the group are allocated accordingly: a) the group/organization

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[345] , *Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 10 Maret 2010* Article 9 (1) Anggota Pengurus Badan Pengelola Sarana Air Bersih sekurang-kurangnya terdiri atas jabatan Ketua, Sekretaris, Bendahara, Unit Teknis dan Wakil Zona.

[346] Ibid Article 10 (4)

[347] Ibid Article 22 (1) Tabungan Pemeliharaan (uang Tunai) sebesar 4 % yang dipungut dari anggota sebelum sarana dibangun akan digunakan sebagai modal awal dalam hal perawatan Sarana Air Bersih.

[348] Ibid Article 22 (3) Bentuk kewajiban anggota berupa iuran perawatan sarana ditentukan berdasarkan total biaya operasional Badan dan kebutuhan sistem yang akan diatur lebih lanjut melalui Rapat Anggota.

[349] Ibid Article 10 5 (d) Kepala Dusun memungut iuran pemeliharaan sarana dari anggota cakupan dan menyetor hasil penerimaan iuran kepada bendahara kelompok

[350] Ibid Article **10 (3) (d)**

[351] , *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 17 Maret 2010* Article 15 (6) Pengambilan biaya operasional bulanan BPSAB dan biaya pemeliharaan SAB dilakukan bendahara dengan persetujuan Ketua dan sekretaris, dengan rekomendasi dari Badan Pemeriksa.

administrative cost is 5%, b) incentive for the management of the organization is 10%, c) operation and maintenance is 85%[352].

Similar to BP SAB Koja Aje, in the BP SAB Koja Kumi, there is a formal appointment for a Technical Unit within the BP SAB Koja Kumi organization. The scope of work of BP SAB Koja Kumi covers the two villages of Nabe and Kobaleba. The members of the technical unit consist of 2 people, one from Nabe and one from Kobaleba. The technical unit takes over the management of the BP SAB, since most of the work is performed by the unit, such as controlling the overall network and reservoirs, as well as collecting the contributions *(iuran).* The technical unit has to ensure the operation of the system and staff often have to walk for a long distance carrying equipment[353].

In the Tlanak village, the article of establishment of HIPPAMS Tirto Agung designates five positions within the management including the Technical Unit. [354] Besides the monthly salary, there is an additional payment for the technical unit staff when he repairs the broken facilities. The amount depends on the level of the damage and difficulty of the work involved[355].

Based on the interview, there is no specific commitment from the government and funding institutions to pay for the long term operational and maintenance cost. The only steady source of funds is the members' contributions (iuran). The contributions are used for repairing the pipes, pumps or other infrastructure, paying the salaries for the management of the HIPPAMS, providing depreciation costs (5%) to maintain the infrastructure as well as cash for HIPPAMS.[356]

Based on the research, there are limited technical resources and budget allocation for the operation and maintenance of the CBO watsan facilities in East Nusa Tenggara (KBP SAB Koja Aje, BP SAB Koja Kumi) and East Java (HIPPAMS Tirto Agung). The responsibility to sustain all the operation and maintenance in terms of technical matters is given to the technical unit. The staff in the technical unit is the one who has the practical skill to

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[352] Ibid Article 18 Dana Badan Pengelola Sarana Air Bersih Koja Aje hanya digunakan untuk tujuan pemeliharaan dan perawatan SAB serta Operasional kelompok yang terdiri dari : 1. Administrasi Kelompok S % dari total iuran yang diterima setiap bulan. 2. Perlindungan Sumber Mata Air 0 % dari total iuran yang diterima setiap bulan. 3. Insentif Pengurus 10 *%* dari total iuran yang diterima setiap bulan. 4. Operasi dan Pemeliharaan Sarana 85 % dari total iuran yang diterima setiap bulan

[353] Talan, 'Interview with Yoseph Kesu,Nabe Head Village,Nabe Head Village Office,16 November 2014'Wawancara Kepala Desa Nabe (Yoseph Kesu)

[354] *Anggaran Dasar Himpunan pemakai air minum dan sanitasi (HIPPAMS) Desa Tlanak* (2008) article 23 Pengurus Hippams sekurang-kurangnya terdiri dari 5 orang yaitu: a. 1 orang ketua, b. 1 orang sekretarus merangkap PHBS, c. 1 orang bendahara, d. 1 tenaga teknis, d. 1 pembaca meter.

[355] ***, Peraturan Desa Tlanak Kecamatan Kedungpring Kabupaten Lamongan No. 3/2008 Tentang Pengelolaan dan Penggunaan Air Minum dan Sanitasi Desa Tlanak*** article 15 d. Bila tenaga teknis/operator, melaksanakan perbaikan jaringan bila kerusakan, selain honor bulanan akan diberi honor tersendiri, besarnya honor akan ditentukan menurut tingkat kerusakan yg diperbaiki.

[356] Avessina, *Interview with Choirul Aziz,village head office, Lamongan,14 January 2015* confirm by Avessina, *Interview with Panggeng SIswadi,Researcher Homestay,Lamongan, 17 January 2015*

operate and repair the facilities. However, there are not enough human resources to handle the work adequately. In addition, there is a lack of training for the technical unit staff. The sustainability of the facility operation would be threatened if the exiting technical staff stopped working (left the village, got sick or died) while the CBO does not have a system to regenerate new skilled staff.

In terms of budgeting, the allocation of funds for the operation and maintenance in Koja Kumi and HIPPAMS relies on the contribution of the members. However, in Koja Kumi there is a specific budget called maintenance saving (*Tabungan Pemeliharaan*) that is dedicated to pay the expenses of the operation and maintenance, while in HIPPAMS the operational cost is taken from the general contributions from members. In BP SAB Koja Aje, there is a potential conflict of interest between the head of village, who collects the contribution from the members, and the treasurer, who oversees the head. Ideally, the head of the village should not be in the management position but in the review or supervisory board, to prevent this conflict within the CBO daily operation.

In terms of professionalisation, it would be ideal if technical apparatus are insulated from local politics, by strengthtening their position in the Articles of Association or village regulation. This can be done, for example, by requiring their removal to be agreed by a public meeting. We found several examples, where as a result of village election, both executive and technical persosn in the CBO are being replaced, resulting to the decline of the infrastructure. Since investment in technical human resources as well as the accumulation of knowledge takes a long time, technical apparatus are very valuable. Thus, in addition to insulating it from local politics, local community must guarantee its regeneration. This positioning will also elevate the social status and public recognition of technical apapratus within a CBO.

### 5.4 Network Expansion

Network expansion is one of important aspect in the CBO watsan operation as it can provide clean water service to the community members that were previously out of reach. Howeve, the regulations for network expansion are very minimal. In Tlanak, the village regulation Article 6 and 7 state that a village government/Hippams have to provide maximal services to the consumer including those in the area that is difficult to reach. The maximal services aforementioned includes the development of new tower, new drilling, and etc, in order to fulfill the need of water of the consumers.

Ideally, network expansion should be discussed in CBO internal and public meetings or village meetings. Our field research in Maukaro found that several families are still excluded from services due to very expensive connection fees and lack of density. Design of gravity fed systems also pose barrier for network expansion. As discussed in sections 3.5; 3.6; 3.7, it would be ideal if village-level network expansion are also integrated to RISPAM.

## 5.5 TARIFF AND FEE COLLECTIONS

### 5.5.1 STRUCTURE

A tariff structure is a set of rules and procedures that determines how to charge different categories of consumers Typical tariff structures are:

- Flat-rate tariff/ fixed charges. It is a possible option when there is no metering system in place. With a flat rate tariff, the consumer's water bill is the same regardless the volume of water used.
- Volumetric tariff. The water bill is charged based on the amount of water used by the customer. It has different variables such as:
- Uniform volumetric charge. The bill is charged based on the quantity used (e.g cubic meters) times the price per unit of water. The advantage of this model is that the consumers understand it easily.
- Block tariff. The block tariff has two main varieties such as Increasing Block Tariff (IBT) and Decreasing Block Tariff (DBT). In IBT, the consumer has low volumetric per unit charge (price) up to a specific quantity (or block), and then for any water consumed. In addition to this amount they pay a higher price up to the limit of the second block and so forth. On the other hand, in DBT, the costumers have a high volumetric charge up to the specified quantity in the first block, and then for any water consumed in addition to this amount. They pay a lower price up to the limit of the second block, and so forth.
- Linear progressive tariff/ Increasing linear tariff. In this structure, the price paid by the consumer increases continuously as the quantity of water used increases.
- Two-part tariffs. In this structure, the water bill is based on the sum of the calculations: a) a fixed charge, and b) a charge related to the amount of water used.

Tariff structures depend on many factors, including the network's characteristics and the objective pursued via pricing policy. The charges may differ between customer classes such as residential, commercial and industrial.

In BP SAB Koja Aje, the tariff structure imposed to the community members is a flat-rate tariff. [357] The members have to pay Rp. 2000 to the head of the village (as a collector) per month/per person/user, by no later than the 21st of each month.[358] In Tlanak, the applicable tariff may not relate to the general

[357] Suryokusumo

[358] Statuta, 'Anggaran Rumah Tangga BPSAP Koja Aje Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende

structure aforementioned. There are differences of tariff structures between interview?, statutes and village regulation. Based on its Statutes, tariff categories is as follows[359]:

1. Social category/public facilities/religious places.
    a. Mosque and smaller mosque (musholla), free of charge
    b. Village hall (Balai Desa) and public health center (Puskesmas), Rp. 1000 and burden cost (biaya beban, additional cost) Rp. 2000 (social tariff);
2. Household category. The consumers have to pay the charge for the water consumption per unit and additional charges as follows:
    a. Water consumption from 0 to 5 $m^3$ , Rp 6000 without an additional cost (biaya beban)
    b. Water consumption from 6 $m^3$ to 30 $m^3$ , Rp. 1500 with an additional cost of Rp. 2000
    c. Water consumption from 30 $m^3$ to 40 $m^3$ , Rp. 2000 with an additional cost of Rp. 2000
    d. Water consumption from 40 $m^3$ and more, Rp. 2500, with an additional cost of Rp. 2000
3. Business or Industry category: 0 $m^3$ and more, Rp. 2500, with an additional cost of Rp 2000 (the price for business or industry).

Whereas, based om Village Regulation the structure is as follows:[360]

a. Water consumption from 0 to 5 $m^3$ , Rp 5000
b. Water consumption from 5 $m^3$ to 30 $m^3$ , Rp. 1300
c. Water consumption from 31 $m^3$ and more, Rp. 2500

From interviews, the structure[361]is based on the progressive structure, and there is a retribution fee Rp. 2000. The overall structure is:

a. Water consumption <5 $m^3$, Rp. 6000 (Tidak dikenakan beban, sudah all out)
b. Water consumption from 6 $m^3$ to 30 $m^3$ , Rp. 1.500 $m^3$
c. Water consumption from 30 $m^3$ to 40 $m^3$ , Rp. 2000 $m^3$
d. Water consumption >40 $m^3$, Rp. 2500 $m^3$

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' article 4 point 3 membayar iuran pemeliharaan Sarana Air Bersih sebesar Rp. 2000/jiwa/bulan yg disetor selambat-lambatnya setiap tgl 21 ke kepala Dusun. Iuran harus dibayar secara tunai.

[359] Statuta, 'Anggaran Rumah Tangga Himpunan pengelola air minum dan sanitasi (HIPPAMS) Tirto Agung'ART HIPPAMS Pasal 13

[360] IbidART HIPPAMS Pasal 13

[361] Avessina, *Interview with Choirul Aziz,Warung Kopi TegalLondo,Lamongan, 15 January 2015* confirm with Document Company Profile HIPPAMS Lamongan,confirm also by Panggeng Siswadi`s statement on Focus Group Discussion Avessina, 'Focus Group Discussion at Lamongan, Bappeda Office, 26 January 2015 '

### 5.5.2 COLLECTIONS AND SANCTIONS

In BP SAB Koja Aje, the head of village is responsible for collecting the contributions from members. Sanctions for the members who do not pay their contributions are as follows: a) 10% charge (per month) if a person by negligence doesn't pay for less than 3 months, b) In the event the person doesn't pay for more than 3 months, he/she cannot access the water until the contribution is paid c) in the event that the person intentionally withholds payment, the water supply to the public hydrant will be blocked[362]. The purpose of this system is to create solidarity among users, in which, in order to avoid the hydrant from being blocked, other users are expected to come up and cover the payment and the non paying household will be subjected to shaming.

In Tlanak, the term "retribution" (retribusi) is used instead of "contribution" to describe the payment made by consumers. Local retribution is a fee as payment for a service or certain permit that is exclusively provided and/or given by the local government to the interest of a person/persons or an agency/agencies[363]. The consumers have to pay retribution in the HIPPAMS office or in the village hall during the working days from 8 am to 12 am. The consumer may come by himself or be represented by a group representative to pay it. Payments are made from the 5$^{th}$ day to the 14$^{th}$ day of the month[364]. A charge of Rp. 1500 will be imposed every month if a member is late in paying the retribution. In the event a member does not pay his retribution for 3 months consecutively and neglects the warning, his water supply will be disconnected. The member can regain the water supply again after he pays all the debts and files a request for the water supply re-connection. However, for those who experienced disconnections, three times need to pay a charge equal to the new connection fee[365] (Rp. 550,000).

### 5.5.3 PROBLEMS AND CHALLENGES

Regarding the tariff structure in BP SAB Koja Aje, as it is based on the flat rate, there is no incentive to motivate the consumers for the economise the use of water. This is because every additional cubic meter is free of charge. From the view of cost recovery, a potential problem may arise from this system in the event that households do not have individual connections. This is because the flat rate system may allow the costumers (with a connection) to supply water to other users, such as unconnected vendors or households, without a corresponding increase in the water bills.

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[362] , *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 17 Maret 2010* Article 20

[363] Undang Undang Nomor 28 Tahun 2009 Tentang Pajak Daerah dan Retribusi Daerah Article 1 number 64

[364] Statuta, 'Anggaran Rumah Tangga Himpunan pengelola air minum dan sanitasi (HIPPAMS) Tirto Agung'ART HIPPAMS Article 14 point 1, 2, and 3

[365] , *Anggaran Dasar Himpunan pemakai air minum dan sanitasi (HIPPAMS) Desa Tlanak*AD HIPPAMS Pasal 40 (2) and (3)

Furthermore, as there is no incentive to economize the use of water, the revenue will become increasingly inadequate. As the economy and income grow, the expenses and the water uses will increase.

