

## *River Scapes, Estuaries, and State Formation in Southeast Asia*

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“In a figurative sense, civilization marches up and down the valley-section: all the great historic cultures, with the partial exception of those secluded maritime cultures in which the seas sometimes served instead of a river [like the Malay archipelago], have thriven through the movement of men and institutions and inventions and goods along the natural highway of a great river.” (Lewis Mumford)<sup>1</sup>

Forty years ago I visited Myanmar (Burma). At the time foreign visits were restricted to only seven days and subjected to draconic currency regulations. All this did not prevent me from enjoying Burma’s mesmerizing landscapes and the rare hospitality of its people. In particular the visit to Pagan was unforgettable owing to the serene beauty of the scenery with its countless stupas and temples but also because of a human tragedy. While cycling from temple to temple I met a lively, little boy who offered to illuminate with a pocket torch the dark interiors of the temples. Thus I cycled around the rest of the day with my little guide on the backseat of my bike. At night the owner of the hostel where I was staying told me that the boy’s father had drowned a few weeks earlier while fishing on the mighty Irrawaddy River. In other words the eight years old boy had given up school and was now gaining some extra income for the household by showing around tourists. After I had paid a visit to the widow that same evening, I met the next day with the boy’s schoolteacher to find out how I could be of some financial help to send the little guide to school again. Afterwards I walked over to the bank of the Irrawaddy and watched that enormous mass of water serenely sliding by. Hard to imagine that this seemingly peaceful stretch of water was a treacherous monster perhaps looking for yet other victims.

That spectacle caused a veritable historical sensation for me, evoking Hendrik Marsman’s famous poem about the rivers of my native country, which reads as follows :

‘Thinking of Holland, I see picture wide flowing rivers slowly meandering through infinite lowlands, rows of incredibly tall poplar trees, huge plumes that linger at the horizon; and

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<sup>1</sup> Lewis Mumford, *Technics and Civilisation*. New York: Hartcourt Brace 1930/1963. pp.60-61.

sunken in the enormous expanse farmsteads spread throughout the countryside. Groups of trees, villages, stumpy towers, churches, elm trees grouped all together in one magnificent composition. The sky is hanging low, and the sun is slowly smothered in grey mists and all around the voice of the water with its eternal disasters is feared and obeyed.’<sup>2</sup>

Watching that morning the mighty Irrawaddy, and on later occasions the crowded Chao Phraya in Bangkok if not the high embankments of the Red River in Vietnam, I realized that the same poem could have been written about these and many other river scapes of Southeast Asia.

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River systems constitute an important segment of the water cycle that feeds life on earth—from the evaporation of water above the ocean, to the drifting of clouds that drop their rain on the continents, where the precipitation turns again into little streams that combine in the countless rivers that empty into the sea. *Da hai na bai chuan* the ocean absorbs the hundred rivers, as the Chinese say.

More than two-thirds of the earth’s surface is covered by water, and less than one third consists of the continents, and again two thirds of the land ‘is arid, frigid, mountainous, or otherwise inhospitable to large human numbers.’ The greatest concentrations of humanity reside in ancient river basins whose fertile soils and ample drainage supported early populations since times immemorial.<sup>3</sup> Indeed more than eighty per cent of the world population lives in alluvial landscapes surrounding rivers; river basins are the arteries and veins of human civilization. Throughout the past, rivers, lakes, and man-made canals have been the most important avenues of transport: transport of foodstuffs, passengers or supplies of fundamental building materials such as timber, sand and bricks made of river clay. Rivers also are nurseries for fish, they provide water for consumption, for irrigation, and in some cases even energy. No wonder that many cities

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<sup>2</sup> Denkend aan Holland, zie ik brede rivieren traag door een oneindig laagland gaan, rijen oerindig ijle populieren aan de einder staan, en in de geweldige ruimte verzonken de boerderijen verspreid door het land, boomgroepen, dorpen, geknotte torens, kerken en olmen in een groot verband. De lucht hangt er lag en de zon wordt er in veelkleurige dampen gesmoord en overall wordt de stem van het water met zijn eeuwige rampen wordt gevreesd en gehoord.

