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Subterranean waters and the 'curation' of underground histories in Timor Leste

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Abstract

This paper examines the historical dynamism of Timorese indigenous waterscapes in order to understand the ways in which local peoples 'curate' their regional histories. In the Baucau-Viqueque region of Timor Leste understandings of and interactions with subterranean waters, and the springs from where it emerges, are deeply embedded in the foundational organizing principles of local social, political and economic life. By taking up the idea of springs as an historical "archive" and drawing on regional oral narratives associated with water, migration, rice and irrigation, this paper argues that this localized meshwork (Ingold 2011) of water history functions to encode, communicate, mediate and negotiate historical contingencies and moral values as well as the ongoing possibilities of socio-political futures. In this landscape, springs form the knots that hold together these narrative histories, while their dynamic role as focal points for ritual activities reflects, keeps strong and enables new trans-generational and trans-spatial connections.

Introduction

Wittfogel (1957) most famously drew the link between ‘autocratic power and hydrological systems’ (Swyngedouw 2009: 59; cf. Banister 2014). Yet even within the regions from which Wittfogel’s ideas were developed, there are others who offer alternative, less autocratic understandings of past and present hydrosocial cycles (Lansing 2007, Palmer 2015). Elsewhere, by developing the idea of the ‘hydro-cosmological cycle’, Boelens’ has carried out an historical analysis of how ‘“metaphysics” links to [water] politics and power’ (2014: 245). By making a link between ancient indigenous water cultural systems and the subsequent appropriation and manipulation of these systems by imperial powers, Boelens ‘offers a tool to examine ancient and modern myths and discourses that attempt to normalize and subjugate actors to control by dominant groups in water society’ (2013: 245). In this paper I also examine the contingent historical dynamism of Timorese indigenous waterscapes. However, unlike Boelens, my aim is not to uncover subjugation (although it is most certainly there), but rather to understand the ways in which indigenous peoples themselves ‘curate’ regional histories through water worlds which simultaneously encode, communicate, mediate and negotiate the ever changing contingencies of local socio-political lifeworlds.

Emerging from the aftermath of 500 years of incipient Portuguese colonial negligence, plantation agriculture, forced labour and Catholic missionary zeal, the Democratic Republic of Timor Leste was declared on 28 November 1975. Within two weeks, given the tacit approval of the United States and Australia, the Indonesian military invaded the territory beginning a brutal and bloody occupation that was to cause the deaths of almost a third of the population (CAVR 2006). When finally accepting that its annexation was a failure, Indonesia withdrew from the territory under the international gaze in 1999. Meanwhile its military and their cronies looted and burnt all in their wake, leaving behind the half-island nation’s infrastructure and economy in ashes. As a result, an independent Timor-Leste faces complex social and economic challenges in rebuilding itself as a modern nation state. Its leaders remain focussed and determined to overcome a long history of conflict and adversity and build a prosperous economic future for their populace. This aspect of Timor’s history, and its people’s determination and resilience are well known. In contrast, the stories I retell in this paper are less well-known, yet arguably they are just as crucial to understanding Timor’s history as well as informing its nation building process (cf. McWilliam 2005).

In this paper I take up the 'fact' of people's connections with, and stories about springs and spring water, as an archive of local 'history', one which I plumb for insights into historical occurrences and future possibilities. While many historical accounts have been written about Timor, Hägerdal (2012) laments that the history of the island is destined to be written through recourse to the colonial record. Indeed it is the case that while he and others have produced intriguing accounts of the colonial encounter and its attendant history making on the island, largely absent from these accounts are the stories that are told and retold in particular contexts by local communities across Timor. Apart from the fact that these accounts are transmitted in oral form (and are extremely time consuming to collect and analyse), another reason for their absence from the historical record is their frequent preference for cyclical time and a preoccupation with identity, relationship and hierarchy (Schulte Nordholt 1971; cf. Hägerdal 2012: 10-13). Yet it is clear that within the recurring motifs of local narrative genres connected to springs, vibrant oral accounts of place and place making contain highly localised and nuanced interpretations of events recorded as well in Western historiography. While these ethnohistories are always partial and open to interpretation, so too are those histories which emanate from Western archival sources.

When I first began my concentrated investigation into the cultural significance and history of water use in the town of Baucau (located in the eastern half of the island, see Map 1), it became apparent that this locale, always on the periphery of colonial activity, was effectively a place 'without a history'. With little material available in either published or in written archival form, it was clear that I would need to rely on the oral record to compose this history. So began my long journey to seek out and build relationships with the locally renowned *lia na'in* ('custodians of the words') and *bee na'in* ('custodians of the water'), clan-based elders who carry the sacred responsibility to record and (as it turned out) negotiate these dynamic and largely clan-based narratives (and associated rituals) connected to water.

What transpired was a confusing and frustrating, but ever fascinating journey of revelation and non-disclosure. One which took me well beyond the boundaries of the town of Baucau and which ultimately produced a tantalising, but always imperfectly understood, story that no historiography from eastern Timor has so far been able to tell (Palmer 2015). As an 'historical' account of water and watery trails, the stories told traverse across the entire eastern half of Timor Leste and take in as well other islands in the eastern archipelago. In doing so they both reveal the significance of water and throw into relief enigmatic regional

migration patterns, as well as shed light on an eastern ritual-political domain which has long eluded discrete historical and anthropological inquiry. Carrying out interviews and participant observation in six local languages, the subsequent analysis of my data revealed a pattern of shared regional narrative genres. It became apparent that these mythic, richly coded and evocative 'water histories' would also give me access to previously undocumented *local* understandings of the pre-colonial and colonial transformation, along with the profound ways in which these are connected to local configurations of the hydro-social cycle. From these water based narratives, I gained critical insight into how the people of eastern Timor Leste shape and have shaped their lives and histories, their connection to place and how they encounter change, record and frame it in the contingent realities of their own local lifeworlds. That people's sense of themselves, the history of the region and the significance of water would be accessible through mythic narrative is perhaps no surprise. In many oral traditions, mythic narratives connected to visible 'nature' enable people to both experience and find connection to the past. What was surprising (at least for me) was that an investigation into the cultural significance of water would be so deeply entwined in *both* the revelation of regional histories and future possibilities.