The inefficiency of BP SAB management is also challenging since the staff that collects the contribution (*iuran*), keeps the money rather than giving it to the treasurer. In this case the staff assumes that the money is his/her right since the BP SAB does not pay his/her incentive. This situation may occur because although there is a supervisory team to prevent misconduct, there is a lack of sanction. Nevertheless, although there is a problem in the process of collecting contribution (iuran) it does not significantly influence the availability of funds to maintain the BP SAB since at the very beginning, a fund (in cash fund) has already been allocated for the maintenance for the next 2 - 3 years[366].

In the Maukaro district, the collection of contributions is a challenging issue, as the members do not have the discipline to pay. However, BP SAB Koja Aje uses a social rather than a legal approach to solve the problem, such as public embarrassment and collective problem solving. In the case there is a member who does not pay the contribution, the public hydrant will be blocked and it will affect all the members. Thus, the members will find a way to solve the problems collectively. The BP SAB staffs also visit the members and hold a meeting routinely to discuss relevant matters[367].

The BP SAB Koja Kumi only lasted for 3 years after its establishment. One of the factors is because the lack of willingness from the members to pay contributions. The member who relies on the water supply from the public hydrant pays the contributions. However, the contribution keeps decreasing as the members decide to dig their own water well and use it. The heads of the zones also took an amount of money when they collected it, so when it came to the BP SAB Koja Kumi, there was not enough money to run the organization and the service. In the end, the technical staff took over the collection duties; however, the payment was only enough to pay him to repair the facility and do technical inspections[368]. A similar situation occurred to BP SAB Ae' Puu. The organization only lasted one year after its establishment. The problem is not only the lack of sufficient human resources to run the organization but also the lack of willingness of the members to pay for contributions[369]. In Chapter 2, we have discussed that integration between fee collection and Adat would be desired.

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[366] AlAfghani, 'Focus Group Discussion, Aspek Regulasi & Keberlanjutan AMPL BM, Ende, 20 November 2014' FGD, Aspek Regulasi & Keberlanjutan AMPL BM, Ende, 20 November 2014 Andreas Worho (Kabid PP2 Bappeda)

[367] Mohammad Mova Al Afghani, *Interview with Agustinus Meo,Agustinus Meo`s House,Ende,12 November 2014* (Agustinus Meo, 2014)

[368] Talan, 'Interview with Yoseph Kesu,Nabe Head Village,Nabe Head Village Office,16 November 2014'

[369] Mohammad Mova Al Afghani, *Interview with Melkimengga and Siprianus Pendi,Kamubheka Village Office,Ende,13 November 2014* (Melki Mengga, Sipirianus Pendi, 2014)

In HIPPAMS Tirto Agung, the collection method is more advanced. Besides the social sanctions the organization is able to impose the agreed rules.

With the concept of community ownership and management, there is a general idea that the responsibility to manage the facilities comes from the sense of ownership; although in reality, in the case that a community owns a facility, it does not mean that it will have a sense of responsibility to manage it or guarantee the willingness to pay for its operation and management.[370] This situation is happening in the Maukaro district, with the exception of BP SAB Koja Kumi. Harvey and Reed argued that it may be more effective to develop a sense of responsibility for financing the upkeep of the facility rather than to develop the desire to achieve community ownership and management.

### 5.6 SERVICE STANDARD

Service standard is important as it can be used as instrument for ensuring equal access to water, irrespective of gender and social statuses. However, service standard also relates to the issue of professionalization and the readiness of each CBO.

There is no specific standard for BP SAB Koja Aje. However, based on the article of association, the BP SAB has to provide clean water for the members for the household needs. The quality of water provided is not for drinking[371]. The members have the right to access a maximum of 40 litres of clean water per person[372]

HIPPAMS Tirto Agung does not have a specific service standard, although in its article of association the organisation is responsible for implementing the minimum service standard (standard pelayanan minimum)[373].

However, the customers have the following rights and obligations: a) to have the pipes beyond water meter to be repaired on their own cost b) to have 24 hours access to clean water. The quality of the water itself has to be clean (no colour or turbid), and tasteless (not saline)[374].

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[370] Harvey and Reed

[371] Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. EndeAD BP SAB Koja Aje, article 29 point 1 and 2

[372] , *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 17 Maret 2010*, article 3 point 1

[373] , *Anggaran Dasar Himpunan pemakai air minum dan sanitasi (HIPPAMS) Desa Tlanak* article 20 point 8

[374] Mohammad JIbriel Avessina, *Interview with Rahayu/Village Head, Village head personal house, Lamongan,13 January 2015* (Rahayu, 2015) confirmed by Panggeng Siswadi,Avessina, *Interview with Panggeng Siswadi,Panggeng SIswadi`s House, Lamongan,13 January 2015* and Choirul Aziz,Avessina, *Interview with Choirul Aziz,village head office, Lamongan,14 January 2015*

At the national level, there was a Minister of Health Decree No. 416/Menkes/Per/IX/1990, which stipulated the parameters for clean water and drinking water quality. The division of clean water and drinking water in Indonesia creates confusion since in the developed country there is no division between drinking water and clean water. Drinking water means the water is clean and safe enough to be drunk. However, the decree was revoked several times. The latest regulation is Minister of Health Regulation No. 492/Menkes/Per/IV/2010 regarding drinking water quality. PDAMs will have the capacity to comply with this regulation, however, CBO will face difficulties since the parameters are quite strict and require substantial investment to meet.

The laboratory reports on the water resources (well, pipes) being used by HIPPAMS Tirto Agung state that the water quality does not comply with the drinking water standard based on Regulation No. 492/Menkes/Per/IV/2010. However, it complies with the clean water standard based on the Decree No. 416 Menkes/Per/IX/1990. Although the decree itself has formally been revoked, it is still being used to measure the clean water quality of HIPPAMS Tirto Agung. Rather than imposing unachievable standard, there should be a specific water quality (and monitoring) standard for CBO – with a "raising floor" mechanism, which means that flexibility should be granted, but with aim to gradually increase standard for qualified CBOs

In the case of Tirto Agung, Tlanak, voluntary, regular testing of water quality in nearby laboratory is doable and desirable, due to short distance to Lamongan city and affordable testing price. In our Lamongan local FGD, the CBO agreed that the result of testing will be regularly announced in village announcement board.[375] Two problem remains however, (i) how to prevent the samples being tampered by CBO officials or anyone delivering the sample to local laboratory and (ii) the flow of information and data collection from the laboratory to the local health service (*Dinkes*). These two aspects can be regulated in Regional by-law and Village Regulation.

Service standard could also guarantee social inclusion in terms of (i) incorporating safeguards against disconnection for the reasons of inability to pay or (ii) providing connection fee subsidies for the poor. None of the CBOs we visited on our field study has this system implemented. Indeed, quite a number of CBOs are struggling with fee collection and providing subsidies would be somewhat unthinkable for them. Secondly, the system design from donor is also an important consideration. In Maukaro, a system of "forced solidarity" is applied. The CBO will perform disconnection in a standpipe (one standpipe serve several houses) when one household failed to pay tariff. Thus, in order to prevent it disconnection, another household could be forced for paying the non-paying household.

[375] Talan, *Meeting Note Focus Discussion Group, Kantor Bappeda Lamongan, East Java, January 26, 2015*

In Tlanak, some household could not afford to pay for connection fee (IDR 350.000). According to our interview, such amount is still required to pay for their children education or other needs. One of those cannot pay is an old widow who no longer afford to conduct physical work.[376] These people either share connection (and share the tariff fee) or extend connection from their neighbors or close relative, without paying the fee. There is no system in place that would ensure their water access, they rely on their neighbor's benevolence for access to water.

As elaborated above, CBOs often does not have clearly specified minimum service standard. Also, monitoring and enforcement of service standard may depend on the availability and access to infrastructure (laboratorium for water quality checks, for example). The condition in Lamongan is ideal to implement the "raising floor" standard for two reason: (i) access to laboratory facility, (ii) pathway towards professionalization is already available on selected CBO (HIPPAMS Tirto Agung). Depending on the condition of each village, subsidy mechanism, especially for paying connection fee for those economicaly weak, may be desirable. However, subsidy for the poor should be the burden of village and not CBO. Village should arrange subsidy mechanism with CBO. This could be regulated in the Village Regulation.

### 5.7 Role of Women in CBO Operation

Except for Aceh Besar Qanun on AMPL By-Law (enacted in 2010), the other Perda AMPL (Dompu/2011, Ende/2014, East Sumba/2013 and Bima/2011), NTT Governor Regulation (2012) and Alor Regent Regulation (2014) all contain clauses involving women in the provision and decision making process in water services. Some of the regulations repeat – almost verbamtimly – the clauses in other regulation, indicating that they may be basd on the same template or use other regulation as a template. As the templates are prepared with donor and NGO involvement, the existence of "gender sensitive clauses" in the Perdas appear to come from them.

In practice, we observe that women are often placed as either treasurer or secretary in CBO executive. In our fieldwork, we have yet to discover female CBO Chairperson. In Tlanak, the Chairman realize that gender balance is important for the CBO and thus strive to always apportion some position for women.[377] We have yet to discover women filing technical position.

The roles for commanding, negotiating and lobbying with elders and local politician (the role of a Chairman) and the technical roles (plumbing and heavy works) are often traditionally ascribed to male, and thus, both Chairman and Technical staffs are male. In addition, the role of calculating finances and writing notes are often traditionally ascribed to female, and thus, sme of the position of treasurer and secretary are filled by women. Regulation can be used as a tool for persuading gender mainstreaming, however, the implementation of these seemed to be limited to certain position which

[376] Avessina, J, *Interview with Tlanak citizen,* Tlanak, January 15, 2015
[377] Avessina, J, *Interview with Panggeng Siswadi,,* Tlanak, January 18, 2015

have been traditionally ascribed as female roles. This may change, however. For example, the former secretary in Tlanak CBO becomes the current village head. Regulatory framework could guarantee that CBO organisation are gender inclusive.

# CHAPTER 6: RAW WATER SECURITY

## 6.1 CBO'S WATER RIGHTS UNDER LAW 7/2004 (INVALIDATED)

The invalidated Law No. 7/2004 categorises the water usage right (Hak Guna Air)[378] into two derivative rights, namely Hak Guna Pakai Air (water rights for basic needs)[379], and Hak Guna Usaha Air (water rights for commercial purposes)[380]. The term "water rights" have been disputed in Court's Decision for its symbolization of "property rights" over water. The Constitutional Court views water as a *res commune* which should bot be subjected to property rights. Judges on the Judicial Review of Water Law and several experts suggest to use the term "licence" rather than rights.

Reference to Law 7/2004, although invalidated, remains important for two reasons: (i) the majority of implementing regulations in the region still refer to Law 7/2004 and they remains valid and enforced although Water Law 7/2004 have been revoked until they are replaced by new regional regulations; (ii) not all provisions of Law 7/2004 are incompatible with the constitution. Some objections are made only with respect to the term used ("rights" versus "licence"). We estimate that provisions which does not deal with the issue of private sector participation or commercialization to be reincluded in future legislations.

### 6.1.1 WATER USE RIGHT (HAK GUNA PAKAI AIR/HGPA)

Under the invalidated water law, HGPA can be granted with or without permit. HGPA is acquired without permit to fulfill daily basic needs for individuals and people's agriculture located in irrigation systems[381]. Daily basic needs encompass what is required to achieve healthy, clean and productive lives and include water used in drinking, cooking, bathing and washing.[382] The permits are required if the water utilization method changes the condition of the water resource, is used by groups of people that take large volumes of water, or occurs outside of existing irrigation systems[383].

[378] Article 1 number 1 Peraturan Pemerintah Nomor 69 Tahun 2014 Tentang Hak Guna Air
[379] Article 1 number 2 ibid
[380] Article 1 number 3 ibid
[381] Article 7 (2)
[382] Elucidation of Article 7 (2) Peraturan Pemerintah Nomor 69 Tahun 2014 Tentang Hak Guna Air
[383] Article 8 UU No. 7 Tahun 2004 (Water Resources Law)

The government institution that uses water to fulfill daily needs and water people's farms and other activities for non-business purposes is also required to have a permit[384]. The permit lasts for 10 years and can be renewed[385].

HGPA includes the right to access the raw water sources. If the water resource is located in a private land, the user/users need to settle an agreement with the owner in order to access the water[386].

Regency/city government has the responsibility to fulfill daily basic needs for the people in its area,[387] based on the following requirements: a) the water withdrawal must not exceed 60 liters per head, b) the water must meet the raw and drinking water quality standards, c) the water must be acquired from the water resource or water intake location that has been provided by the regency/city government. The location should be within a maximum 20 minute walk from the residence[388]. The water can be provided through infrastructure and facilities such as: irrigation networks, waterways, reservoirs, public wells, water terminals, public hydrants, and a drinking water pipe system network, etc. [389] The provincial government has the responsibility to assist the regency/city government[390]. In addition, the regency/city government can implement its duties by itself or cooperate with a drinking water supply system developer[391].

Except for the reference to provate sector and the use of the term "rights" these provision does not seen to be in conflict with the Constitution and therefore may be reincluded in future legislations.

### 6.1.2 WATER EXPLOITATION/COMMERCIALIZATION RIGHT (HAK GUNA USAHA AIR/HGUA)

Under the invalidated Water Law, HGUA can be granted to individuals or enterprises (e.g. BUMN, BUMD, private company/badan usaha swasta, *Koperasi*) via a permit[392] which lasts for 10 years and can be renewed[393]. HGUA is a provisional right to exploit water resources for commercial purposes. The obligations of permit holders are: a) fulfilling the obligations in the permit, b) paying the water management service and other financial requirements based on the relevant regulations, c) protecting and preserving the function of water resources, d) protecting and preserving water resource infrastructure, e) controlling water pollution, e) repairing the water resources from the

[384] Article 14 Peraturan Pemerintah Nomor 69 Tahun 2014 Tentang Hak Guna Air
[385] Article 23 and 24 ibid
[386] Article 34 ibid
[387] Article 35 ibid
[388] Article 36 (1) ibid
[389] Article 36 (2) ibid
[390] Article 36 (3)ibid
[391] Article 36 (4) ibid
[392] Article 46 (1) ibid
[393] Article 54(1) ibid

damaging activities, f) and giving access to the use of water to fulfill daily basic need for the people nearby the location[394]. This clause have been extremely problematic and lead to the invalidation of the Water Law.