<sup>3</sup> Harm de Blij, *Why Geography Matters; Three challenges facing America: Climate change, the rise of China, and global terrorism*, Oxford: Oxford University Press 2005. p. 97.

in the pre-modern world were built along the banks of rivers. Yet if river basins created favourable conditions for human settlement, ironically no part of our natural environment has been so manipulated, curbed, polluted and shackled by human intervention as rivers. Nonetheless rivers remain difficult to tame, and torrential rainfalls still occasionally turn them into monsters overflowing extensive areas of land.

Biologists, studying *lotic* or flowing water ecosystems, used to mainly focus on fishery biology, but recently their research has become much more holistic and focuses on watersheds in their entirety. That is to say, they picture them as one system from their source all the way to the sea. Out of this synthetic view the overarching so called *River Continuum Concept* (RCC) has emerged which views streams/rivers holistically as ecosystems and river scapes as whole basins or multiple basins.<sup>4</sup> Although my lecture is not concerned with the organisms living within the rivers or even *lotic* ecosystems as such, the biological approach hands us some epistemological concepts that may help us better understand the mutual interaction between man and river in temporal and spatial contexts.

For one it shows us that it makes sense to look at rivers from a wide perspective instead of focussing on irrigation, fishing, flood works and so on. As part of the River Continuum Concept it has been argued that communities of organisms occur in discrete patches along stream networks and can be found at any point along the general longitudinal gradient of the river scape. Furthermore biologists have ascertained that the junctions of the main rivers with their tributary rivers also contribute to the organization of specific biological communities. Here analogies may be drawn with riparian communities if we study them as more or less discrete congregations of people who are living along the length of the river and interacting with it. Here the interests of the biologists and historians overlap to some extent. Waterways have been shaped in the course of time by the varying interests, values and goals of their riparians: think of canalization, deepening or blocking off by barrages for irrigation or hydro electric purposes, but the riparian societies that depended on these fluvial systems have been configured in similar ways to the waterways. Historical river towns and the deltas in which they are situated should be discussed in terms of dialectical interaction between the dynamics of human agency and of the natural environment.

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<sup>4</sup> 'Entire fluvial systems are viewed as continuously integrated series of physical gradients and the adjustments in the associated biota.' K.W. Cummins, C.E. Cushing and G.W. Minshall, *River and Stream. Ecosystems of the World*. Berkeley: University of California Press 2006. p.1-2.

After the considerable uproar among historians in the 1950s created by Carl Wittfogel's controversial, Marxism inspired magnum opus, *Oriental Despotism*, in which he argued that the hydraulic-bureaucratic states of the past formed the fundamental template of the Asiatic Mode of Production, for several decades river society studies enjoyed little attention in the scholarly world.<sup>5</sup> Geographical narratives about rivers generally tend to be rather romantic stories about explorers who sail up and down rivers. There exists admittedly quite a corpus of adventurous fiction and non-fiction writing about the rivers of the globe, varying from Mark Twain's *Life on the Mississippi* to Joseph Conrad's *Into the Heart of Darkness*, a tale of the Congo river in Africa. Like mountains, rivers attract and challenge adventurers. While mountain climbers attempt to scale mountain tops, river wanderers prefer to ascend to the sources of the river or they drift in a canoe or a boat all the way down to the estuaries, and describe what and who they meet *en route*. Among the more entertaining books on Southeast Asia's rivers I just mention here Edward Gargan's, *The River's Tale. A Year on the Mekong*, Milton Osborne's *Mekong. Turbulent past, uncertain future* and Steve van Beek's 58-day voyage along the Chao Phraya, *Slithering South. 720 miles from the Golden Triangle to the Sea*.<sup>6</sup>