Locating Water Histories

Located in the heart of the ancient contact and collision zone between the migrating pacific peoples of Melanesia and Austronesian seafarers from southern China, most inhabitants of the Baucau Viqueque zone speak one or more of the Makasae, Kawamina and Tetum languages. Meanwhile the physical geography of the Baucau Viqueque zone is equally hybrid. Divided in its central region by rugged forested hills and mountains splitting on either side into tracts of savannah and coastal areas replete with limestone terraces, caves, outcrops, sinkholes, depressions, springs, sub-surface drainage and sub-surface rivers of which, until recently, little was scientifically understood (Wallace *et al* 2012a; see Map 2).

In contrast to the ancient karst of the central mountainous zone, water flowing through the younger karst of the Baucau plateau and marine terrace zones on the north coast does so via a 'two phase flow system', one which is alternately diffuse and concentrated (Furness 2012). Connected to these latter processes are large springs which are potentially high yielding (Furness 2012: 3; see Map 2).While post-independence hydrogeological surveys (2010-2012) have produced much important information on this local hydrology, there has been little attempt to understand how karst water

flows through the landscape are configured in local cosmological and socio-ecological terms. Yet my own research, intensively carried out during roughly the same period, makes it clear that from a local perspective this entire karstic landscape forms a culturally and historically connected web of seepages and deep underground water pathways stretching from the central mountains, to the plateau, marine terrace zone and eventually to the sea.

Taking my lead from Gow's 2001 book *An Amazonian Myth and its History*, this paper engages with indigenous accounts of this landscape and the region's history as they are told through water-based narratives. In such tellings, water and springs are both the objects and subjects of history. The historical method for my re-telling begins in my own ethnographic data. It is my own interpretations of mythic modalities and accompanying historical vignettes and conundrums that have been woven together to produce a 'general account' (Gow 2001: 23). 'Only then', writes Gow, 'can the archive start to speak to us of what we hope to find there' (2001: 23).

Yet as will also become apparent, while general accounts of localized histories are possible, historical specificity in a Western sense is not. The narratives on which I rely are both contingent on history and on their specific retellings, which have an inherently transformative potential. The local retellings of these narratives (whether to me or others) occur in an ever shifting context which accords with what interests people, their own interpretation of the importance of changes they experience and the specificities of the audience at that moment (cf. Gow 2001: 312; Fox 1980; Traube 1989). Representing the past through 'a mix of history, memory and myth' these accounts are generative of place and relations over linear time (Attwood 2011: 177). In contrast to history's conception of a 'clean break' (Certeau 1986:4) between the past and the present, memory entangles the past with the present, it has presence (Attwood 2011: 178; cf. Chakrabaty 2011). So too, as we shall see, does myth. As Gow writes:

> myths are causaly related to history but, when threatened with historical events which would render them meaningless, they simply transform, in order to preserve themselves from such meaninglessness…In this reaction to a changing world, myths obliterate time [and] act to reset the temporal scale of the lived world [creating with it] new sets of meaningful connections to be explored and lived (2001: 285).

In this way, these myths are forever semantically re-interpreted to form the basis of dynamic relational actual worlds (Boucher 2013). They are also a 'way in' to investigating what the Timorese have long asserted: that water has its own agency, that it mediates relations across the landscape and forever re-casts people, place and power by entangling them all in a bewildering complex of sociality and exchange. Through these myths I show how indigenous water narrative genres are deployed to 'curate' regional history encoding, communicating, mediating and negotiating ever changing historical contingencies, moral values and the possibilities for socio-political futures (Appadurai 2013).

History, water and Indigenous ontologies

Across Timor Leste and across the eastern archipelago, indigenous ontologies or ways of being are largely based on an understanding of place as enlivened by an ancestral and nature spirit world (cf. Fox 1997, Hicks 2004, Trindade 2011, Reuter 2014). Families of particular lineages are organised around origin groups linked to the sacred hearths of particular sacred houses (known in the national language of Tetum as *uma lulik*). These are in turn connected to local spirit ecologies, many of which centre on water, which embed families and their sacred house complexes in intimate, intergenerational social, political and economic exchange relationships. It is within this 'house' based context that *lia na'in* ('custodians of the words') are given their sacred responsibilities to be the caretakers of 'domain' histories, to enable exchange with other 'houses' and to ensure ongoing communication and exchange with the ancestral world. Such processes, when verbalised in narrative form through invocatory speech or prayer, manifest as highly skilful recitations of verse in which the flow of words or blessing has been likened to the flow of water (Waterson 2012). This is perhaps no coincidence, for as Strang writes about indigenous relations with water more generally:

> metaphors of water, move freely across ecological, social, imaginative, and corporeal domains, bringing them together in a flow of human and environmental changes over time and space. It is equally clear that water and notions of flow are ways of conceptualizing time in cyclical terms, describing how collective human and non-human actions circulate into and out of the material world and, on an individual scale, portraying the nascence, progress, dissolution, and regeneration of individual lives (2013: 189-190).

If, as MacLeod writes, ideas are 'animated by the substance of the world' (MacLeod 2013: 48) then we might think of water as 'the ultimate medium for the conversations that continually create the world ... [a] substance [which] acts forever as a meeting place and medium' (2013: 49). Indeed, by communicating through water in myth and other 'literary' forms what is invoked is the significance of multi-generational 'relationships to time, to the past, to water and to one another' (2013: 57). Water is a carrier of matter, a dynamic flow which alternately congeals and separates particular agencies (cf. Barad 2003). Known as the 'universal solvent', wherever it flows 'it carries substances along with it' (Altman 2002:10). This analogy is particularly poignant in the Baucau Viqueque region of Timor, which like much of the rest of the island, is underlain by karst or limestone formations. In such environments the topography is formed chiefly by the dissolving of rock by water and complex and changing surface and subsurface water pathways are always in the process of ending or becoming. Earthly substances are always on the move.

In local configurations of the subterranean water world of the Baucau Viqueque region, this continual coming together and separation of matter enables relations to *both* flow through the landscape (literally) and to embed in place. Distinctive narrative genres which are used to recount particular water stories reflect this, and the world as a whole is interpreted as coming into being through a complex multi-dimensional and multi-temporal hydro-social cycle (Palmer 2015). In many narratives autochthonous people emerge from these subterranean waters, creating springs as they do. As people move in their migratory journeys across the landscape they are described as carrying with them these ancestral waters in bamboo containers. This 'origin' water is then later thrown on the ground, creating a new 'child' spring and, as it permeates watery pathways deep beneath the earth's subsurface, these flows ultimately enable a reconnection between people and their primeval springs. Conversely, other narrative genres tell of how people and/or other ancestral beings move through space via these subterranean watery pathways, emerging at particular springs and establishing new connections with the people living there.