Under the present interim legislation (planned to be replaced soon), Irrigation Law 11 Year 1974, water commercialization is regulated by Article 11, which mandates further regulation. The draft of Government Regulation on Water Commercialization is being drafted but it is not certain if such draft will be enacted.

### 6.1.3 CBO'S CATEGORIZATION OF WATER RIGHTS

Under the invalidated water Law, a CBO can be categorized as a HGPA recipient, one that requires a permit to withdraw the surface and groundwater**.** In this case, the status of the CBO is considered as a group of people rather than a legal enterprise or legal entity. This is because the subject of HGPA is for personal use, people's agriculture system and for the use of groups of people that take large volumes of water, or occurs outside of existing irrigation systems. It is assumed that a CBO as a legal entity cannot be granted the HGPA since there is no explanation regarding eligibility of legal entity to acquire HGPA. In addition, the CBO also cannot be granted HGPA for the use of groundwater. This is because Article 14 (b) GR No. 69/2014 allows only a group of community members to acquire a HGPA permit in order to utilize surface water to fulfill daily needs in large volumes and/or in a way that changes the natural condition of water resource. There is no specific explanation regarding the eligibility of CBO as a legal entity or group of community members (non legal entity) to withdraw ground water.

In terms of HGUA, CBO can be categorized as a HGUA recipient since the HGUA can be granted to individuals or enterprises (e.g. BUMN, BUMD, private company/badan usaha swasta, *Koperasi*) via permit. However, based on the elucidation of the Article 45 (3) Law No. 7/2004 it seems that the enterprise should be a legal entity. CBO can withdraw both surface and ground water via permit through HGUA rights. Nevertheless, in terms of the use of groundwater for the purpose of CBO water and sanitation, it is not specifically defined under the Law No.7/2004 and GR No. 43/2008**.** The main purpose of HGUA is to give the right for the "water commercialization". Article 57 (1) GR No. 43/2008 is not accommodating the need of CBO watsan. The article states that the purpose of ground water commercialization is for a) raw materials for production (bahan baku produksi) dedicated to water in packaging (air minum dalam kemasan), clean water, foods, beverages, drugs/medicines, b) water potential utilization (pemanfaatan potensi) c) business medium, d) indirect materials (bahan pembantu) or production process. In this context, it is unclear whether the water that is used for a CBO is for the "commercialization" and is under category of "raw materials for production".

[394] Article 61 (2) ibid

Until the Water Law was revoked, the HGPA or the HGUA rights are not yet enforced within the practices of the AMPL BM and the types of water licenses will have to await for the enactment of new regulations.

According to some literature, CBO should have its own permit to exploit water.[395] However, in practice, it is categorized as a "business" rather than a water supply provider.[396] As a result, CBOs are being charged a higher fee rate than PDAM since it is seen as a "catch-all" business category. Due to these circumstances, CBOs would rather stay out of the system as they cannot afford the required fees, nor meet the standards .

The following is a quote from an indepth interview with a person from Public Work explaining the condition of the bulk raw water source for the water supply in Lamongan: "*….in Lamongan, bulk raw water treatment for every village is different. One village uses ground water, one uses surface water; there also a village which uses a well, whether it is through a treatment plant or not. For non-treated water, they give a regular tariff, but for treated water, the water price has becomes high, thus the community contribution is also increasing."* [397]

Under the interim regulation (Law 11/1974), it is likely that CBOs (and PDAM) will be categorized under a "commercialization" rights. This could could pose future problem, especially for CBO, as it would mean that licencing would be very restrictive and subject to heavy prerequisites similar to that of the private sector.

### 6.2 Water Licensing Practice at the Regency Level

Both HGPA and HGUA holders should have permits in order to utilize/exploit surface water, seawater that is located in the land, and the ground water. The community-based water supply and sanitation program in Indonesia was developed especially for low-income community and rural area dwellers. Fresh water is usually acquired from groundwater, springs, or rainwater.

In Ende Regency, Perda No. 9/2014 on Water Management states that every intake, utilization and exploitation of surface and ground water should require a permit from

[395] Jemima Sy, *Handbook for Community-Based Water Supply Organizations, Multi-Village Pooling Project in Indonesia* (The Water and Sanitation Program (World Bank), 2011) Jemima Sy, 'Multi Village Pooling Project Indonesia: Handbook for Community Based Water Supply Organisation '; World Bank

[396] Sy, *Handbook for Community-Based Water Supply Organizations, Multi-Village Pooling Project in Indonesia*

[397] Avessina, *Interview with Zulkha and Agus Pindo,Public work Agency Office,13 January 2015* Agus Pindo`s statement

the regent[398]. The ground water exploitation and/or utilization is valid for 3 years and can be renewed[399], while the surface water utilization is valid for 10 years and can be renewed[400]. In order to get the permits, a written request and required documents should be submitted to the regent through the relevant government agency. Some of the permits and the requirements are as follows:

a) Well-drilling permit (*Surat Izin Pengeboran Air Tanah*/SIP). SIP is a permit given by the Regent in order to conduct well drilling.[401]. The application for the permit includes:[402]
   1) a copy of a permit of the underground water drill-well company that is issued by the authority;
   2) a copy of a permit of the well driller, as the drilling must be conducted by an accredited well-driller;
   3) a non-objection declaration from the members of the community around the area, known by the Head of village/Lurah;
   4) a location map with the scale 1 : 10.000 which shows the drilling spot.

b) Ground water intake permit (*Surat Izin Penggunaan Air Tanah*/SIPAT). The permit is given by the Regent in order to extract and/or utilise the ground water from drilled wells, dug wells, driven wells (sumur pasak), and spring water. [403] The application for the permit includes:[404]
   1) a copy of the SIP;
   2) a copy of the water analysis report;
   3) the result of logging and a picture of well construction for the drilled ground water well;
   4) a report of the water pumping;
   5) a location map with the scale 1 : 10.000 which shows the drilling spot.
   6) an environmental management document (Dokumen Upaya Pengelolaan Lingkungan/UKL) and environmental monitoring document or an environmental impact assessment (AMDAL);
   7) a written statement to install a water meter with personal budget.

c) Surface water intake permit (*Surat Ijin Pengambilan Air Permukaan*/SIPAP). It is given by the Regent in order to extract and/or

[398] Article 55 (5) Peraturan Daerah Kabupaten Ende Nomor 9 Tahun 2014 Tentang Pengelolaan Sumber Daya Air
[399] Article 61 (2) (3) ibid
[400] Article 61 (4) ibid
[401] Article 1 number 27 ibid
[402] Article 58 (2) ibid
[403] Article 1 number 28 ibid
[404] Article 58 (2) ibid

utilise surface water from rivers or other channels.[405] The documents that should be submitted are as follows[406]:

1) a non-objection declaration from the members of the community around the area, known by the Head of village/Lurah;
2) a copy of the water analysis report;
3) an environmental management document (Dokumen Upaya Pengelolaan Lingkungan/UKL) and environmental monitoring document or an environmental impact assessment (AMDAL);
4) a written statement to install a water meter with personal budget.
5) a location map with the scale 1 : 10.000 and a topography map with the scale 1 : 50.000 which describe the planned location for water intake;
6) information regarding the plan for water intake.

In Ende, based on the Regional by law (Perda) No. 9/2014, a SIPAT (ground water intake permit) is needed in order to withdraw/utilise spring water. Nevertheless, there are no SIPAT documents found by the researchers regarding the withdrawal/utilization of the springs in Koja Aje, Ae Bhika and Ae Puu. Water rights for traditional legal communities are accepted as long as they are not in conflict with national interests and regulations[407]. However, the means to resolve conflicts between traditional users and "national interests and regulations" are not made clear.

BPSAB Koja Aje relies on the role of Mosa Laki for the management of the utilization of springs**.** Rules and sanctions are made based on the agreement among the traditional community members and the Mosa Laki, rather than formal approval from the head of regent (government officials).

In general, the Perda does not accommodate the water utilization/withdrawal by the CBO and/or traditional community. The SIPAT is available for a person or an enterprise (badan usaha) that has legal entity (badan hukum) such as State or Region-Owned Enterprises (BUMN/BUMD), BUMN and Cooperatives. In addition, in order to obtain a SIPAT, a water analysis report and environmental documents are required. These requirements are difficult to be fulfilled by the traditional community groups since they have limited capacity. Regarding the traditional communities, the government needs to provide specific assistance such as experts and/or financial assistance, as well as giving exceptions for the traditional communities to utilise/withdraw the ground water.

[405] Article 1 number 29 ibid
[406] Article 58 (2) ibid
[407] Article 6 (2) and (3) Law No. 7/2004 and Article 3 (2) ; Peraturan Pemerintah Nomor 69 Tahun 2014 Tentang Hak Guna Air

In Lamongan, Perda No. 5/2004 on ground water management states that any person or legal entity conducting exploration and exploitation of ground water should acquire a permit from regional head (kepala daerah)[408]. The permits and retributions that should be paid are as follows:

a. Ground water exploration permit [409] , Rp 500,000 for the first well, Rp. 600,000 for the second well, Rp. 650,000 for the third well;
b. Groundwater exploitation permit (SIPA), Rp. 300,000;
c. Spring water embankment (*izin penurapan mata air*), Rp. 300,000);
d. Groundwater intake permit, Rp. 300,000;
e. Spring water intake permit, Rp. 300,000;
f. Groundwater commercialization permit, Rp. 400,000;
g. Permit of the underground water drill well company, Rp. 300,000;
h. Permit of the well driller, Rp. 250,000 [410];

The ground water exploration, exploitation and embankment (*penurapan*) permits are valid for 1 year and can be renewed while the rest are valid for 3 years[411]. The permit holders must formulate and implement an environmental management document (Dokumen Upaya Pengelolaan Lingkungan/UKL) and environmental monitoring document (Dokumen Upaya Pemantauan Lingkungan) or an environmental impact assessment (AMDAL)[412].

In Lamongan, the groundwater exploitation permit (SIPA) is required in order to utilize the water. In this regard the HIPPAMS in seven villages (HIPPAMS from Tlanak village, Greger village, Kemlagigede village, Karangwedoro village, Doyomulyo village, Parengan village) have applied for the SIPA[413]. The HIPPAMS especially in Tlanak is eligible to apply for the SIPA since the CBO is in the form of Koperasi. In addition, HIPPAM can withdraw water for free, but they should protect the catchment area by conserving the forest in their area. In an attempt to protect the groundwater recharge, the government involved HIPPAM as a district water resource council member. However, according to Kiswanto, one member of the association, the implementation of the water conservation plan is not working. For example, around the HIPPAMS Tirto Agung's well facility, there is no monitoring well to control water table depletion in the surrounding area.[414]

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[408] Article 12 (1)
[409] Article 25 (2) Peraturan Daerah Kabupaten Lamongan Nomor 5 tahun 2004 Tentang Pemanfaatan Air Tanah
[410] Article 12 (2) ibid
[411] Article 15 (1) and (2) ibid
[412] Article 13 ibid
[413] *Surat No. 005/573/413.021/2010 Surat Keterangan Perijinan SIPA, Pemerintah Kabupaten Lamongan, Sekretariat Daerah*
[414] Avessina, *Interview with Association Officials (Kasdan, Kiswanto, Atekan Yossy), Asosiasi HIPPAMS Lamongan Office, Lamongan, 9 January, 2015*

### 6.3 CBO's Access to Water after the Judicial Review of Water Law

The 2015 Judicial Review of the Water Law 7/2004 resulted in the return of Law 11/1974 on Irrigation and the invalidity of Law 7/2004 implementing regulations. We are of the opinion that regional by-laws regulating CB Watsan and PDAMs are still valid (to the extent they do not contravene the Constitutional Court's prescription), since they are regulated also by regional autonomy laws.

While we are writing this report, the government is drafting three government regulations: concerning commercialization (RPP Pengusahaan), water and sanitation (RPP SPAM) and Management of Water Resources (RPP PSDA). The content of the drafts are not publicly available.

In terms of CBO's access to water supply, the key issue will be the categorization of CBO's license under Law 11/74 ("Law 11").[415] Law 11 (which consist of only 17 articles) does not specify and detail the typology of water licenses – although it mention that licenses could be issued for designation, utilization and provision of water and water source.[416] The regulation on "commercialization" on the other hand, is rather detailed and dedicates one provision to it.[417] Its definition however, is unclear.[418] According to Law 11, commercialization is any activities fulfilling two elements: (1) value adding activity and (2) profit motive.

The issue becomes, which license category will be applied to CB-watsan. Following the Judicial Review, the prerequisites for obtaining commercialization becomes more stringent and preference for water commercialization is given to state-owned and region owned enterprises. To this extent, there is no clarity on which licenses will be applied to water and sanitation in general. The licensing framework for both CB and PDAM are thus still unclear.

Since CBO fulfills water for daily basic needs – and according to the Constitutional Court water for daily need should rank top priority in water allocation framework – the CBOs are actually fulfilling the state's duty on the right to water. Thus, in general, water license for daily basic needs, including those abstracting water directly from its source or from networked piped (drinking water provision system or SPAM) should not be categorized under commercialization license.

It would be more appropriate to devise a general SPAM license for PDAM, CBO and other providers. Licensing for CBO could be placed under this category, but in more simplified form compared to that for PDAMs.

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[415] Undang Undang No.11 Tahun 1974 Tentang Pengairan
[416] ibid Article 3(2) a, b and c
[417] Ibid Article 11 Chapter 6
[418] Ibid elucidation of Article 11

## 6.4 LEGAL PROTECTION OF WATER SOURCE

In order to obtain a permit to utilize and/or exploit the water, a CBO must have legal access to the land or property where: a) water sources are located, b) buildings, water towers and other infrastructure for the water system will be built, and c) pipes will be laid . Access to land can be done by a way of donation, sale, lease, or 'easement' i.e granting another party right of way. Based on the field study the access to land is done through land certification of springs, *waqf* (donating buildings, plots of land or cash based on Islamic religion for charitable purposes) and the customary law practice (Mosa Laki).

### 6.4.1 LAND CERTIFICATION OF SPRINGS

The transfer of land title can me made through a sale, a purchase or a grant (hibah). Officially, the transfer process should be made in front of an official land deed issuer (PPAT) and then the land is registered to the BPN to obtain a certificate.

In Ende, the source of water for BP SAB Koja Aje is mainly from the springs. To secure access to the springs, there was a transfer of ownership of two springs (Koja Aje spring and Ae Bhika spring) from the owners[419] to the infrastructure management unit of the village's administration (UPS Desa) in Kebirangga village, Kebirangga Tengah village, Kolikapa villge, Bolengo and Magekapa village. The social units (UPS) represent the community's interest in the three villages to develop a water facility. The UPS is an embryo for the development of BP SAB Koja Aje. The springs are used by the BP SAB to provide clean water for the members[420].