Yet the subject has gained scholarly attention in recent historical environmental and cultural studies on man and the natural environment such as *Something New under the Sun* by J.R. McNeill, and more specifically in David Blackbourn's *The Conquest of Nature: water, landscape and the making of modern Germany*, a superb history of the spatial ordering processes that have occurred over the past three centuries in Germany.<sup>7</sup> From studies like these, it becomes clear that more than any other ecosystems on earth, river scapes have provided all sorts of energy to the human societies that sought to harness them. If Jared Diamond in his well known study *Collapse* wrote of geographic factors which played a role in the disintegration of societies and thus showed the role of natural environment in the fate of human society, why would not it be possible to turn the argument around and show how natural environment may actually have led to

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<sup>5</sup> Karl A. Wittfogel, *Oriental Despotism. A Comparative Study of Total Power*. New Haven: Yale University Press 1957.

<sup>6</sup> Edward A. Gargan, *The River's Tale. A Year on the Mekong*. New York: Alfred Knopf (Vintage reprint 2003); Milton Osborne, *Mekong. Turbulent past, uncertain future*. Crows Nest NSW: Allen and Unwin 2000. Steve Van Beek, *Slithering South*. Hongkong: Wind and Water 2002.

<sup>7</sup> David Blackbourn, *The Conquest of Nature: Water, Landscape and the Making of Modern Germany*. New York: Norton 2006; J.R. McNeill, *Something New under the Sun. An environmental History of the Twentieth Century World*. New York: Norton 2000.

integration of societies?<sup>8</sup>

In the past I have compared two major river systems, those of Western Europe's Rhine River and its tributaries and the Yangzi watershed of eastern China, and have summed up some of the geographic factors that may help us explain why these river basins have been hotbeds of economic development over the past 700 hundred years. I suggested that in spite of totally different bureaucratic traditions, administrative constellations and infrastructural arrangements, both river scapes *owing to the early emergence of dense, interconnected urban clusters and to the regional and supra regional market networks that developed around them* have played prominent roles in the development of these key economic areas in pre-industrial and industrial times.<sup>9</sup>

Since 2016 historians from Fudan University and a couple of other Chinese Universities in and around the Yangzi delta have teamed up with a conglomerate of specialists from Holland, Belgium, Germany and France in a joint study program on the Rhine and Yangzi estuaries.

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In the framework of the present lecture series about Southeast Asia I have been invited to discuss the historical significance of the river scape in Southeast Asia society. Although in Southeast Asia the geographical and climatic conditions of Southeast Asia's rivers are very different from those of the Rhine and Lower Yangzi, one does not have to be a geographical determinist to acknowledge that rivers have played an instrumental, if not primordial role in the state formation processes in that tropical zone. Like the Nile, the Euphrates and the Tigris, the cradles of ancient civilizations of Egypt and Mesopotamia, the Irrawaddy, Menam Chao Phraya, Mekong and Red River, the main rivers of the Southeast Asian peninsula have given shape to the rice growing human societies that emerged in their basins.

Anybody who is even slightly aware of Southeast Asian society or history will have read or will have heard in passing about the very different types of rice cultivation that have been practiced in the river basins and on the watersheds of mountain ridges situated in between. On the

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<sup>8</sup> J. Diamond, *Collapse: How Societies Choose to Fail or Succeed*. New York: Viking 2005.

<sup>9</sup> See my website: <https://www.blusse.com>. 'Archipelagoes of River Towns: Medium Sized cities of the Lower Yangzi and the Rhine Region compared' in L.Blussé and Wang Zhenzhong eds, *A Comparative Reflection about the Yangtse River and the Rhine*. Shanghai, Zhongxi Book Company 2019: 324-333.

poor soils of the sparsely inhabited-, forest covered mountain ridges, only shifting cultivation ( so called *ladang* or swidden agriculture) is possible. In the river basins rice cultivation is practiced either by broadcasting seed on the flood plain or by transplanting seeds in well prepared and irrigated fields. Ironically the presence of rivers is so much taken for granted that few people have tried to generalize about the historical significance and function of these arteries. Even two recent collections of essays on Southeast Asian geography and the use of water, fail to devote a single chapter to the rivers as such.<sup>10</sup>