Over the period of a decade or so, as I listened to these bewildering narratives of the multiple ways that people move through the landscape with water, I came to understand that it is subsurface water that carries with it and is inspirited by aspects of a sacred and animate cosmos. This water is the life nourishing milk and blood of the earth and a key medium of communication between the visible world of the living and invisible world of the ancestors. It is, in fact, the agency of water itself which enables this co-presence between the living and the dead. Emerging from springs into the light and radiance of the surface world, subterranean water carries with it, mediates and transforms the spiritual essence of both life and death. Springs, meanwhile, form the knots that hold together these narrative histories and act as ritual hubs that reflect, keep strong and enable dynamic trans-generational and trans-spatial connections. At a deep material, metaphysical and metaphorical level, history in this region is told through water.

Yet how through the lens of historiography might we approach these karstic narratives told via such rich metaphor, which are so implicated in understandings of multi-generational time, and which commit above all else to a deep sense of circularity? The anthropologist James Fox argues that all historiography 'must be concerned with relating certain structured events within some framework of time and place' (1980: 10). He writes that '[t]o be history, a narrative must establish a chronology and a location' (1980: 10). Drawing from narrative histories on Roti, an island to the west of Timor, he argues that local 'true tales' are those which are rooted in particular domains and which account 'for some feature of that domain's organization'(1980: 17). These 'true tales', he writes, are also related to other similar sorts of tales (1980: 17) However, he also contrasts these 'true tales', dynamic and contingent as they are, with tales divorced of specificity 'told for the telling itself', something he aligns with folk literature not folk history (1980: 25).

While leaving aside the matter of 'folk' terminology, it is broadly the case that both of these types of narrative are present in much of what follows. Many narratives as we will see revolve around accounts of knowledge of water and fire. While in their historical specificity these tales relate to actual named springs (*bee matan*), and the actual ancestral hearths (*ahi matan*) or sacred houses (*uma lulik*) connected to them, they also tell us stories of how the world came into being, of how people's lives developed in relation to others and the hold that these lives have over people across particular spans of generations. Hence alongside their historiography, these tales simultaneously express an ontology through which spring water is the autochthonous giver of life, enabling sets of relations which are considered to be the ultimate arbiter of truth. In addition, any search for cohesion and a general account of local histories through these watery narratives is always interceded by accounts of the agency of both water and fire, of life giving liquidity and the transformative radiance of house based hearths which are, in combination, forever recasting life and responding to historical contingency. And while the energetic materiality of this 'history' means that it forever overspills its form, this process 'is the very condition of emergence of distinctive, beheld and apprehended matters and sensibilities' (Anderson & Wiley 2009: 324). As Ingold (2011) proposes, it is through attention to these inter-related stories through which beings and things are 'alive' that we are able to transcend notions of unity and disunity, to see how 'paths converge and diverge, to form an ever extending reticulate meshwork…..the meshwork of storied knowledge' (Ingold 2011:168).

The emergence of the world

To begin my account of the content of some these narratives, I will relay a summary of the origin story told to me in Makasae by Major Ko'o Raku, a *lia na'in* ('custodian of the words') of the Bahu village in Baucau, a village which is comprised of both Makasae and Waima'a speakers. While Makasae originates from a Papuan or non-Austronesian language family, Waima'a is thought to be derived from a notionally Austronesian bloc termed by linguists Kawamina which comprises the Kairui, Waima'a, Midiki and Naueti languages. Both language groups (along with Tetum), are spoken across the region of this study and

while it is hypothesised that Makasae has a much longer presence on the island, it is possible that Kawamina languages are derived from even earlier alloglot languages (Hull 1998: 146).[1] This origin story, however, is of a time before languages, a time when everything in the world was water and the first lands of Timor emerged:

> In the beginning Timor was created by a foot sparring pair of brother and sister birds (M: *ketu*). Their sparring kicked back the sea and so created the first dry land in the form of three mountains: Ramelau, Cabalaki and Matebian [see Map 3]. Sometime later *Christu* [a term (along with *Maromak* or God) which is now used interchangeably with the term for the preeminent indigenous Moon-Sun deity (M:*Uru-Watu*; W: *L'ara Wulo*)] descends and creates from the mud a human figurine. *Christu* then [like the wind] breathes life into the figure and fashions another figure from its rib. He then announces he will return in seven days and orders the two people not to eat the forbidden fruit. Yet these two people listened instead to the python (M: *talibere*) and disobeyed the order. From this act they knew shame and hide their bodies under bark clothing. Later other people came from across the sea (Makasar) and showed them how to make *tais* (woven cloth). As their penance for eating the forbidden fruit, in order that they could have food to eat, they and their descendents were now destined to labor in fields growing rice and other crops. In order that he could help his older brother carry rice back from the fields, the younger brother of the first people secretly began transforming back and forth from person to horse. This act is known as *kuda resa* [M:'rice horse'] and it is from such [transformative] acts by the first ancestors that we came to know 'culture'. Today as descendents of these first people we continue to make offerings at large springs [the portals to the other world of deities and ancestors] in order to feed the spirits of the ancestors, imploring them to make the springs flow freely so that the people can live and grow their rice and other crops.

[1] In this and other Timorese multilingual settings the local preference is to highlight cultural inclusiveness and synergies, not linguistic differentiation (cf. Schapper 2011). Differentiation between groups, when asserted, is made on the basis of divisions between 'houses' and their customs ('*lisan*') not language. Although the Makasae language now dominates in the Baucau district, the names and origin histories of many Baucau sacred houses, along with place names themselves, suggest that in the past the Baucau region was dominated by the 'Kawamina' language group (cf. McWilliam 2007).

Despite its distinct Catholic inflection, what over time became evident to me from this narrative (told to me early in my fieldwork period) were clues to the connections between people, localities and spiritual ecologies stretching from the mountains to the sea. It was not until many years later that I was able to piece together the story's meanings and understand the transformative roles of its key protagonists, to see the connections and lay them out in a 'perspicuous' view (Wittgenstein's 1979: 9e).