We do not find any document on certificates of spring under BPSAB's name. The legal form of BPSAB, which hasn't take the form of legal entity, constitutes a barrier for owning land wand water source. There is no certification of the land/springs regarding the transfer of ownership from the UPS Desa to the BP SAB Koja Aje. However, the BP SAB Koja Aje article of association states that the springs are formally/legally owned by the BP SAB to be used as a raw water source to provide clean water for the members[421].

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[419] , *Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 10 Maret 2010* article 23 point 1 Sumber Mata Air Koja Aje yang dimiliki oleh Bapak Yohanes Jogho Bie -Mosalaki Owa Joje di Dusun Kotakadhe Desa Kebirangga, Kecamatan Maukaro, dan Markus Ora - Mosalaki Owa Joje Dusun Ndetundopo Desa Kolikapa Kecamatan Maukaro. Sumber Mata Air AE BHIKE yang dimiliki oleh Hendrikus Bhera - Mosalaki Owa Joje, dusun Ndetundopo desa Kolikapa Kecamatan Maukaro. Kedua Mata air tersebut, telah diserahkan secara sah kepada UPS Desa Kebirangga, Desa Kebirangga Tengah, Desa Kolikapa dan Dusun Bolenggo desa Magekapa yang mewakili warga cakupan di desa-desa tersebut di atas untuk membangun Sarana Air Bersih pada tanggal 11 April 2008.

[420] Ibid , Psl 23 butir 2 Sumber Mata Air Koja Aje dan Ae Bhike dimanfaatkan oleh Badan Pengelola Sarana Air Bersih Koja Aje.untuk kepentingan penyediaan air bersih bagi anggota cakupan.

[421] , *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 17*

It is to be noted however that raw water security in Ende depends largely on the role of Adat and Mosa Laki (see below) than legal formalities.

At the Kemlagilor village, the land and the facilities are declared as the village's asset. Nevertheless, there is no certification process regarding the ownership of the assets by the village[422].

In Tlanak, Lamongan, initially the village community granted their land for the location of a well as a source of raw water for the HIPPAM to be used for the community based water supply system.. At the beginning, the land was granted because it was dedicated for the purpose of supplying water for the Tlanak village. However, since the HIPPAMS expanded their service, another village will receive water from the land. This means the CBO sold the water and received benefit from the system[423]. Thus, the owner of the land asked the association to buy it due to the changes in the water supply system Based on the interview it is stated that the village owns the assets collectively.[424] The land was bought jointly. The land certificate is on behalf of the head of HIPPAMS, Mr Panggeng Siswadi and the transfer of the title from the CBO leader to the village government (pemerintah desa) is still in process[425].

### 6.4.2 WAQF

Waqf land is acknowledged under Article 49 (3) Agrarian Law No. 5/1960 and GR No. 28/1977 **on** Waqf of Land with the Right of Ownership. Based on Article 1 (1) GR No. 28/1977, waqf involves a legal action of a person or legal entity that separates their wealth in the form of land and institutes it permanently for the interest of religious service or public purposes in accordance with the Islamic teachings. A party who donates its asset is called a waqif. A waqif should be an adult who is healthy mentally and spiritually. The land that is intended to be given as a waqf should be free from any imposition (pembebanan), confiscation or proposition (perkara). If the waqif is a legal entity, it should comply with Article 8 (1) b Minister of Agrarian Regulation/Head of National Land Office No. 9/1999. A person or legal entity that takes care of the waqf land is called a nadzir. A nadzir can be a person or legal entity.

The waqif should declare their intention clearly and firmly to the nadzir in front of the waqf conveyance officer (Pejabat Pembuat Akta Ikrar Wakaf/ PPAIW) and witnessed by 2 people. The declaration will be written in a waqf pact. PPAIW will request Regent or Mayor cq Head of Agrarian Sub Directorate to register the waqf land. Documents that

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*Maret 2010* Koja Aje, Psl 11 butir 2. Sumber mata air tersebut pada butir 1 menjadi milik / asset yang sah dari BPSAB Koja Aje untuk digunakan sebagai sumber air bagi system air bersih Koja Aje

[422] Avessina, *Interview with Masrukin,Iwan and Fadheli,CBO official at Kemlagilor, Kemlagilor village head official,Lamongan,24 January 2015*

[423] Mohammad Jibriel Avessina, *Interview with Panggeng Siswadi,Panggeng SIswadi`s House, Lamongan,13 January 2015* (Panggeng SIswadi, 2015)

[424] Ibid

[425] Ibid

should be submitted to the PPAIW are: a) a certificate of ownership or other proof of land ownership, b) a letter from the head of the village reinforced by the head of the sub-district which validates the status of the land ownership and assures it is not under any dispute, c) a land registration certificate (*Surat Keterangan Pendaftaran Tanah*/SKPT), d) a permit from the Regent or Mayor cq Head of Agrarian Sub Directorate.

The waqf system is quite predominant in moslem dominated regions such as East Java and West Java. Based on interviews and field visits, several urban sanitation sites in Bogor used the waqf system, however, we are unable to comment on whether it is conducted properly.

### 6.5 Role of Adat Law (Mosa Laki)

As previously discussed in Chapter 2, in Ende, Mosa Laki plays a significant role in the AMPL BM management and the protection of the raw water. The head of Mosa Laki who is also the head of BP SAB Koja Aje, on behalf of community members of Kebirangga Tengah village (except the hamlet of Bhengge), Kebirangga village, the hamlet of Bolenggo, and Magekapa village, declares in a written form regarding the willingness to not cut down the trees around the springs (with the radius of 200 $m^{2)}$ of Koja Aje and Ae Bhike located in Kolikapa, Maukaro district. The violation of the declaration will be punished based on customary law and/or prevailing law. [426]

In addition, to secure the access to the springs, there was a transfer of ownership of two springs (Koja Aje spring and Ae Bhika spring) from three Mosa Lakis [427] to the infrastructure management unit of the village's administration (UPS Desa) in Kebirangga village, Kebirangga Tengah village, Kolikapa villge, Bolengo and Magekapa village. The social units (UPS) represent the community's interest in the three villages to develop a water facility. The UPS is an embryo for the development of BP SAB Koja Aje. The springs are used by the BP SAB to provide clean water for the members[428]. There is no formal transfer of ownership regarding the springs from the UPS Desa to the BP SAB Koja Aje. However, the BP SAB Koja Aje article of association states that the springs are formally/legally owned by the BP SAB to be used as a raw water source to provide clean

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[426] *Surat Pernyataan Tidak Menebang Pohon di Daerah Mata Air No.01/SP/BPSAP-KA/MK/VII/2008, signed on 31 July 2008 by Agustinus Meo*

[427] , *Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 10 Maret 2010*, Psl 23 butir 1 Sumber Mata Air Koja Aje yang dimiliki oleh Bapak Yohanes Jogho Bie -Mosalaki Owa Joje di Dusun Kotakadhe Desa Kebirangga, Kecamatan Maukaro, dan Markus Ora - Mosalaki Owa Joje Dusun Ndetundopo Desa Kolikapa Kecamatan Maukaro. Sumber Mata Air AE BHIKE yang dimiliki oleh Hendrikus Bhera - Mosalaki Owa Joje, dusun Ndetundopo desa Kolikapa Kecamatan Maukaro. Kedua Mata air tersebut, telah diserahkan secara sah kepada UPS Desa Kebirangga, Desa Kebirangga Tengah, Desa Kolikapa dan Dusun Bolenggo desa Magekapa yang mewakili warga cakupan di desa-desa tersebut di atas untuk membangun Sarana Air Bersih pada tanggal 11 April 2008.

[428] Ibid, Psl 23 butir 2 Sumber Mata Air Koja Aje dan Ae Bhike dimanfaatkan oleh Badan Pengelola Sarana Air Bersih Koja Aje.untuk kepentingan penyediaan air bersih bagi anggota cakupan.

water for the members[429]. The BP SAB and its members are responsible to preserve and maintain the spring[430].

To preserve the raw water, the members are obligated to turn off the water tap after they have finished using the water[431]. In order to protect the springs there are various sanctions for violations. They will be categorized as criminal actions and police will enforce the law in the case that a person/persons: a) intentionally introduce toxic substances into the spring or other water facilities or litters the area around the springs[432]; b) cuts down one tree in the springs area. In addition, the guilty party must plant 20 new trees and take care of them for at least 2 years[433]; c) causes a forest fire, either intentionally or through acts of negligence, in the springs area. In addition, the person also has to "green" the areas that have been burnt[434].

### 6.6 CBO Access Rights in Planning Instruments

The community based water supply and sanitation program in Indonesia was developed especially for low-income communities and rural area dwellers. Fresh water is usually acquired from groundwater, springs, or rainwater. Land-use changes, the management of watersheds, reservoirs and river basin management influence the supply of raw water resources, both in quantity and quality. In addition, uncontrollable water withdrawal without considering the groundwater recharge may lead to the water scarcity, thus jeopardizing the sustainability of the raw water supply for the community based water and sanitation.

Therefore, it is important to have Integrated Water Resource Management (IWRM). IWRM has been defined as a "…process which promotes the co-ordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems". The International Conference on Water and Environment for the 21st century that was held in Dublin, Ireland highlighted the

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[429] , *Anggaran Rumah Tangga Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 17 Maret 2010* Psl 11 butir 2. Sumber mata air tersebut pada butir 1 menjadi milik / asset yang sah dari BPSAB Koja Aje untuk digunakan sebagai sumber air bagi system air bersih Koja Aje

[430] Ibid Koja Aje, Psl 11 butir 3. BPSAB dan seluruh anggotanya mengambilalih kewajiban memelihara dan menjaga kelestarian sumber mata air tersebut .

[431] Ibid , Article 29 butir 3

[432] , *Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende, 10 Maret 2010* Koja Aje Article 20 point 4

[433] Ibid article 20 point 5.

[434] Ibid article 20 point 6.

importance of IWRM and participatory approach principles in water management. "Participatory" in IWRM means that the participation should include:

Real participation where the stakeholders are part of the decision making process;

Public participation where it is more than a consultation;

A participation as a means to achieve long-lasting consensus and common agreement;

There is a creation of participatory mechanisms and capacity.

Ideally, spatial, river basin and ground water management planning should be integrated in order to sustain the raw water security. In addition, it is important to guarantee public access to information, participation and justice in the decision-making process to ensure the accommodation of the public's interests.

Law No. 7/2014 stipulates that the implementation of water resources development shall be carried out through public consultations, through stages of survey, investigation, planning and based on technical feasibility, as well as environmental and economic considerations[435]. In addition it also stipulates the community members shall have equal opportunities to take a role in the process of planning, implementation and supervision of water resources management.[436] The description below will elaborate the guarantee regarding the access rights for community member in the relevant sector, which relate to the raw water security.

### 6.6.1 SPATIAL PLANNING

Spatial planning has implications for land use. Good and integrated spatial planning is required in order to protect ecosystems such as forests and water recharge areas that support the raw water security. Public participation in the spatial planning is important, as the decision regarding the land use will impact the public directly and indirectly. Law on spatial planning states that the public participation is conducted through: a) participation in the formulation of spatial planning, b) participation in the spatial utilisation, and c) participation in the spatial utilisation control[437]. Furthermore, GR No. 68/2010 regulates the form and procedure of the public participation in the spatial planning.

Related to the spatial planning, every person has the right to: a) know the spatial plan, b) enjoy the added value of a space as an impact of the spatial planning, c) have

[435] UU No. 7 Tahun 2004 (Water Resources Law) Article 74
[436] Ibid Article 84
[437] Article 65(2)Undang Undang Republik Indonesia Nomor 26 Tahun 2007 Tentang Penataan Ruang

compensation for any loss regarding development activities based on spatial planning, d) file an appeal to the relevant officials regarding development that is against the spatial planning in his/her area, e) appeal for permit cancellation and the cancellation to the relevant officials regarding the development that is against the spatial planning, f) file for compensation to the government and/or permit holder if the development activities which are against the spatial planning resulted in loss/damage.[438].

Regarding the public participation, both regulations mostly stipulate the norms rather than mechanism (e.g. time line, steps to be taken to involve public in the planning process, the medium for providing information, etc).

### 6.6.2 RIVER BASIN PLANNING

The river basin management includes river conservation, river development and river damage control (*pengendalian daya rusak sungai*)[439]. The management is conducted through different phases as follows: a) formulating programs and activities, b) implementation, and c) monitoring and evaluation.[440] The government, provincial government and regency/municipality government based on its authority conducts a planned and systematic community empowerment in the river management.[441] The empowerment includes several activities as follows: a) dissemination, b) public consultation, and c) public participation.[442] However, the empowerment is limited to the activities pertaining to river conservation and river damage control.[443] With regards to the community empowerment, the government, provincial government, regency/municipality government based on its authority has to provide an information center.[444]

There is no guarantee of public participation (including CBO watsan) and its mechanism in the planning phase (formulation of programs and activities) and the decision making process.

### 6.6.3 GROUNDWATER PLANNING

Groundwater planning management is formulated in order to produce a guideline and direction for conservation, utilization, and ground water damage control.[445] The ground water planning is formulated through several phases as follows: a) groundwater inventory, b) designation of a land conservation zone, c) formulation and stipulation of

[438] Article 60 ibid
[439] Article 18 (1) *Peraturan Pemerintah Republik Indonesia Nomor 38 Tahun 2011 Tentang Sungai*
[440] Article 18 (2) ibid
[441] Article 69 (1) ibid
[442] Article 69 (2) ibid
[443] Article 69 (3) ibid
[444] Article 69 (4) ibid
[445] Article 19 (1) Peraturan Pemerintah Nomor 43 Tahun 2008 Tentang Air Tanah

a ground water management plan[446]. The minister, governor, regent/mayor based on its authority, formulates the ground water management plan. The plan is made through public consultation, involving relevant technical institutions and community members.[447] In addition, the minister, governor, regent/mayor provides information regarding ground water to relevant stakeholders. [448] The guarantee regarding public participation is at the public consultation level. There is no further arrangement regarding the mechanism for public participation which includes CBO watsan. There is no guarantee for public participation (including for CBOs) for the decision making process in the planning phase and in the granting of permits (for ground water utilization and/or commercialization).