In today's talk I should like to explore and hypothesize to what extent the particular environmental circumstances of Southeast Asia's river scapes may have influenced historical developments, yes to what rivers may serve as a paradigm, as a *root* paradigm, for understanding specific socio-political aspects of traditional Southeast Asian society. By doing so I shall give special attention to the environmental factors and the strategies of political economy that on the mainland and in the Indonesian archipelago during the age of 'archaic globalization' gave birth to a succession of the large 'Indic' kingdoms along the major river corridors of the mainland and on the other hand to a host of Malay port principalities in the estuaries of the islands of the partially submerged Sunda plateau.<sup>11</sup> Arguing that four river basins on the mainland and the various estuaries of the rivers of the archipelago played a pivotal role in the formation of two discrete typologies of Southeast Asian polities, I shall sketch how these state formation processes developed over time until about 1800, when all of Southeast Asia, with the exception of Siam, progressively came under European colonial rule. Given the format of this lecture it will be impossible to deal with these river-based state formation processes in any detail. What I shall try to do, however, is to sketch how particular environmental situations have contributed to different types of state formation processes: a) the large river basin based kingdoms of mainland Southeast Asia and b) the estuary based port polities of the archipelago. In doing so I shall gladly avail myself of the writings of area specialists like Victor Lieberman, Anthony Reid, Barbara Andaya

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<sup>10</sup> Peter Boomgaard ed. *A World of Water. Rain, Rivers and Seas in Southeast Asian Histories*. Leiden: KITLV Press 2007; Paul Kratoska, Remco Raben, Henk Schulte Nordholt, *Locating Southeast Asia. Geographies of Knowledge and Politics of Space*. Singapore: NUS Press 2005.

<sup>11</sup> In the ice age some 15,000 years ago, when the surface of the sea was about 200 feet lower, these islands still were part of the mainland.

and others who each from different perspectives have tried to position Southeast Asia's past in a global context.<sup>12</sup>

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The geographical position of Southeast Asia is quite unique. Half peninsular and half insular it sits astride the equator and derives from this situation a tropical climate. Because the area is situated on the edge of the Eurasian continent to the northwest and borders on the Australian continent to the southeast, it is subjected the circulation of dry and wet seasonal spells of the monsoon. With the exception of the savannah climate in the interior the monsoon regime with its wet and dry seasons reigns over most of the area. The Southeast Asian subcontinent, is a so called 'shatter belt', a 'strategically positioned and oriented region', that is deeply internally divided and encompassed in the competition between great powers in the geostrategic areas and spheres. The Southeast Asian subcontinent is wedged in between the mountain chains of China in the north and India in the northwest, and plays host to a veritable mosaic of ethnicities and linguistic groups spread over the forested highlands and the river basins of the peninsular mainland, and a vast archipelago of a handful of very large and a multitude of very small islands. The majority of the ethnicities that are living nowadays in the subcontinent have moved in from elsewhere.

Over the past two millennia the rivers have served as conducts along which the Burmese and the Thais have moved southwards wiping out or dislocating the original populations of the river basins. The bulk of the populations of Myanmar, Thailand, Cambodia and Vietnam live clustered in the alluvial basins and deltas of the Irrawaddy, the Menam Chao Phraya, the Mekong and the Red River, which all stream from a river knot on the Tibetan plateau in southern direction. Throughout history the high north-south pointing mountain ridges have blocked cultural and economic contacts between these river valleys, and as a result the flood plains and deltas turned into distinct ethnic, political and economic units, with the populations of the river basins living in

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<sup>12</sup> In particular Barbara Andaya has in her magnificent study of the riverine sultanates Jambi and Palembang shown how the upper and lower stretches of the rivers of East Sumatra interacted and connected and continue to do so until the present day. Barbara Watson Andaya, *To Live as Brothers, Southeast Sumatra in the Seventeenth and Eighteenth Centuries*. Honolulu: Hawaii University Press 1993.