While this narrative was told by a ritual leader from the north coastal zone, its central themes reverberate through the creation oriented myths of other communities who also tell stories of how they came to be, of why they continue to toil hard in their fields, to make their offerings to their ancestors and to continually confront treachery and trickery at the same time as they strive for a way of life that is respectful and prosperous. What is uncanny about all of these tellings, however, is how much of their content correlates with what we know, or think we know, from the archaeological and historical linguistic record. These scientific interpretations paint for us imperfect pictures of how it was people and their languages migrated through the islands of the archipelago and of how they collided, transformed and internally spread across the islands which they settled. Likewise in local narrative traditions we find accounts of people transforming from a solely hunter gatherer to a mixed hunting, gathering and sedentary agricultural existence, of the coming of 'culture' and laws, and of the ways in which outsiders have been installed and thus transformed the fabric of these worlds. The ways in which people negotiate and memorialise these momentous changes to their worlds and interactions with each other is there in all these water stories. Whilst, as ever, narrative unity and linear cohesion remains elusive, pieced together as 'intermediate connections' these stories can also offer a tantalising glimpse of an ever transforming world, one impossible to construe from the archives of history and science alone.

In many narratives found both at the mountains and the coast, we are often told about a first peoples, the progenitors of an origin clan of a particular locality, who emerged either out of the ground (usually via a spring) or moved into this 'uninhabited' locale through journey. Whether their 'emergence' is from a vertical or horizontal journey, we then learn much about how they subsequently negotiated their place in the world. As noted above, movement in most of these narratives is facilitated through or by spring water, a substance which connects the world of the living with that of the dead. Yet while in some stories people emerge together with water out of caves on mountain peaks, in other stories which will be discussed

below they emerge out of springs closer to the coast. What is also interesting is that in many of these narratives, those that emerged from the mountain peaks are said to have spread out from there to populate the world beyond, some even travelling across the seas, returning later with the heightened knowledge of fire and metals, water and wet rice production. While some of these ‘explorers’ returned to their original mountain and dry land rocky abodes, others are said to have returned to settle by the springs which are scattered across the north coastal marine terrace zone.[2]

These returning ‘rice growing people’ who first settled around Baucau’s marine terrace zone (see below) are significant for other reasons other than rice. They also brought with them the knowledge of metalwork. Oral histories recount stories of these peoples heating and beating metal in the fire, before combining it with mud and heating it again to beat into shape ornamental discs and swords. These prized objects were then exchanged with other local groups, eventually forming the basis of the local marriage exchange economy. As the industry emerged other people were increasingly drawn down from the mountains eager to engage in trade and participate in this emerging culture.

The origins of irrigated rice production

The extent to which this aquatically charged agricultural landscape evolved though co-produced networks of long-term human management and more-than-human engagement is evident in narratives relating to the origins of irrigated rice production. Both Waima’a and Makasae settlement histories of the north coastal zone record the arrival of people, usually brothers, from the central peaks of Matebian and Mundo Perdido (see Map 3). In the myth recounted by the people of the Waima’a village of Wani Uma [W: ‘house of the bees’] to the north-west of Baucau town, three named brothers descended from the mountains ‘in darkness’ down the river valleys toward the coast. When they reach the coast the youngest brother had an injured leg and could no longer continue. It is recounted that as it ‘was getting light’, he had neither the necessary strength nor speed to continue this journey. At a place

[2] Karst fed springs of the marine terrace zone combined with a pattern of denser vegetation and cave overhangs or ‘wave cut notches’ are also believed to be early inhabitation sites (Metzner 1977: 25; cf. Glover 1986). Glover has dated habitation sites in this area to 15,000 years BCE (Glover 1986).

called Buruma [W: ‘house of monkeys’] he heard the winged serpent crow, signaling to him this was the place he should settle. He did so and sent his elder brothers on their way.

Waima’a ritual verse (*loli*) from the village of Wani Uma records this event, although unusually it does so in Makasae:

Asa bui bere du’u	We male birds have come from the mountains
Kokoroe dana kokoroe	But the earth is already light
Nadani la’a do	You two go on to the rocks beyond
Afasika na Wasika na isi la’a	I am going to stay here.

Eventually the descendents of this man, in some accounts comprising a party of another three brothers, headed across the sea to settle on the island of Roma. Importantly, however, at unspecified intervals two of these brothers later made their way back to island Timor. One brother settled to the east of Wani Uma inland on the Laga coast beneath the Matebian range. This brother, who arrived at the house of Boleha, brought with him a particular breadfruit tree (*kulu kai*: ‘the seedless Kai breadfruit’). The other settled to the west of Wani Uma in a coastal zone near Bundura called Wai Wono. This man brought with him another kind of breadfruit tree (known as *kulu roma*: ‘the seeded Roma breadfruit’). Hence while both brothers symbolically shared the same trunk, the fruit of their respective branches was distinct. Oral histories recount that the branch which first settled with the Boleha house headed south up into the mountains of Matebian to a place called Baguia where they intermarried with the local clans. The descendents of these *kulu kai* people then descended from Matebian in waves. A Waima’a ritual poem (*loli*) records the arrival of these two waves of migration, referred to as the brothers of Kulu Roma and Kulu Kai:

Kokoroe Koe e	The male bird crows
Kokoroe koe la	The male bird crows
Ro mai-e – la dopa mai-e	The boats are coming
Kokoroe koe e	The male bird crows
Kokoroe koe la	The male bird crows
Roma mai-e la	The boat is coming from Roma [to the north]
Ro mai e	The boat is coming
La ro mai la teu Rai Malaku	Another boat comes from Malaku [to the north]

Tasi tuku tasi tena	These sons have been brought up across the sea
Iti ana watu rai tena	They come to plant breadfruit[3] and level the land (make paddy)
Kaiwetu kei aku resa kei	In separate hamlets and houses.

These first people to settle at the coast at Wai Mata Me were a brother and a sister and they commenced their settlement by creating, for the first time in the area, two rice paddies which were named Bui Laku Bui Liri. They also brought with them bamboo lengths filled with water and when they moved to their final settlement site at Mau Ba'i further along the coast they created (M. *saun*=planted) two springs known as Wai Mata Oli [W: large spring] and Wai Mata Me [W: small spring].