### 6.7 CBOs ACCESS TO PLANNING AFTER JUDICIAL REVIEW

Most of the provisions on public participation in planning are not deemed incompatible with the constitution and can thus be reinserted in the new regulatory framework for water resources. These provisions – as discussed above – do not specifically guarantee that CBOs will be represented in the planning exercise. At the moment of writing, the government are contemplating to enact, either a government regulation or a ministerial regulation to implement a 1982 government regulation on water management.[449] The 1982 Government Regulation was deemed to be reactivated after the the Constitutional Court reinstuted Law 11/1974 on Irrigation, after Law 7/2004 on Water Resources was invalidated. However, legal experts are in disagreement as to whether the 1982 regulation could be automatically reactivated. Similar to provisions of Water Law 7/2004, there is no specific guarantee for CBO under the 1982 regulation.

In Lamongan, the CBO association was appointed by river basin commission to represent the interest of CB watsan.[450] This is a good practice but unfortunately not the norm in other regions. In this respect, CBOs guarantee of access to river basin planning and other relevant planning instruments should be detailed in regulation at the national, provincial or municipal level, depending on the designation and authority of the river basin or groundwater area. Through such legal guarantees, CBOs would be able to claim and advocate their rights to be prioritized in water allocation framework.

[446] Article 20 ibid
[447] Article 26 ibid
[448] Article 82 ibid
[449] Peraturan Pemerintah Republik Indonesia Nomor 22 Tahun 1982 Tentang Tata Pengaturan Air
[450] Avessina, *Interview with Association Officials (Kasdan, Kiswanto, Atekan Yossy), Asosiasi HIPPAMS Lamongan Office, Lamongan, 9 January, 2015*

# CHAPTER 7: FINDINGS, RECOMMENDATIONS AND FUTURE ACTIONS

## 7.1 FINDINGS AND RECOMMENDATIONS

Despite the Government of Indonesia's target towards universal (one hundred percent) access to water and sanitation by 2019 and informal expectations that 60% (sixty percent) of such target will be achieved through community-based water and sanitation, CB-Watsan initiatives are suffering from complex regulatory problem saffecting their sustainability. In this research project, we ask the question: **How can Regulatory Frameworks Ensure The Sustainability of Community Based Water and Sanitation?**

1. **In regions where Adat is prevalent, CB-Watsan initiatives should be integrated with Adat, both in pre and post construction stages**

In Maukaro, Ende, East Nusa Tenggara, all CBOs are facing problems with operation and maintenance, especially with regards to low compliance in terms of assets maintenance and fee collection. Such low compliance is caused, partially, due to resistance from Adat leaders and their family towards paying fee. Adat is sufficiently integrated in the pre-construction process, in the form of release of control towards spring location, acknowledgement of right of way and transfer of control of standpipes location from Adat leaders to the CBO as well as the prohibition on wood cutting on catchment areas controlled by Adat leaders.

However, Adat is not sufficiently integrated in the post construction process. The Mosalakis (Adat leaders) are treated as common water users – which prompt some resistance – and fee collection and sanctioning system are dominated with modern concept which does not go along with traditional sanctioning method. We recommend that Adat be integrated also in the post-construction process, in which Mosalakis becomes the figurehead of the CBO and that fee collection, sanctioning and assets protection are integrated with ordinary Adat system. Municipal governments (regencies) and donor agencies can work together to implement this recommendation. The National Planning Agency (Bappenas) could enact a policy integrating Adat with watsan infrastructure system. Regional-by-law and Village Regulation should accomodate this integration in its provisions.

**2. Limited professionalization is the way forward**

In both Ende and Lamongan, central, dominant authoritative figures are important for CBO's survival. Surviving CBOs have hierarchial culture. CBO Chairmen and executive board members are not motivated by financial incentives, they have their own day-jobs (mostly, as teachers) which secure their income stream. They are motivated by external and community recognition of their work, which accords them special status in their village. Forced introduction of financial incentives to CBO leader may be detrimental and contradict local values. Regeneration of CBO leadership is (and has been) problematic.

In eastern Indonesia where Adat is prevalent, professionalization agenda may be challenged by Adat. Professionalization is more likely to be implemented in Eastern Java – notwithstanding the motivation and hierarchial culture of CBOs as discussed above. In both cases, technical personnel are vital in safeguarding water infrastructure. Technical personnel, in both Lamongan and Ende, typically do not engage in strategic CBO decision-making process as that is the responsibility of CBO chairman. Despite their important role, public recognition is low, although salary is relatively above other CBO executives. Since the knowledge that has been accumulating in technical personnel is invaluable and their training cost is expensive, replacing technical personnel may bring negative impact on CBO sustainability.

Regulatory framework can insulate technical personnel from interference with local politics by requiring their replacement to be agreed by public meeting or CBO meeting. Community Based Organization's statutes and village regulation can mandate regeneration and training of technical personnel. CBO's articles of association should limit the term of office for CBO Chairman and executive board in order to allow accountability to take place at the end of their term but allows for reappointments. This recommendation can be adopted through "private ordering" model. Donors and Bappenas could enact sample CBO Articles of Association to be adopted by CBOs.

**3. CB-Watsan should be recognized as a distinctive actor and model of provision**

In the 2005 and 2015 Court Decisions, the Court was preoccupied with the binary distrinction between state (direct provision and state/regional owned enterprise) versus private enterprise. In a bid to prevent privatization of the water sector, every other actors other than State and Regional Owned Enterprise are either discouraged or prohibited to enter the arena. This research demonstrate that the distinction is actually more complicated than that, since there is a third actor, the "community". Unfortunately, CBOs does not fall into the category of State and Regional Owned Enterprises and thus are unintentionally marginalized in the Court's debate an in national legislations.

This research recommends that the "community" be recognized as a distinctive actor and model of water services provision in addition to state/state owned enterprise and the private sector. Section 1.4.4 developed criteria for "community-based", which contain these elements: (i) similarities in terms of locality, values and problem faced (ii)

participation and decision making on the planning process (iii) there is a cost sharing, in kind or in cash, by the community in the construction process and (iv) undertakers are appointed from, by and are accountable to the community. The Ministry of Public Works, especially the Directorate General of Cipta Karya would be the most strategic apparatus to conduct such reform. These reforms should be embodied in the Government Regulation on water supply and sanitation and any implementing regulations thereof.

4. **National Legislations must regulate CB-Watsan *in equal level* with the "institutional" system**

Chapter 3.2 have explained in detail how – despite its expectation and contribution to universal access – CBOs in CB-Watsan have been "discriminated", both in terms of policy discourse and the regulatory framework. CB-Watsan are considered to be only a "temporary" solution, an auxilary of PDAMs. This manifested in the lack of acknowledgement of CBOs as "water undertaker" in secondary legislation, which enjoys certain priveleges as well as responsibilities. This further manifests in the lack of clarity towards licensing types used by CBO for operation and water abstraction, and consequently, its monitoring, evaluation and government counterpart which are directly in charge of them. This also has implication towards planning framework and budgetary politics. In conjunction with the recommendation to treat "community" model as a distinctive actor and model of water services provision, legislation should regulate CB_watsan in equal leval with "institutional" system. In order to foster further formalisation, CBO officials from the field advocate the use of single, uniform name for Watsan CBO throughout Indonesia, which should be regulated in a legislation. Similar to the above, this recommendation is most suitable for the Ministry of Public Works, Directorate General of Cipta Karya. The recommendations could form a part of the Government Regulation on Drinking Water and Sanitation and its implementing regulations;

5. **Regulatory framework must clarify the roles and responsibilities of local agencies in post construction stage**

The role and responsibilities of each local government agency are typically detailed in regent's regulation. We found no regent regulation specifying the roles and responsibilities of local government agencies in providing support, monitoring and evaluation to CBOs. Some local government agencies are mandated with development of water infrastructure, however in practice, this is interpreted as a responisbility in building the infrastructure themselves. Thus, regulatory framework should clarify its roles in terms of technical and institutional support as well as water quality regulation for CBOs. This could be outlined in a regional by law or regent's regulation.

This recommendation calls for reform of national legislations (Gvernment Regulation on Drinking Water and Sanitation) – thus most relevant to be carried out by the Directorate General of Cipta Karya, Ministry of Public Works. Implementation of such recommendation can be detailed in a Regional by Law or Regent Regulations.

**6. CB Watsan and non-CB Watsan Planning Framework must be integrated**

Our field study demonstrated incidences of conflict and cooperation between PDAM (and other water initiatives) with CB-Watsan. Conflict arises because of potential overlap between the two actors. Several models of cooperation have been explored in Chapter 3.7, notwithstanding their technical difficulties. In order to prevent conflict, foster cooperation and sustainable operation of both actors, the planning framework should be integrated. The RISPAM has been the planning framework for water services in general, however, due to the cost of RISPAM, it is mostly focused on PDAM. Regulatory framework *can* require, subject to financial capability, that CB Watsan planning framework are integrated into RISPAM. Regulatory framework – which could be in the form of Regional By Law -- *should* require that coordination between CB Watsan initiator and PDAM are in place before and after the construction process. This recommendation could be implemented at the policy level (Public Works Ministry Regulation) and detailed by Regional by Law.

**7. Legal forms of CBO should be compatible with the "CB-Watsan" concept**

In selecting the appropriate legal form for CBO, several elements must be considered:

(a) accommodation of the "community-based" concept; (b) financials and profit (c) the degree of independence and (e) assets security. The community based concept means that there are: (i) similarities in terms of locality, values and problems faced (ii) participation and decision making on the planning process (iii) cost sharing, in kind or in cash by the community in the construction process and (iv) operators are appointed from, by and are accountable to the community.

Ideally, a CBO should be constituted as a legal entity for the purpose of securing assets (point e above) --although assets could also be owned by Village – and in limiting the liability of their executives. All legal forms has its own drawback and advantages, however, after evaluating all relevant legal forms in Indonesia, we come up with the conclusion that BUM Desa (Village Business Entity), Perkumpulan (Association) and Koperasi (Cooperatives) are the forms which can best accommodate the elements above.

As explained in Chapter 4, they too have their drawbacks. For example, BUM Des *per se* is not a legal entity and it is not clear if BUM Des can be also be constituted as cooperatives or another legal entity. There are critiques from our field study that a BUM Des may not be independent and will be under the influence of local politics. This critique is confirmed by our legal analysis which suggests that BUM Des budgeting, appointment and dismissals of its executive are under the authority of the Village Head. Meanwhile, association (*perkumpulan*) which is the most common type of watsan CBO in Indonesia, has limitation in terms of some restriction on profit motive. Profit – depending on the CBO -- might be important for professionalization (and further scaling up) agenda. Recent regulatory trend appears to be moving towards categorizing association as non-profit, voluntary, humanitarian organization. This restriction would mean that professionalisation agenda could be impeded. Finally, cooperative, which is the second most common type of Watsan CBO found in practice, has drawback in terms of the distribution of retained earnings. After cooperative law 17/2012 which prohibits the distribution of transaction gain with non-

members to cooperative members are repealed, every surplus **can** now be distributed cooperative members. In practice this could mean that less funds are available for network expansion, repair and maintenance.

**8. Most CB Watsan (immovable property) assets are ownerless. Assets must be owned, either by CBO or by Village**

Interviews with CBO executive and Watsan activists suggest that CB Watsan assets are "owned" by the community. However, upon conducting legal analysis of documents obtained, we have never found any immovable property assests (land, building) which can be directly linked to CBO. There are no land certificates or building permits which are under the CBO name. This is primarily because CBOs are not constituted as legal entites, which therefore, cannot own immovable property. Non legal entity CBOs can own movable properties, but legally, such movable properties are actually owned by people whose name are listed in the CBO articles of association. We thus found discrepancy between the idea of community ownership of assets and its actual practice.

Regulatory framework at the local level should clarify if assets should be owned by CBO (which should be a legal entity) or villages. Each option carries different legal consequences and has its own advantages and drawbacks as explained in Chapter 5.1. Notarization and certification processes are often cumbersome and the transaction costs is high. Therefore, legalization of assets should be a part of national government infrastructure policy. Certification should be provided to CBO at affordable or at zero cost. A local notary could be appointed by the local government to deal with registration processes. A local government agency should be tasked with monitoring and reporting CBO assets. This recommendation can be detailed by a policy from Bappenas and the Ministry of Public Works and then detailed in a Regional by Law or Village Regulation.

**9. Assets Infrastructure should be protected by a combination of Regional By Law, Village Regulation and (where applicable) Adat**

As provisions on the protection of assets infrastructure are binding on the public at large, they should not be regulated through CBO Articles of Association, which are binding only to members and signatory parties they should be regulated through public law mechanisms which impose efficient sanctions with an aim at deterrence and reparation of damages. Sanctioning mechanisms by imprisonment and enforcement through court system should generally be avoided as they tend to be ineffective. If destruction of assets are massive and caused by business entities, a local government agency should be given the responsibility and the legal standing to sue (see Chapter 3.5).

Regional by law should protect CB Watsan assets from damage or destruction, arising out of intention or omission from third parties, by imposing direct financial penalties. Similar rules should be provided by Village Regulation, but using sanctioning mechanisms which are accepted by local customs and tradition. Regulation can provide that when sanctioning mechanisms by Village are agreed, no sanction should be imposed by Regional by Law. If Adat system is in place, damages to assets at the village level should be resolved by Adat mechanism, except if the damages are too massive, which should prompt local

government to intervene. This recommendation should be carried out by regional government and village government.

**10. There should be a specific type of CB-Watsan water abstraction licence**

Most CB-Watsan are not equipped with abstraction licences, this is due to lack of clarity of licensing types in each region and whether those types are applicable to CB Watsan. Without a licensing framework, there can be no legal guarantee of water allocation for CB Watsan. Thus, in order to realize the human right to water, a specific type of licensing for CB Watsan should be conceived. Its application should be simplified and the cost should be affordable. The licensing framework should also establish monitoring mechanism. This recommendation calls for regulatory reform in water abstraction licensing. The Directorate General of Water Resources Management (DitJen SDA) of the Public Works Ministry is the most relevant agency to carry out such reform, with cooperation with Directorate General of Cipta Karya.

**11. CBO should be granted access to all planning instruments**

Water allocation framework that eventually determine CBO's access to raw water are determined through planning exercise at the basin level. CBO needs to be guaranteed access to information on river basin planning. CBO should be recognized as a specific stakeholder at river basin commissions and water allocation for CBO should be specifically considered. This recommendation calls for acknowledgement of Watsan CBO in Integrated Water Resources Management. The Dirctorate General of Water Resources Management and Balai PSDA as well as river basin agencies are the key actors in executing this recommendation.