discrete patches, clusters or nuclei in the high, middle and lower reaches of the rivers rather than in contiguous concentrations.<sup>13</sup>

The Irrawaddy and the Salween cross in an almost parallel way Burma proper, but while the Irrawaddy is joined by various tributaries and serves as the cradle of Burmese civilization, the Salween is only navigable close to its mouth and therefore has not served as a transportation corridor or focus of settlement.<sup>14</sup> On their eastern flank, these rivers are shielded off by a high forested mountain ridge from the Chao Phraya river, which in an almost parallel direction traverses Thailand from the north to the south and plays host to Thai civilization. The third and largest river, the Mekong, also originates in the Tibetan highlands and marks the borders of Thailand and Laos before it cuts across Cambodia and empties into the South China Sea via the southern tip of Vietnam. During the rainy season the Mekong stores much of its water in the Tonle Sap, an enormous lake reservoir, which reduces the flood crests in the delta. In the dry season the flow reverses and the water returns in the Mekong. The plain surrounding the lake - twice the size of the Mekong delta - used to constitute the central region of the Angkor Empire.<sup>15</sup> Finally another mountain ridge to the east of the Mekong basin forms the watershed with the narrowing strip of land formed by coastal Vietnam. The Red river which flows out of China into North Vietnam, where it issues in the Gulf of Tonkin, is much shorter than the Irrawaddy, Chao Phraya and Mekong. Its basin is probably the most densely settled area in Southeast Asia.<sup>16</sup>

The Irrawaddy flows through a very long lowland, some 800 miles in length and creates together with the Sittang River a delta of some 40,000 square miles. The lowland of the Menam Chao Phraya in Thailand is 300 miles with a delta of about 26,000 square miles. The Mekong has an irregular lowland which covers together with its delta about 100,000 square miles, while the Red River in north Vietnam flows in a structural trench and only widens out toward its mouth in a delta covering some 5,400 square miles. These four river systems play host to the major population clusters of the Southeast Asian mainland.

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<sup>13</sup> Richard Joel Russell and Fred Bowerman Kiffen, *Culture Worlds*. New York: MacMillan 1951, p.465.

<sup>14</sup> James Penn, *Rivers of the World. A Social Geographical and Environmental Sourcebook*. Santa Barbara: ABC Clio 2001, p.240.

<sup>15</sup> George B. Cressey, *Asia's Lands and People*, New York: McGraw-Hill 1963, p. 296.

<sup>16</sup> The dense population pattern of the Red River reminds rather of that of China's large rivers than those of the other great rivers in Southeast Asia.

The settlement patterns of the populations of the insular world of the Philippines, Malaysia and Indonesia are spread in a rather different manner than those on the mainland. Traditionally speaking the highlands and the extended tropical forests areas of the low lands of Sumatra and Borneo with their large rivers, are relatively poorly inhabited with the exception of the port areas in the estuaries. In the ‘Pacific Rim of fire’, the chain of volcanic mountains that curve from Luzon in the north to Java in the south, dense populations are clustered on the rich volcanic plains. Volcanic Java with its fertile soil and well developed irrigation systems has been able to feed large population clusters and has provided just like the river basins of the mainland a perfect location for state formation, as the legendary empires of Majapahit and Angkor attest.