Meanwhile it was two ancestors whose names were Leki Roma and Loi Roma who brought with them to Wai Mata Me buffaloes of the same name. The buffalo wallowed in the mud and broke up the earth with their horns. From this act, springs were created and the water began to emerge. At Wai Mata Me a sacred house was built. From the spring at Wai Mata Oli the water was channeled to feed the new rice fields below in the coastal area of Mau Ba'i (where the practice of metalwork or *tuku besi* was first introduced). These fields were all named and once the water had been channeled all the way to Mau Ba'i, the owners of the buffalo (and custodians of the springs) sacrificed the animal as an offering to the ancestors of the springs.

The introduction of wet-rice production systems and metalwork that is recounted in these stories brings with it a radical transformation of life. Along with rice, irrigation and metalwork, these migrations and 'returns' brought with them knowledge of various objects which are, even today, central to marriage exchange relations in the region. From this original inter-island exchange of goods, subsequent generations in Timor have developed their own etiquette of marriage exchanges and respectful relations. Swords, buffalo and horses given in exchange for coral necklaces (*gaba*), woven cloth (*tais*), rice and pigs remain central to marriage exchange practices in this area of Baucau. So too does the blessing of these unions by way of the waters of particular house-based springs and annual sacrifices to the ancestors of these springs. In every way this is a world being brought into being and continually shaped

[3] The ecological record suggests that breadfruit originated in eastern Melanesia before colonising out across broader Oceania.

by the dynamic micro and macro forces of extra-regional movement and more than human communication.

The ritual and political power of Luca

The watery agency of this more-than-human landscape is also a powerful shaper of regional politics. To understand the importance of localized socio-political relations enabled through and with water, I now turn to a consideration of specific subterranean pathways which configure relations between groups in or across particular land zones in this region. These relational, dynamic and opaque watery pathways create a thoroughly material basis for engagements between people, ancestral spirits and place. They underpin the actual and metaphorical fluidity of movements which emanate through the multiple life giving qualities of spring water. In this way they also provide insight into Baucau's relationship with the enigmatic regional ritual-political domain of Luca (see Map 1), a place long at the heart of eastern Timor's customary polities and cosmologies.

During the start of my research period, it became apparent to me that across the eastern part of Timor Leste, Luca's central political and ritual power is continues to be encoded in myth and narrative connected to springs. It is important to stress the fact that the domain of Luca is as much a ritual-political concept or symbol as it is an actual political realm (Francillon 1967: 113). Schulte Nordolt (1971) for instance argues, in relation the better documented We Hali kingdom further to the west see Map 3), that that this relatively dynamic and open system of politico-ritual power was in fact held together by mythic accounts of the power of the centre (an immobile core of ritual power and skill (*matenek*)). It was the ensuing ritual connections of the immobile centre to surrounding emissary sub-kingdoms which held the domain together. While in eastern Timor the political importance of Luca has long since declined[4], its symbolic meanings and its encoding in ritual form remain present in many of the spring narratives which I collected. In these narratives it is Luca's power to communicate with and draw on the power of the sea (and through this its capacity to access the wealth of the underworld) which remains a recurring theme. Hence, as we will see below, as well as being

[4] Hägerdal (2012) refers to a number of historical sources which briefly mention the colonial significance and expansion of the kingdom of Luca suggesting it remained a significant kingdom into the nineteenth century.

a once expansionary and pre-eminent political presence in the region, by virtue of its power to communicate and hence domesticate the sea, Luca is powerful because it is considered the preeminent communicator with the ancestral world of the underworld (which is synonymous with the sea).

In contrast to the better known We Hali Kingdom, Luca's status and trajectory as an important eastern kingdom has long eluded historians (see Hagerdal 2012). While there are glimmers of its import in the colonial record, it is also apparent that the kingdom rose to the height of its power and ultimately fell during the time of the Portuguese colonial administration. Yet the oral history record makes it clear that Luca (or the mythical realm of Luca) was a kingdom of central importance in pre-colonial times (Spillett 1999). At whatever point it was that Luca's power expanded across the region, what is also clear from the oral history record that I collected is that Luca's expansion across the zone was responsible for the creation of particular springs and rich agricultural groves, leading eventually to critical developments in irrigated rice production and large population migrations from the Matebian ranges.

For example Waima'a and Kairui origin stories recount how in ancestral times people emerged out of springs ruling themselves, until later coming under the rule of Luca and finally intermarrying with incoming Makasae speakers. These stories record specific events relating to the coming of Luca, and demonstrate how the kingdom's presence in the region was enabled by the use of supernatural forces drawn from the underworld. The narratives of 'houses' connected to particular springs record how their ritual and political autonomy was overthrown at some point by the arrival of a ruler associated with the kingdom of Luca. In many cases this man was denied a requested marriage with a local woman, resulting in him returning to Luca (or one of its sub-kingdoms) to collect containers of powerful origin waters. Returning to the 'house' from which he had been shunned, he would then throw this water on the ground, triggering an eruption of subterranean waters and drowning the 'house' complex in its entirety.[5] In these spring narratives, Luca is characterized as seeking to control everything from the mountains to the sea. Yet as we see below, at some point in colonial history, Luca lost it foothold across the east and as its political influence retracted so too did

[5] I know of at least five similar stories from localities in the Baucau-Viqueque region (in Venilale, Cairiri, Ossu. Wailili, and Lacluta). The protagonist in such stories is always a son of Luca or connected to it through one of its subkingdoms, Vemasse and Vessoru (which are characterized in ritual verse as the buffalo horns of the Kingdom of Luca).

its water, flowing it is said back through underground channels to Luca. Despite this, Luca remains until the present a ‘big name’ in Baucau associated in water narratives and ritual verse with the movement of people, power over water and the development of lush spring groves (Palmer 2015). These mythic narratives continue to be invoked alongside ritual practices around water and in various multi-temporal and multi-generational ways carry ‘the past’ of Luca (and its symbolic role of communicating with the underworld to regulate the regional hydro-social cycle) firmly into the present.

Spring narratives and wet rice agriculture in the late Colonial period

In many of these narratives and associated ritual practices, water and the associated regional hydrosocial cycle are configured as key enablers of war and peacemaking. Distinctive regional narrative genres also record the ways in which the agency of water influenced relations in the colonial period. Many of these narratives centre on the accounts of rituals linked to wet-rice agriculture and chart the complex political fluidities of local livelihood practices across time and space.