## 7.2 FUTURE ACTIONS

### 7.2.1 FOLLOW-UP RESEARCH

Section 1.7 put the emphasis of this report on rural water supply. The implications of this emphasis is that there are unresolved issues on the regulation of rural and urban sanitation, in which community urban sanitation would be more complex than rural sanitation.

The reason for putting emphasis on rural water supply is because the value chain of urban sanitation from storage, conveyance, treatment and/or disposal of waste will carry more specific and complicated legal implications which would be too broad to be discussed in this report. Nevertheless, other parts of this report remain relevant to community sanitation, both urban and rural.

In addition, Section 1.7 clarifies that on the issue of raw water security, the focus of this report is with respect to legal protection, abstraction licenses and "access" rights in the planning context. Our reviewer commented that water quality regulation is also of relevant to raw water security. We agree with this comment and our field work validates such concern. However, we are of the opinion that water quality regulation are more appropriate to be discussed in future research on sanitation. Finally, there are issues pertaining state budget which have not been discussed in detail in this report. This should be discussed in an upcoming research.

To sum up, there are three issues which needs more exploration in future research: (1) The issue of urban sanitation, (2) raw water quality and (3) legal construction of state budget for CB Watsan. The CRPG have recently signed a research cooperation contract with an Australian University to explore the above issues, building from this report. The research is currently ongoing. Another joint research proposal in collaboration with an Australian University is currently in the bidding stage.

### 7.2.2 RESEARCH COMMUNICATION AND DISSEMINATION

This project have collected various types of legal documentation and databases, most are public documents (regulation and decrees) and some are private documents in which we have obtained permission for publication. We plan to publish those documents in our wiki page at CRPG website.

We also plan to conduct other research communication activities which includes: (1) series of blog post in both Bahasa Indonesia and English at our blog site (2) translation of our AIIRA research report into Bahasa Indonesia, (3) publication of several editions of CRPG Policy Briefs on Water and Sanitation and (4) e-mail dissemination to relevant institutions in Indonesia and abroad.

### 7.2.3 MAINSTREAMING WATER RESEARCH AT UNIVERSITAS IBN KHALDUN BOGOR

Since the AIIRA project, the research capacity at UIKA Bogor for water and sanitation has significantly developed. We have been able to attract outside expertise and foster cooperation with various institution at home and abroad. The CRPG has convinced the University that developing niche expertise in water and sanitation would be desireable. Developing such niche will require inter-disciplinary approach from various faculties at the University level. We are planning to conduct the following: (1) University Level Research Conference discussing results from AIIRA and ongoing follow-up research on water sanitation (2) mainstreaming water and sanitation expertise through undergraduate and postgraduate research (*skripsi* and master thesis) at various faculty, especially Law, Religious Study, Engineering and Economics, (3) encouraging lecturers and faculties to conduct water and sanitation research through government financing (Dikti and LPDP) building on our research database.

### 7.2.4 FOLLOW-UP ACADEMIC PUBLICATIONS

Our reviewers have suggested several journals that may be appropriate for publication. The publication process may take some time. We will need to rewrite our findings in a journal format and return to our database for information.

# CHAPTER 8: BIBLIOGRAPHY

## Legislations

Undang Undang 17 Tahun 2013 Tentang Organisasi Kemasyarakatan
Undang Undang No.11 Tahun 1974 Tentang Pengairan
Undang Undang Nomor 6 Tahun 2014 Tentang Desa
Undang Undang Nomor 16 Tahun 2001 Tentang Yayasan
Undang Undang Nomor 17 Tahun 2012 Tentang Perkoperasian (Dicabut)
Undang Undang Nomor 23 Tahun 2014 Tentang Pemerintahan Daerah
Undang Undang Nomor 25 Tahun 1992 Tentang Perkoperasian
Undang Undang Nomor 28 Tahun 2004 Tentang Perubahan Atas Undang-Undang Nomor 16 Tahun 2001 Tentang Yayasan
Undang Undang Nomor 28 Tahun 2009 Tentang Pajak Daerah dan Retribusi Daerah
Undang Undang Republik Indonesia Nomor 26 Tahun 2007 Tentang Penataan Ruang
The Water Supply and Sewerage Services (Customer Service Standards) Regulations 2008, SI 2008 No. 594
State Owned Enterprises Act 1992 (Victoria), No. 90 of 1992, Version No. 036

Peraturan Daerah Khusus Ibukota Jakarta No. 11 Tahun 1993 Tentang Pelayanan Air Minum di Wilayah Daerah Khusus Ibukota Jakarta
Peraturan Daerah Kabupaten Takalar No. 15 Tahun 2003 Tentang Perusahaan Daerah Air Minum
Peraturan Daerah Kabupaten Lamongan Nomor 5 tahun 2004 Tentang Pemanfaatan Air Tanah
Peraturan Daerah Kabupaten Sragen No. 8 Tahun 2004 Tentang Perusahaan Daerah Air Minum Kabupaten Sragen
Undang Undang No. 7 Tahun 2004 Tentang Sumber Daya Air

Peraturan Bupati Alor Nomor 14 Tahun 2014 Tentang Pelaksanaan Sanitasi Total Berbasis Masyarakat
Peraturan Daerah Kabupaten Bantul Nomor 03 Tahun 2014 Tentang Tata Cara Pembentukan dan Pengelolaan Badan Usaha Milik Desa
Peraturan Daerah Kabupaten Bantul Nomor 11 Tahun 2009 Tentang Pembentukan dan Tata Cara Pengelolaan Badan Usaha Milik Desa
Peraturan Daerah Kabupaten Banyuwangi Nomor 21 Tahun 2011 Tentang Tata Cara Pembentukan dan Pengelolaan Badan Usaha Milik Desa
Peraturan Daerah Kabupaten Dompu Nomor 8 Tahun 2012 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat
Peraturan Daerah Kabupaten Ende Nomor 9 Tahun 2014 Tentang Pengelolaan Sumber Daya Air
Peraturan Daerah Kabupaten Ende Nomor 13 Tahun 2014 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Ende

Peraturan Daerah Kabupaten Luwu Timur Nomor 07 Tahun 2008 Tentang Pedoman Pembentukan dan Pengelolaan Badan Usaha Milik Desa (BUMDes)
Peraturan Daerah Kabupaten Sikka Nomor 16 Tahun 2007 tentang Jenis Urusan Pemerintahan Yang Dapat Diserahkan Kepada Desa
Peraturan Daerah Kabupaten Sumba Timur Nomor 2 Tahun 2013 Tentang Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat
Peraturan Daerah Khusus Ibukota Jakarta No. 13 Tahun 1992 Tentang Perusahaan Daerah Air Minum Daerah Khusus Ibukota Jakarta (PAM Jaya)
Peraturan Daerah Kota Bogor No. 4 Tahun 2004 Tentang Perusahaan Daerah Air Minum Tirta Pakuan Kota Bogor
Peraturan Daerah Kota Bogor Nomor 5 Tahun 2006 Tentang Pelayanan Air Minum Perusahaan Daerah Air Minum Tirta Pakuan Kota Bogor
Peraturan Daerah Nomor 28 Tahun 2008 Tentang Kedudukan, Tugas dan Fungsi Dinas Pekerjaan Umum Cipta Karya Kabupaten Lamongan
*Peraturan Desa Rendoraterua No. 03/2008 Tentang Air Minum Penyehatan Lingkungan Berbasis Masyarakat*
*Peraturan Desa Tlanak Kecamatan Kedungpring Kabupaten Lamongan No. 3/2008 Tentang Pengelolaan dan Penggunaan Air Minum dan Sanitasi Desa Tlanak*
Peraturan Gubernur Nusa Tenggara Timur Nomor 10 Tahun 2012 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat
Peraturan Menteri Dalam Negeri Nomor 57 Tahun 2007 Tentang Petunjuk Teknis Penataan Organisasi Perangkat Daerah
Peraturan Menteri Hukum dan Hak Asasi Manusia Republik Indonesia Nomor 6 Tahun 2014 Tentang Pengesahan Badan Hukum Perkumpulan
Peraturan Menteri Negara Pendayagunaan Aparatur Negara Nomor Per/18/M.PAN/11/2008
Peraturan Pemerintah Nomor 41 Tahun 2007 Tentang Organisasi Perangkat Daerah
Peraturan Pemerintah Nomor 43 Tahun 2008 Tentang Air Tanah
Peraturan Pemerintah Nomor 43 Tahun 2014 Tentang Peraturan Pelaksanaan Undang Undang Nomor 6 Tahun 2014 Tentang Desa
Peraturan Pemerintah Nomor 60 Tahun 2014 tentang Dana Desa yang Bersumber dari Anggaran Pendapatan dan Belanja Negara
Peraturan Pemerintah Nomor 69 Tahun 2014 Tentang Hak Guna Air
Peraturan Pemerintah Republik Indonesia Nomor 22 Tahun 1982 Tentang Tata Pengaturan Air
*Peraturan Pemerintah Republik Indonesia Nomor 38 Tahun 2011 Tentang Sungai '*
Staatsblad 1870 Nomor 64 Perkumpulan Perkumpulan Berbadan Hukum

Qanun Kabupaten Aceh Besar Nomor 8 Tahun 2010 Tentang Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat
Peraturan Daerah Kabupaten Maros No. 4 Tahun 2011 Tentang Perusahaan Daerah Air Minum
Peraturan Daerah Pemerintah Daerah Kabupaten Bima Nomor 6 Tahun 2011 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat di Kabupaten Bima
Peraturan Daerah Kabupaten Dompu Nomor 8 Tahun 2012 Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat
East Sumba Regency regional regulation No 2/2013
Ende regional regency regulation no 13/2014

Peraturan Pemerintah No. 16 Tahun 2005 Tentang Pengembangan Sistem Penyediaan Air Minum
Peraturan Pemerintah Nomor 72 Tahun 2005 Tentang Desa
Undang Undang No.40 Tahun 2007 Tentang Perseroan Terbatas
Peraturan Daerah Kota Sukabumi No. 3 Tahun 2009 Tentang Perusahaan Daerah Air Minum
Undang Undang No.5 Tahun 1962 Tentang Perusahaan Daerah

OFWAT, *The guaranteed standards scheme (GSS) Applicable to England and Wales from 1 April 2008* (2008)

## Judicial Decisions

Putusan Mahkamah Konstitusi Nomor 28/PUU-XI/2013 Tentang Pengujian Undang Undang Nomor 17 Tahun 2012 Tentang Perkoperasian
*Judicial Review of Law Number 7 Year 2004 regarding Water Resources, Judgment of 13th July 2005, No. 058-059-060-063/PUUII/2004* (Constitutional Court of the Republic of Indonesia)

## Ministerial Regulation and Decrees

Keputusan Menteri Negara Koperasi & Usaha Kecil & Menengah No: 518/BH/XVI.10/550 /413.111/2010 tentang Akta Pendirian Koperasi
Peraturan Menteri Pekerjaan Umum Nomor: 18/PRT/M/2007 Tentang Penyelenggaraan Pengembangan Sistem Penyediaan Air Minum

## Private Legal Documents

*Surat No. 005/573/413.021/2010 Surat Keterangan Perijinan SIPA, Pemerintah Kabupaten Lamongan, Sekretariat Daerah*
*Surat pernyataan penyerahan lahan untuk pembangunan Direksi Kit/Program ProAir Ende, Ratuseba 10 Juni 2008 (Simon Seto)*
*Surat Pernyataan Tidak Menebang Pohon di Daerah Mata Air No.01/SP/BPSAP-KA/MK/VII/2008, signed on 31 July 2008 by Agustinus Meo*
'Akta Pendirian Perkumpulan Penduduk Pemakai Air Minum dan Sanitasi (Hippams) Tirto Agung'
*Anggaran Dasar Himpunan pemakai air minum dan sanitasi (HIPPAMS) Desa Tlanak* (2008)
*Establishment deed HIPPAMS Tirto Agung,Tlanak* (2008)
Anggaran Dasar Badan Pengelola Sarana Air Bersih Koja Aje, Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende

Statuta, 'Anggaran Rumah Tangga BPSAP Koja Aje Desa Kolikapa, Desa Kebirangga Tengah, Kebirangga & Dusun Bholengo Desa Magekapa Kec. Maukaro Kab. Ende

## Books and Thesis

Al'Afghani MM, 'The Role of Legal Frameworks in Enabling Transparency in Water Utilities Regulation' (PhD Thesis, University of Dundee 2012)
Tönnies F and Lichtblau K, *Soziologische Schriften : Studien zu Gemeinschaft und Gesellschaft* (VS Verlag für Sozialwissenschaften 2011)
Denzin NK and Lincoln YS, *The Sage handbook of qualitative research* (Sage 2005)
Falzon M-A, *Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Social Research* (Ashgate Publishing 2009)
GWP, 'Integrated Water Resources Management'
Hantke-Domas MP, 'Economic Regulation of Public Utilites with Natural Monopoly Features. A Study of Limitations Imposed by Property Rights from a Legal & Economic Approach' (Dissertation, University East Anglia 2005)
Harvey PA and Reed RA, 'Community-managed water supplies in Africa: sustainable or dispensable?' 42 Community Development Journal 365
Hendry S, *Frameworks for Water Law Reform* (Cambridge University Press 2014)
Hood C, Rothstein H and Baldwin R, *The government of risk: Understanding risk regulation regimes* (Oxford University Press, USA 2001)
Marcus GE, 'Ethnography in/of the world system: the emergence of multi-sited ethnography' Annual review of anthropology 95
Prosser T, *The regulatory enterprise* (Oxford University Press)
Quinn KCaR, *Diagnosing and Changing Organizational Culture* (Addison-Wesley 1999)
Smedal OH, *Hierarchy, Precedence and Values: Scopes for social action in Ngadhaland, Central Flores* (Vischer. MP ed, ANu E Press 2009)