Tracking these spring narratives allows us also to trace the ways in which irrigation practices evolved. In such narratives irrigated rice production practices and their associated ritual politics are simultaneously ways of encoding and communicating core moral values and of the mediating and negotiating the changing relations which embody them. While these processes were little understood by the Portuguese colonialists, every extant irrigated rice community had their own particular customs and ritual practices at their respective springs (although in the present era, this suite of exact practices are, like the narratives themselves, often locally contested (Palmer 2015)).

In Baucau town, the Bahu village’s Makasae speaking ‘custodian of the words’ Major Ko’o Raku provides an account of the development of a network of irrigation channels which stretch from the major town springs of Wai Lia and Wai Husu many kilometers down to the sea (see Map 4). He links this development to the arrival of three brothers from south of the central ranges of Matebian (an area once under the domain of Luca). The expansive irrigated fields created as a result of this migration eventually became the domain of various local hamlets and households with each new terraced field being named after the farmer who created the bunds (*kabubu*) of the fields. These

larger scale irrigation networks were said to have expanded the small scale irrigation channels established in much earlier times (see above).

In contrast, the Waima'a speaking peoples of Wani Uma own telling of development of Baucau's irrigation channels focuses on the arrival of (a differently named set of) three brothers from Luca and charts the beginning of the Bahu village's monopoly over the marine terrace zone's irrigation waters. Moreover, as the Kingdom of Luca's power eventually declined in the region, the colonial administrative rulers from Vemasse and Laleia increased their influence over the houses of Baucau. Three of Bahu's sacred houses received their political authority in the form of sacra (a *rota* or sceptre) from these new rulers. From this period the irrigation channels developed under the auspices of early twentieth century Portuguese colonialism.

During the early twentieth century, as the colonial presence in the town became entrenched, Baucau's sacred house complexes clustered around the springs of Wai Lia (see Map 4) were incrementally destroyed or moved elsewhere. The rice fields in the immediate vicinity of the Wai Lia spring also slowly disappeared replaced with government and church buildings, shops and roads. Yet in the late 1930s water-sharing and fertility seeking rituals at the Wai Lia spring were still vibrant events, comprising annual house-based rituals and the larger 'one in seven year' ceremonies involving villages from the wider region. Each dry season around August, ritual prayers and ceremonies would commence and continue for seven nights, feeding the spring's custodial spirit beings (manifest as large eels) and culminating in a celebration of song and dance involving groups of young men and women. After this the water would begin to flow. While Pinto Correia, the Administrator of Baucau in the 1930s, does not report specifically on these rituals, he does note that '[*l*]*ulic* [sacred] are the springs of Cai-Bada, of Baucau, of Uai-Líli, of Loi Dua and of Uai-Cana [Venilale], *lulic* are all the streams, the trees that sink their roots into them, and the eels that live in them' (1935: 63). He also notes that '[i]n the spring of Uai Tequi, of Bucoli…the custom persists to gift the eels who lives there, rice and grated coconut' (1935: 63). He reports that once in Baucau '[w]hen a European sergeant accidentally killed a *lulic* eel that lived in a well near the water fountain, a wave of terror spread among the *indígenas* (1935: 63-64).

During World War II these rituals were again impacted as the town was occupied by the Japanese and bombed by the Allies. Much of the town's population fled to the hills. While the rituals haltingly re-commenced in the post-war period, the subsequent Indonesian occupation (1975-1999) also severely disrupted the conduct of water-sharing and fertility

ceremonies at Baucau's regional springs. Armed conflict, death, the widespread burning of sacred houses, forced relocations and highly restricted population movements meant that relations between houses and communities across the region were now severely disrupted. Nonetheless, despite this long hiatus in once vibrant water rituals, it remains the case that these spring complexes are acknowledged centres of pre-eminent ancestral power (Palmer 2015).

The significance of water histories in an independent Timor Leste

When I first went to a liberated East Timor in the year 2000, the country was still recovering from the aftermath of the 1999 emergency and violent withdrawal of Indonesian troops. Yet from the ashes of this scorched earth retreat, new life was already emerging, literally out of the earth. In the country's second city, Baucau, a locally famous spring called Wai Lia had once more gushed forth feeding the town's depleted water supply and channeling irrigation waters to the terraced fields below. I was told that this spring, which had been near dry for many years, had spontaneously gushed forth as the Indonesian military departed the town, as though it too was celebrating a victory. While years later I was to hear many stories about this spring and its temperamental flow, there remained a constant refrain: The water had its own agency. It was also made clear to me that the agency of this spring was linked to this unlikely Timorese victory. Like other springs, it was said to have given spiritual assistance and power to the people in their resistance activities.

In the post-independence era as people embrace their freedom to reconstitute their ancestral traditions and invigorate relations among themselves, a 'renaissance' is occurring in the region in relation to a range of ritual resource regulatory practices, including water sharing and blessing rituals. This paper has shown how people's connection to their subterranean waters and flows is understood as integral to the ongoing configuration of human and more-than-human relations. I have been interested in the particular ways in which water's multi-temporal agency is activated (both liquefied and congealed) by interweaving with human and other more-than-human forms, flowing, cohering, and growing in knots embedded in a broader meshwork. At the human level, I showed how water narratives and ritual practices record, co-ordinate and enable the transformation of this meshwork though a particular understanding of multi-dimensional space-time.

Yet, as in the past, this renaissance is challenged in the independence era by other frameworks of resource relations. As the state works with international advisors to draft new national water laws

and policies (Jackson & Palmer 2012), local peoples are also drawn into processes which seek to define land, water and other resources through new systems of abstraction, legibility and value. Such multiple ways of enacting the world are, as always (Mol 1999), now being thrown together and (re)negotiated, 'cleaving' (Lavau 2013) together and apart with powerful discursive and practical effects. While some local customary practices may be recognized in these new and emerging bureaucratic and development initiatives, such recognition is routinely watered down and re-framed in the service of the state. Yet the discursive sidelining of these watery configurations and attachments to place does not mean that they go away. Rather the 'underground' relational economies which are activated by people's attention to densely woven spiritual ecologies of water are ongoing concerns across the length, breadth and depth of the Baucau-Viqueque region. As the new nation state of Timor Leste embraces an increasingly technocratic future, other more abidingly poetic practices of subterranean engagement will also continue to curate both the past and possible futures.