## Journals

Al'Afghani MM, 'Constitutional Court's Review and the Future of Water Law in Indonesia' 2 Law, Environment and Development (LEAD) Journal (2006)
Al'Afghani MM, 'The transparency agenda in water utilities regulation and the role of freedom of information: England and Jakarta case studies' 20 Journal of Water Law 129
Al'Afghani MM, 'Anti Privatization Debate, Opaque Rules and Neglected 'Privatised'Water Services Provision: Some Lessons from Indonesia' (STEPS II Conference, "Liquid Dynamics", organized by the International Development Study (IDS) at the University of Sussex, Sussex, 22-23 March 2011)
Antlov H, *Village and Sub-District Functions in Decentralized Indonesia* (2012)
Bakker K, 'The ambiguity of community: Debating alternatives to private-sector provision of urban water supply' 1 Water Alternatives 236
Black J, 'Critical reflections on regulation' 27 Austl J Leg Phil 1
–––, 'The decentred regulatory state?' in Vass P (ed), *Regulatory Review 2006/2007, 10th Anniversary Edition* (The University of Bath 2007)
Brocklehurst C, 'Water : Understanding the Basics' Paper 1

Carter RC, Tyrrel SF and Howsam P, 'The impact and sustainability of community water supply and sanitation programmes in developing countries' 13 Water and Environment Journal 292
Lockwood H, 'Professionalising community-based management for rural water services' IRC, December 2011
Rogers P and Hall A, *Effective water governance (TEC background papers no. 7)* (Global Water Partnership, Stockholm 2003)
Sanz MP, Schouten M and Hantke-Domas M, 'Consumer-inclusive economic regulation: water pricing under different regulatory regimes'
Schrohner S, 'Red cocks and black hens Gendered symbolism, kinship and social practice in the Ngada highlands' Bijdragen tot de Taal-, Land- en Volkenkunde / Journal of the Humanities and Social Sciences of Southeast Asia and Oceania 1

## Draft Regulation and Academic Drafts

Rancangan Peraturan Daerah Kabupaten Sikka Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat

## Op-Ed

Al'Afghani MM, 'Can the court's concern over water privatization be justified? (Part 2 of 2)' *The Jakarta Post* (March 10 2015) Op-Ed 6 <http://www.thejakartapost.com/news/2015/03/10/part-2-2-can-court-s-concern-over-water-privatization-be-justified.html> accessed May 04, 2015
–––, 'Court decision brings water governance reforms to a halt ( Part 1 of 2 )' *The Jakarta Post* (March 09 2015) Op-Ed 6 <http://www.thejakartapost.com/news/2015/03/09/court-decision-brings-water-governance-reforms-a-halt-part-1-2.html> accessed May 04, 2015

## Interviews and Field Notes

Afghani MMA, 'Interview with Poernomo and Wisnu at Kupang,NTT 17 November 2014'
–––, *Interview with Agustinus Meo,Agustinus Meo`s House,Ende,12 November 2014* (Agustinus Meo, 2014)
–––, *Interview with Agustinus Meo,Personal House,Ende,13 November 2014* (Agustinus Meo, 2014)
–––, *Interview with Melkimengga and Siprianus Pendi,Kamubheka Village Office,Ende,13 November 2014* (Melki Mengga, Sipirianus Pendi, 2014)
AlAfghani MM, *Interview with Bambang S* (26 October 2014, 2014)
–––, *Interview with Bennedictus Bera (Mosalaki),Mosalaki`s House,Ende,12 November 2014* (Bennediktus Bera (Mosalaki), 2014)

–––, *Interview with Maukaro`s Head District,Maukaro District Office,Ende,12 November 2014* (Camat Maukaro, 2014)
–––, *Interview with Yohanis Nislaka,BPMD`s Office,Ende 15 November 2014* (Yohanis Nislaka, 2014)
___, *Interview with Alvian, PDAM Office, Lamongan, January 14, 2015*
–––, *Interview with Dormaringan Saragih, Waspola Facility, Jalan Lembang 11 A, Menteng, Jakarta, September 25, 2014*
–––, *Interview with Fany Wedahuditama, Bogor, September 29,2014*
–––, *Interview with Herbertus Gani, Ende, November 16, 2014*
–––, *Interview with Petrus H Djata Ende, 10 November 2014*
–––, *Interview with Reza Hendrawan, Jakarta, August 26, 2014*
Avessina MJ, *Interview with Association Officials (Kasdan, Kiswanto, Atekan Yossy), Asosiasi HIPPAMS Lamongan Office, Lamongan, 9 January, 2015* (Kasdan,Kiswanto,Atekan Yossy)
–––, *Interview with Panggeng Siswadi,Panggeng SIswadi`s House, Lamongan,13 January 2015* (Panggeng SIswadi)
–––, *Interview note with Reza Hendrawan* (2014)
–––, *Interview note with Reza Hendrawan,Bakoel Koffie Cikini,Jakarta,25 August 2014* (2014)
–––, *Annuat Meeting CBO Tlanak, Village Head Office,Lamongan,10 January,2015* (Panggeng Sisyadi,Rahayu,Kasbulloh, 2015)
–––, *Interview with Association official (Kasdan,Kiswanto,Atekan Yossy)* (Kasdan,Kiswanto,Atekan Yossy, 2015)
–––, *Interview with Audy,Community Leader,Warung Kopi, Lamongan 15 2015* (Audi, 2015)
–––, *Interview with Choirul Aziz,village head office, Lamongan,14 January 2015* (Choirul Aziz, 2015)
–––, *Interview with Choirul Aziz,Warung Kopi TegalLondo,Lamongan, 15 January 2015* (2015)
–––, *Interview with Dimas Indriani* (Dimas Indriani, 2015)
–––, *Interview with Dimas Indriani,CBO/HIppams Treasurer,personal house,Lamongan 15 January 2015* (Dimas Indriani, 2015)
–––, *Interview with Dormaringan Saragih,Jejaring AMPL-Waspola Office,Jakarta,25 September 2014* (2015)
–––, *Interview with Galih Yanuar (Bappeda Official), Hilmi (Bappeda Official), Agus Pindo (PU Official),Bappeda Office,Lamongan,9 Januari 2015*
(Galih Yanuar, Hilmi, Agus Pindo 2015)
–––, *Interview with Masrukin and Fadeli,CBO Official,Kemlagilor village head office,21 January 2015* (Pengurus Kelompok Pengelola Sarana (KPS) Kemlagilor (Masrukin dan Fadeli), 2015)
–––, *Interview with Masrukin,Iwan and Fadheli,CBO official at Kemlagilor, Kemlagilor village head official,Lamongan,24 January 2015* (2015)
–––, *Interview with Panggeg Siswadi,Panggeng Siswadi`s House,Lamongan,13 January 2015* (Panggeng Siswadi, 2015)
–––, *Interview with Panggeng Siswadi* (Panggeng SIswadi, 2015)
–––, *Interview with Panggeng Siswadi,Panggeng SIswadi`s House, Lamongan,13 January 2015* (Panggeng SIswadi, 2015)
–––, 'Interview with Panggeng Siswadi,Researcher homestay,Lamongan 18 January 2015'

–––, *Interview with Panggeng SIswadi,Researcher Homestay,Lamongan, 17 January 2015* (2015)
–––, *Interview with Rahayu/Village Head* (Rahayu, 2015)
–––, *Interview with Rahayu/Village Head, Village head personal house, Lamongan,13 January 2015* (Rahayu, 2015)
–––, *Interview with Sutrisno (HIPPAMS Consumer)* (Sutrisno, 2015)
–––, *Interview with Sutrisno (HIPPAMS Consumer),Personal House,Lamongan,15 January 2015* (Sutrisno, 2015)
–––, *Interview with Village Head Tlanak, Rahayu* (Rahayu, 2015)
–––, *Interview with Zulkha and Agus Pindo,Public work Agency Office,13 January 2015* (Zulkha dan agus pindo, 2015)
Muhajir MA, *Interview with Darsono, PDAM Office, Ende, November 10, 2014*
Muhajir MA, 'Interview with Ivan Julianto, PDAM Lamongan Officer on 15 January 2015'
Talan JP, 'Fieldnote on Maukaro district 11 November 2014'
–––, *Fieldnote report 30 November 2014*
Talan JP, *Interveiw with Benediktus Bera, Mosalaki`s House, Ende,15 November 2014*
Talan JP, *Interview with Vinsensius Mei,personal house, 16 November 2014*
–––, *Interview with Visentius Mei,personal house, 16 November 2014*
–––, 'Interview with Yoseph Kesu,Nabe Head Village,Nabe Head Village Office,16 November 2014'
–––, *Fieldnote report 30 November 2014* (2014)
Talan JP, *Wawancara dengan Benediktus Bera 15 November* (2014)

## Group Discussions

Al'Afghani MM and Avessina MJ, 'Focus Group Discussion Report' (The Role of Regulatory Frameworks in Ensuring Sustainability in Community Based Water and Sanitation, Center for Water Governance and Jejaring AMPL, Hotel Alila Pecenongan, Jakarta, October 11, 2013)
Al'Afghani MM and Avessina MJ, 'Focus Group Discussion Report' (The Role of Regulatory Frameworks in Ensuring Sustainability in Community Based Water and Sanitation, Center for Water Governance and Jejaring AMPL, Hotel Alila Pecenongan, Jakarta, October 11, 2013)
*Lokakarya Kajian Efektivitas Kinerja Kelembagaan Kelompok Pengguna Sarana Air Minum, Jakarta 2 Desember 2014* (Bappenas 2014)
Al'Afghani MM, 'Focus Group Discussion Report, Akmani Hotel, 26 March 2015'
Adifan M, *Group Discussion, September 1-14, 2012*
–––, *Group Discussion, September 1-14, 2012* (2012)
Avessina MJ, 'Focus Group Discussion at Lamongan, Bappeda Office, 26 January 2015
'
AlAfghani MM, 'Focus Group Discussion, Aspek Regulasi & Keberlanjutan AMPL BM, Ende, 20 November 2014'
–––, *Korespondensi Milis AMPL, Manajemen Infrastruktur AMPL BM, Sep 10, 2012* (2012)

–––, *Laporan Penelaahan Ranperda AMPL-BM Kabupaten Sikka* (Dropbydrop and Pokja AMPL Sikka, 2012)
Hendrawan R, *Group Discussion, September 1-14, 2012* (2012)
Talan JP, *Meeting Note Focus Discussion Group, Kantor Bappeda Lamongan, East Java, January 26, 2015* (2015)

## Other Sources

Al'Afghani MM and others, *Research Proposal; The Role of Regulatory Frameworks in Ensuring The Sustainability of Community Based Water And Sanitation* (Center for Water Governance and UNESCO Centre for Water Law, Policy and Science, 2013)
Biro Pusat statistik L, 'Data Kependudukan BPS' (*Biro Pusat Statistik*, 2014) <http://lamongankab.bps.go.id/>
Biro Pusat Statistik N, <www.bps.ntt.go.id> accessed 24 february
BPS, 'Biro Pusat Statistik NTT' (2013) <http://ntt.bps.go.id/>
Bappenas, 'Penyusunan Rencana Pembangunan Jangka Menengah Nasional (RPJMN) 2015-2019 '
Bappenas and others, *Kebijakan Nasional Pembangunan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat* (2003)
Biro Pusat Statistik E, 'Data Biro Pusat Statistik' (2014) <www.endekab.go.id>
de-Albuquerque C, *Report of the independent expert on the issue of human rights obligations related to access to safe drinking water and sanitation, A/HRC/15/31* (2010)
Dewi ASK, 'Alternatif Bentuk Badan Hukum yang Tepat dalam Pendirian Badan Usaha Milik Desa (BUMDes) sebagai Upaya Meningkatkan Pendapatan Asli Desa (PADes)' 3 Pamator
Ende P-PK, *LAPORAN KAJIAN BELANJA PUBLIK Sektor Air Minum dan Penyehatan Lingkungan (AMPL)* (2011)
Ende PK, <www.endekab.go.id> accessed 25 January
Ende PK, *LAPORAN KAJIAN BELANJA PUBLIK Sektor Air Minum dan Penyehatan Lingkungan (AMPL)* (2011)
Erawan P, 'Tuntut Hak, Pembina Yayasan Perbaiki Permohonan Uji Materi UU Yayasan' (2015) <http://x.crpg.info/17XKsVw> accessed March 06, 2015
Essential Services Commission, *Customer Service Code Metropolitan Retail and Regional Water Businesses* (Issue No 7, 15 October 2010, 2007)
Ismawan B, 'Badan Usaha Milik Desa (BUM-Des)' (*Indonesiafightpoverty*, 2014) <http://x.crpg.info/1AMKOZ4> accessed February 26, 2015
Jemmima SY Ea, *Multi-Village Pooling Project in Indonesia* (October, 2011)
Jouravlev A and United Nations. Economic Commission for Latin America and the Caribbean, *Water utility regulation : issues and options for Latin America and the Caribbean* (Economic Commission for Latin America and the Caribbean 2000)
Kabupaten Sikka, *Naskah Akademik Rancangan Peraturan Daerah Kabupaten Sikka Tentang Pengelolaan Air Minum dan Penyehatan Lingkungan Berbasis Masyarakat* (2012)
Kualita QG, *Pulau Ende,Kisah sukses pulau Indonesia yang pertama yang terbebas dari buang air sembarangan* (Departemen Kesehatan,Jakarta)
LP3ES, *Kajian Cepat Terhadap Program Program Pengentasan Kemiskinan Pemerintah Indonesia : Program WSLIC-2 Dan Pamsimas* (2007)

Prabaharyaka I, *Kajian Efektivitas Kinerja Kelembagaan UPS-KPS (Unit Pengelola Sarana – Kelompok Pengelola Sarana) Perdesaan* (2014)
Prioharyono JE, 'Kekuasaan Politik dan Adat Para Mosalaki di Desa Nggela dan Tenda, Kabupaten Ende, Flores ' Vol 33 no 3 September-Desember 2012 Journal Anthropology of Indonesia 180
United Nations Committee on Economic Social and Cultural Rights, *General comment no. 15 (2002), The right to water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)* (E/C12/2002/11 20 January 2003, 2003)
Waspola, *WASPOLA FACILITY Laporan Bulanan Oktober 2013 Dokumentasi No: 050/2013/AWP1/C4/MR10*
*(AusAid Initiative INI 390) WB TF 071267* (2013)
Wellborne IW-GaP, 'The professionalisation of social work: a cross-national exploration' Int J Soc Welfare 2008:17 : 281–290 INTERNATIONAL JOURNAL OF SOCIAL WELFARE
ISSN 1369-6866
WHO, *Community Management of Rural Water Supply and Sanitation System, Points for Practitioners* (World Health Organization, Regional Office for Africa 1996)
World Bank, 'The Hard Way to the High Road: Transition of Community-based Water Groups to Professional Service Providers in Indonesia ' Water and Sanitation Program <http://x.crpg.info/1dJKUd5> accessed May 02, 2015
Ohnishi M and Nakamura K, 'Capacity building of local governmental and non-governmental organizations on environmental hygiene through a community-based training workshop program' 23 J Interprof Care 4
Quesada MG, *Water and Sanitation Services in Europe: Do Legal Frameworks provide for "Good Governance"?* (UNESCO Centre for Water Law Policy and Science at the University of Dundee 2010)
Sara J and Katz T, *Making Rural Water Supply Sustainable: Report on the Impact of Project Rules* (Water and Sanitation Project (WSP) -- The World Bank, 1997)
Sekretariat CPMU Pamsimas, *Petunjuk Teknis Pedoman Pelaksanaan Pamsimas Tingkat Masyarakat* (2012)
–––, *Petunjuk Teknis Pedoman Pengelolaan Program Pamsimas* (2012)
–––, *Petunjuk Teknis Pembentukan Lembaga Keswadayaan Masyarakat (LKM) Pamsimas* (2012)
–––, 'Instruksi Gubernur nomor 11 Tahun 1985 tentang pembentukan Himpunan pemakai air minum '
–––, 'Anggaran Rumah Tangga Himpunan pengelola air minum dan sanitasi (HIPPAMS) Tirto Agung'
Suryokusumo B, 'AIIRA Internal Workshop Presentation, Bogor, Novotel,10 February 2015 '
Sy J, *Handbook for Community-Based Water Supply Organizations, Multi-Village Pooling Project in Indonesia* (The Water and Sanitation Program (World Bank), 2011)
–––, 'Multi Village Pooling Project Indonesia: Handbook for Community Based Water Supply Organisation '
–––, '<Transition of Community Based Water Groups to Profesional Service Providers in Indonesia.pdf>'

## Pictures

**Water Seminar in Bogor**

## "*CHALLENGES AND NEW APPROACHES IN WATER SUPPLY AND SANITATION IN THE DEVELOPING WORLD*". KEYNOTE SPEAKER: DR. BIMA ARYA (MAYOR OF BOGOR CITY)

The small boats carry passenger to the coast of Pulau Ende at the village's main transportation stop.


The office of Rendoraterua Village Chief.

A rainwater tank was already built in one of the villagers' home

The well is no longer used by the villagers because of saltwater infiltration of well water system.

The construction of the Sea Water Reverse Osmosis (SWRO) at Pulau Ende.

In spite of containing brakish water, the well is still used by the villagers for their daily water needs.


Dr. Al Afghani (right) is interviewing the Village Chief of Ndoriwoy (left).

John Petrus Talan, researcher at IGRSC Kupang (left), is interviewing a local religious figure in Pulau Ende.

An interview with women who are engaged in Ikat weaving.

People use jerry cans to fetch water from the well. Once the jerry cans filled with water, they carry them home to be used for daily water needs such as bathing and washing.

Wastewater is disposed to the ocean

The rainwater tank becomes dry because it has not rained a drop for eight months.

Rainwater Tank from above.

An interview with the Chief of Desa Rerurangga


This monument is created by UNICEF to promote hand-washing and hygiene behavior.


UNICEF also created this monument that says “Gunakan Air pada PAH untuk Minum dan Masak” (use rainwater for drinking and cooking).

Warm welcome from BPSAB Koja Aje officials

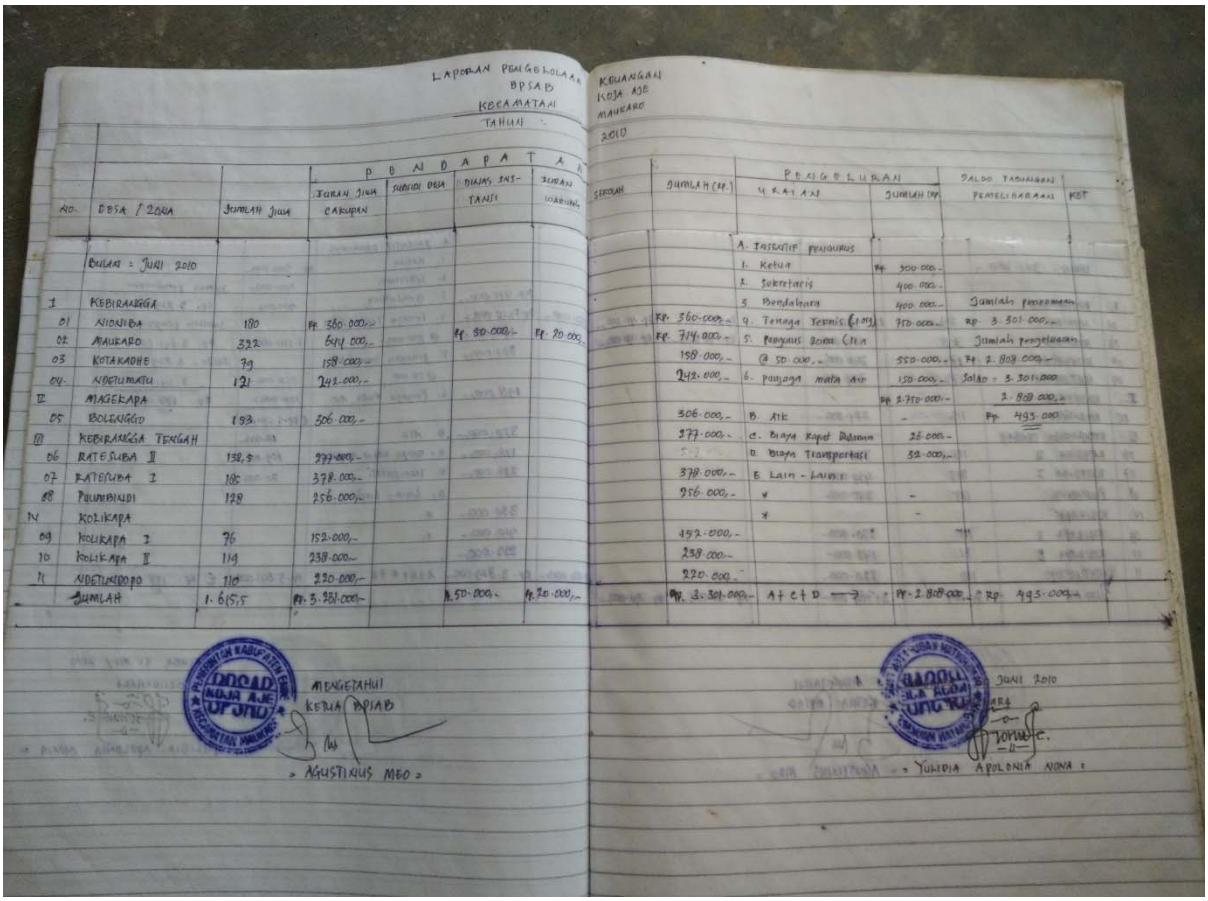
Discussion and interview with health officials and local doctor at Community Health Center (Puskesmas) Maukaro.

Dr. Al Afghani is giving a sanitation and hygiene education session to primary school children to increase awareness and encourage them to implement sanitation and hygiene practices in everyday life.

A villager is using jerry cans to collect tap water in BPSAB KojaAje (A local community water management group)

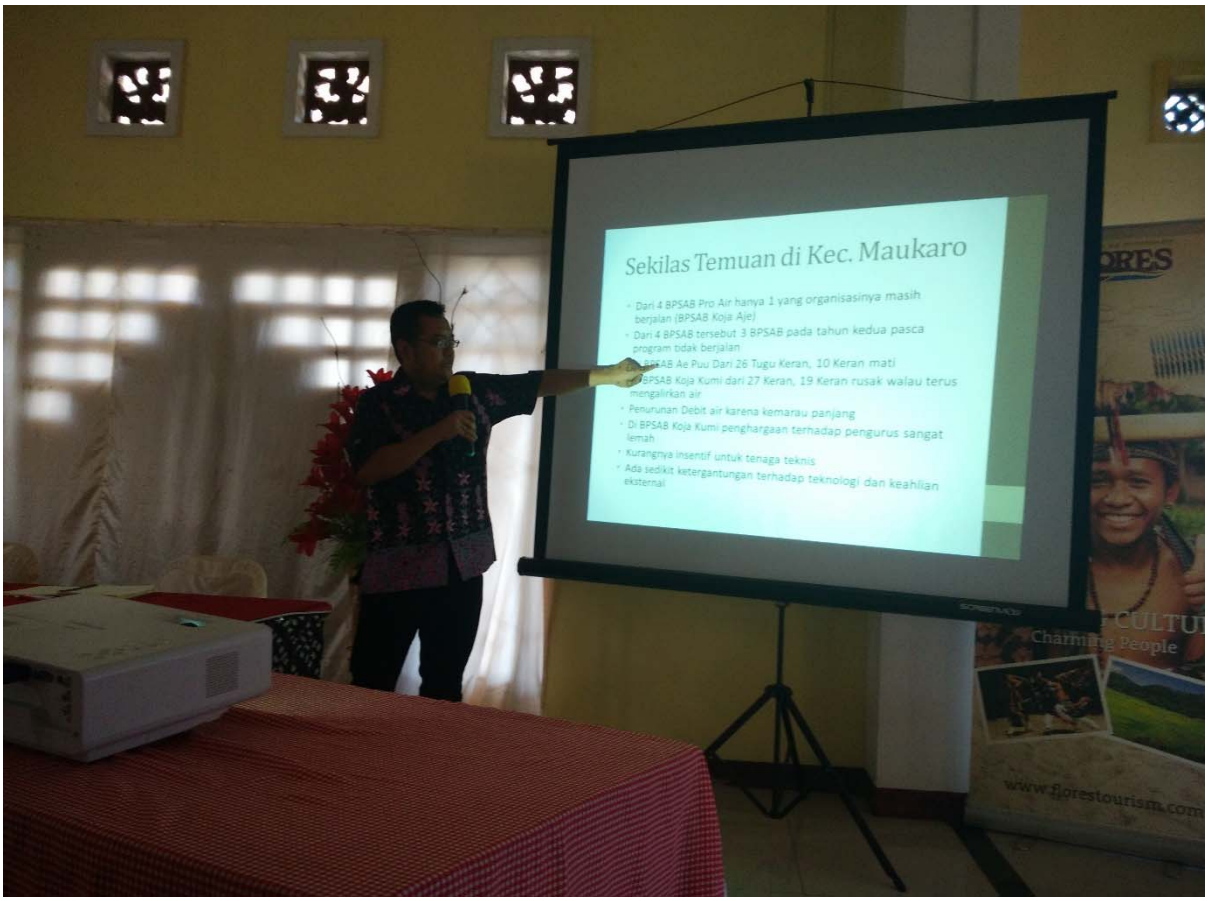
An Interview with member of BPSAB Koja Kumi


The office of the BPSAB Koja  Aje



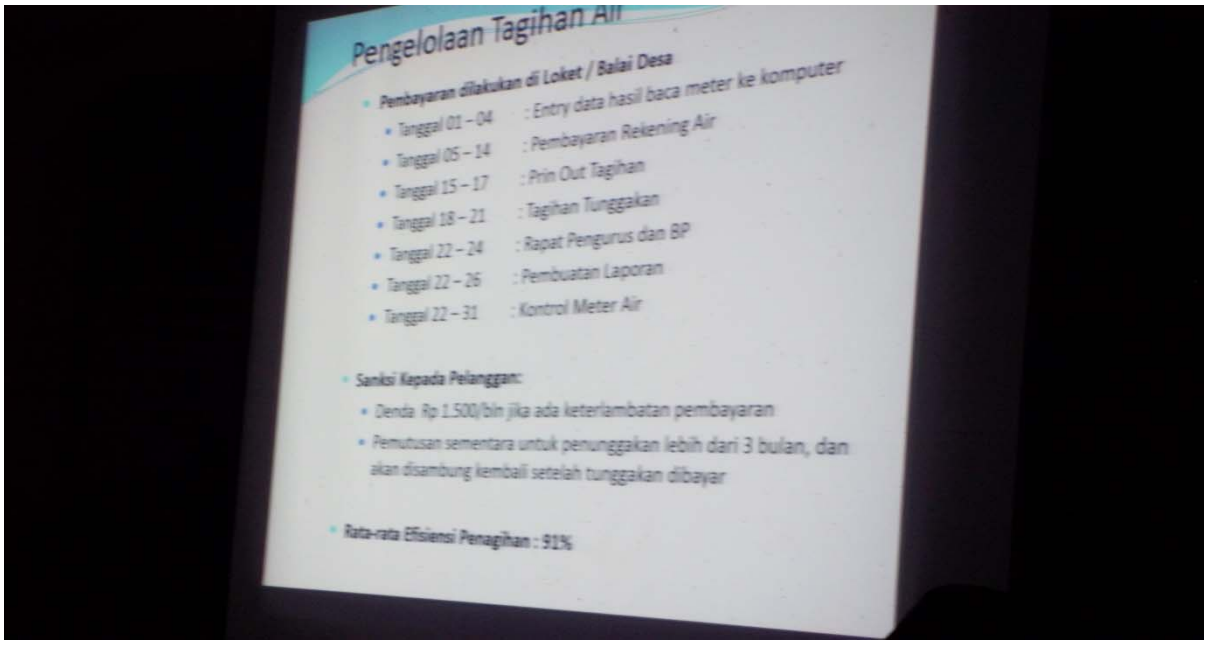

BPSAB Koja Aje is still using paper-based accounting system and bookkeeping by hand. They have not yet transitioned to a computer-based accounting system.

Interview and discussion with Petrus H Djata (Water and Environmental Working Group / Pokja AMPL) and Marselinus Wika (Head of HAKLI Ende).




Dr. Al Afghani gives an explaination regarding the condition of Maukaro District during the Focus Group Discussion which took place in CitaRasa Restaurant, Ende.


Focus Group Discussion at Cita Rasa Restaurant, Ende.




This slide shows how the water bill is being managed by HIPPAMS.

Panggeng Siswadi is handing over the squat toilet to one of the locals as a symbol of improved water and sanitation facilities in the village.

The payment counter from inside


The map displays consumer locations of HIPPAMS Tirto Agung, Desa Tlanak Kedungpring Lamongan.


Three signs from left to right: Pemberdayaan Kesejahteraan Keluarga/PKK (Empowerment Family Welfare), Himpunan Petani Pemakai Air/HIPPA (Farmer Waterusers Association), Himpunan Penduduk Pemakai Air Minum dan Sanitasi/HIPPAMS (Community Based Organization for Water and Sanitation).


HIPPAMS Tirto Agung's water tower.

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