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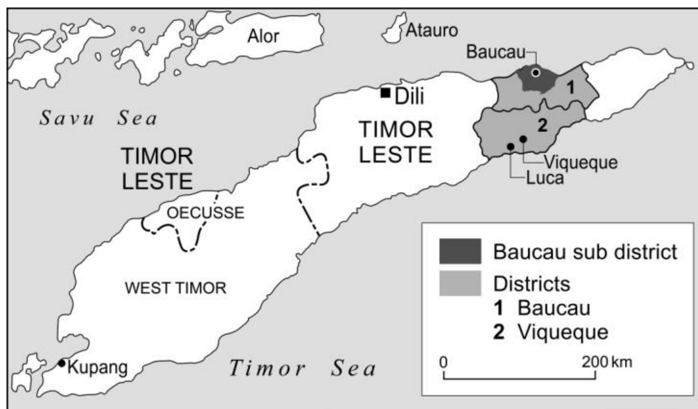
Map Captions

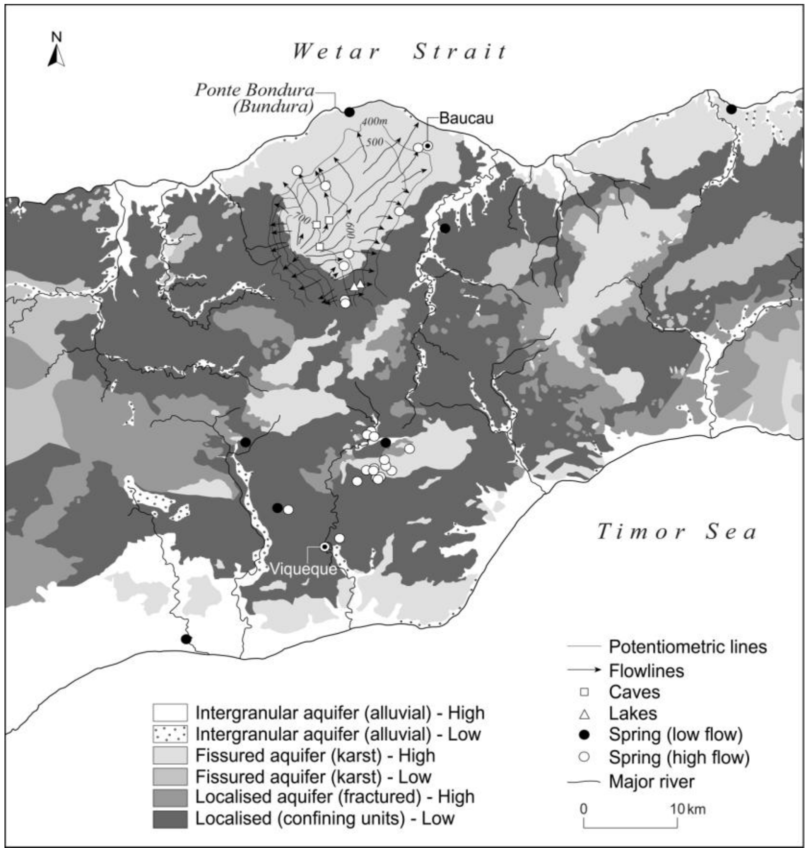
Map 1 Baucau Viqueque Zone of Timor Leste (copyright Chandra Jayasuriya)

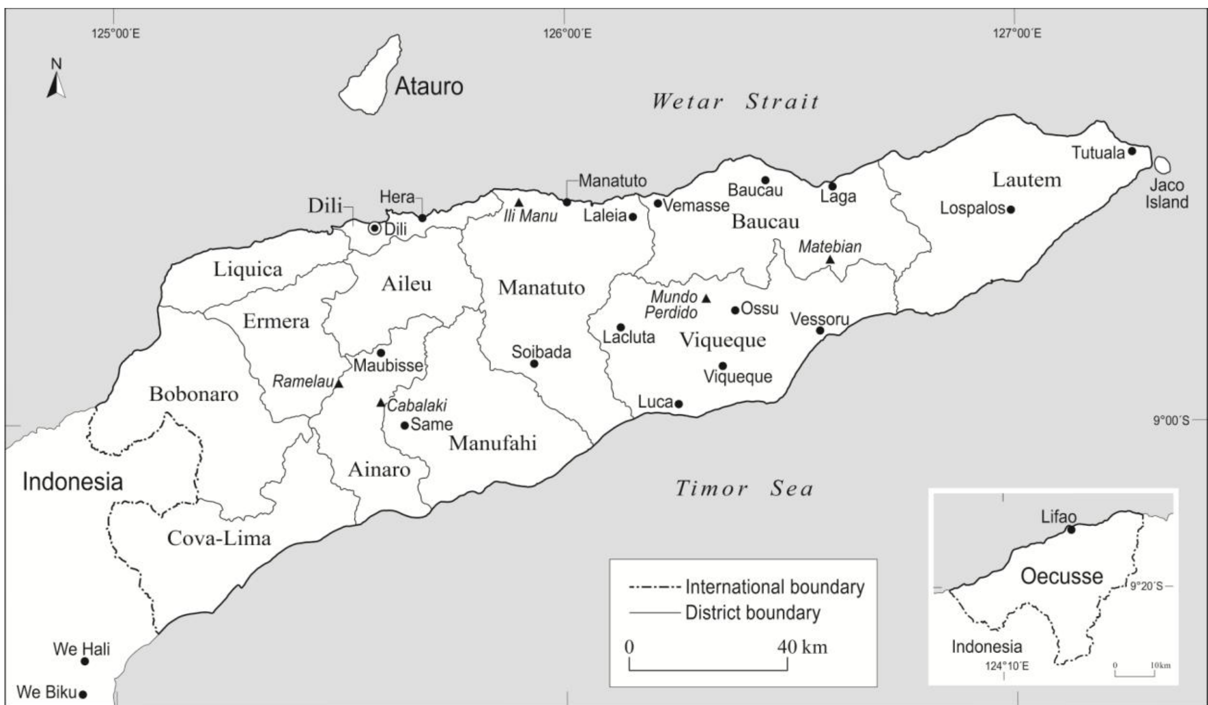
Map 2 Hydrogeology of the Baucau Viqueque Zone (copyright Chandra Jayasuriya, adapted from *The Hydrogeology of Timor Leste* map, copyright Geoscience Australia (Wallace et al 2012b))

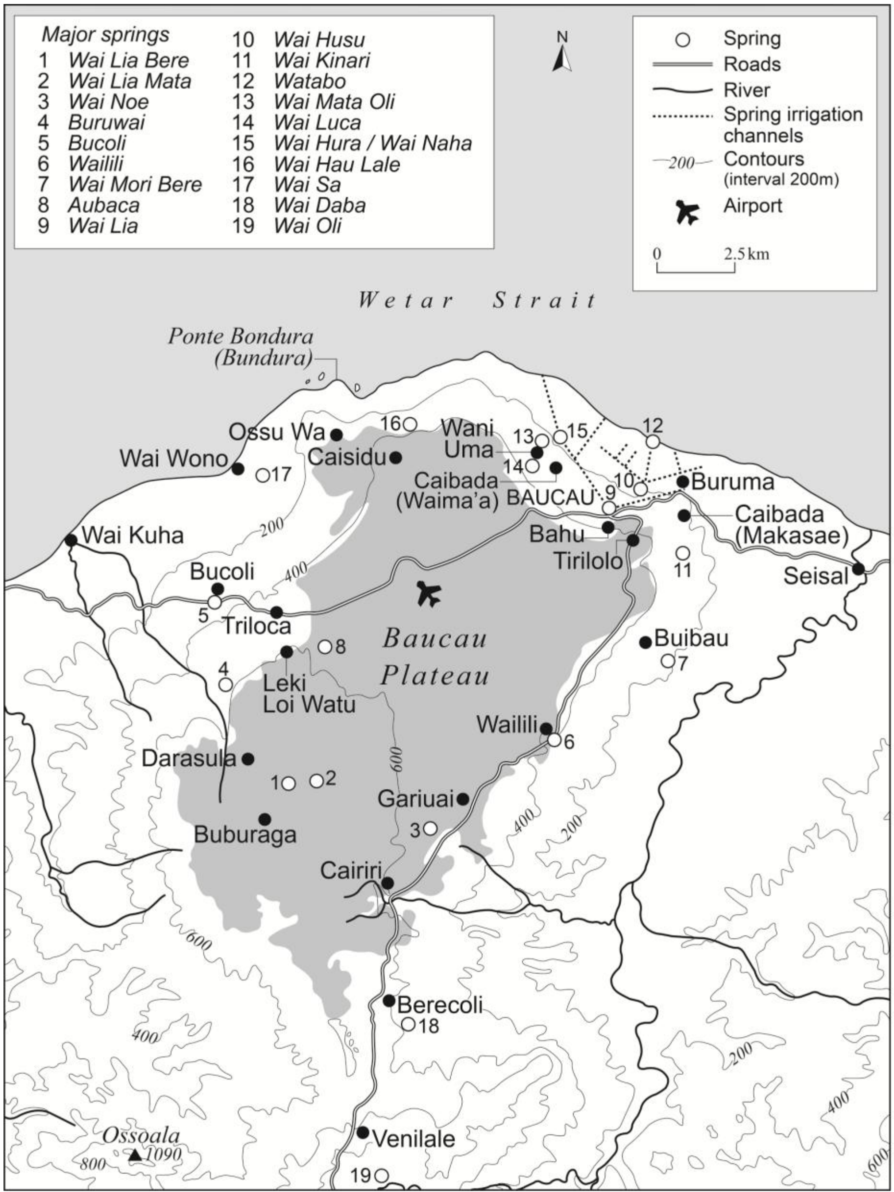
Map 3 Timor Leste district map (with key towns, mountains and other places from text) (copyright Chandra Jayasuriya)

Map 4 Baucau sub-district map (with key villages and springs from text) (copyright Chandra Jayasuriya)




Wetar Strait
Ponte Bondura
(Bundura)
Baucau
400m
500
600
700
Timor Sea
Viqueque
Potentiometric lines
Flowlines
Caves
Lakes
Spring (low flow)
Spring (high flow)
Major river
0
10 km
Intergranular aquifer (alluvial) - High
Intergranular aquifer (alluvial) - Low
Fissured aquifer (karst) - High
Fissured aquifer (karst) - Low
Localised aquifer (fractured) - High
Localised (confining units) - Low


125°00´E
126°00´E
127°00´E
Atauro
Wetar Strait
Tutuala
Jaco
Island
Lautem
Lospalos
Manatuto
Baucau
Laga
Dili
Hera
Dili
Ili Manu
Laleia
Vemasse
Baucau
Matebian
Liquica
Aileu
Manatuto
Mundo
Perdido
Ossu
Vessoru
Ermera
Lacluta
Viqueque
Soibada
Maubisse
Ramelau
Viqueque
Bobonaro
Cabalaki
Luca
Same
9°00´S
Manufahi
Indonesia
Ainaro
Timor Sea
Lifao
Oecusse
9°20´S
Cova-Lima
International boundary
District boundary
0
40 km
Indonesia
124°10´E
We Hali
We Biku



Major springs
1 Wai Lia Bere
2 Wai Lia Mata
3 Wai Noe
4 Buruwai
5 Bucoli
6 Wailili
7 Wai Mori Bere
8 Aubaca
9 Wai Lia
10 Wai Husu
11 Wai Kinari
12 Watabo
13 Wai Mata Oli
14 Wai Luca
15 Wai Hura / Wai Naha
16 Wai Hau Lale
17 Wai Sa
18 Wai Daba
19 Wai Oli
N
Spring
Roads
River
Spring irrigation channels
Contours (interval 200m)
Airport
0
2.5 km
Wetar Strait
Ponte Bondura (Bundura)
Ossu Wa
Caisidu
Wai Wono
Wani Uma
Caibada (Waima'a)
BAUCAU
Buruma
Caibada (Makasae)
Wai Kuha
Bahu
Tirilolo
Seisal
Bucoli
Triloca
Baucau Plateau
Buibau
Leki Loi Watu
Wailili
Darasula
Gariuai
Buburaga
Cairiri
Berecoli
Venilale
Ossoala
1090