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#### *Continental Southeast Asia*

In his *Strange parallels* Victor Lieberman has sketched how over a period of a thousand years alternately in the upper, middle and lower reaches of the four mainland rivers processes of territorial consolidation, administrative centralization and cultural integration occurred in which the realms of the alluvial plains expanded over time and progressively subjugated the surrounding tribal populations of the highlands to their rule. He discerns the consecutive phases in which these ‘river based normative and inevitable unification processes’ occurred. He starts out with what he calls the ‘theocratic charter polities’ of Pagan, Angkor, Champa and Dai Viet that flourished in the river basins between 850 and 1300.<sup>17</sup> All these kingdoms were involved in water control and irrigation projects, the extensive use of labor services and the expansion of agricultural land. Owing to climatic factors as well as incursions by the Mongols and the Thai bands (between 1300 and the 1450) disorder and war led all over the region into the collapse of central authority and the sacking of the capitals.<sup>18</sup> But by the middle of the fifteenth century new centralizing polities came into being: The Toungoo dynasty vanquished the Mon kingdom based at Pegu in the lower reaches of the Irrawaddy and ended up reigning over the whole river basin, the adjoining highlands as well as part of the Malay peninsula; the kingdom of Ayudhya gained domination of the Chao Phraya basin, the Lao kingdom of Lansang gained control of the middle region of the Mekong and the Khmer kings of Cambodia abandoned Angkor and moved

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<sup>17</sup> *Ibidem*, Vol. 1: 210.

<sup>18</sup> Lieberman, *Strange parallels*. Vol 2: 17.

their capital to Phnompenh in the lower Mekong basin. Dai Viet in the north of Vietnam extended its sway territory into Champa in central Vietnam and pushed remnants of that kingdom towards the Mekong estuary where it survived for another century.

The middle of the 16<sup>th</sup> century witnessed after another period of unrest the establishment of the Restored Toungoo in Burma and the Ayudhya kingdom in Siam which both ruled until their demise in exhaustive internecine wars during the 1750s and 60s. Yet within a very short time dynastic rule was restored under the Kon-baung kings of Burma and the Chakri rulers of Siam who moved their capitals respectively to Amarapura (close to today's Mandalay) on the left bank of the Irrawaddy in central Burma, and from Ayudhya downstream to Bangkok. By 1824 the two empires had extended their authority to the entire peninsula: Burma enveloping Arakan and Assam, Siam stretching out its influence over Cambodia, Laos to the east and the Malay kingdoms to the south.<sup>19</sup> This last efflorescence of the great kingdoms of Southeast Asian subcontinent at the end of the eighteenth century, when the Nguyen dynasty concluded its 'march to the south' and Burma and Siam reached their largest dimensions, has been termed 'The Last Stand of Asian Autonomies.'<sup>20</sup>

The question now may be posed: "what did the early river based polities look like, how were they organized?" Here I am not interested in describing the Indian state models that were adopted all over Southeast Asia, but I should like to focus on the template of the organization and settlement patterns of Southeast Asian society. In search of a 'cultural matrix' for Southeast Asia's ethnic mosaic, Oliver Wolters has proposed the metaphor of the patchwork of *Mandalas*, circles of power, concentrated around rivaling strong men surrounded by tributaries. S.J. Tambiah has elaborated these ideas in the concept of 'galactic polity', showing how satellites (the tributaries) moved around a center of gravity, but in times of diminishing power at the center of one Mandala, might move over to the circle of another stronger rival. Under these conditions alliances often did not last longer than the reign of one powerful ruler.<sup>21</sup> The early Mandala states were clustered around the rivers, as Renée Hagesteijn has shown in her *Circles of Kings*. In fact she speaks of an almost constant process of clustering, declustering and reclusterings of

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<sup>19</sup> *Ibidem*, p.19-21.

<sup>20</sup> Anthony Reid, *The last Stand of Asian Autonomies. Responses tor Modernity in the Diverse States of Southeast Asia and Korea, 1750-1900*. London: MacMillan 1997.

<sup>21</sup> Consequently the galactic polity, - Lieberman prefers the term 'solar polity'- basically consisted of a realm based on hierarchical patron-client relationships: the king ruled the central capital zone, his relatives the outer shell of his territory, and the hereditary tributaries rule the satellites farther away.

political units in the early state of state formation.<sup>22</sup> Rather than based on clearly demarcated territories, the galactic states of Southeast Asia were based on the numbers of followers a riparian ruler could assemble around himself.

What then were the factors that contributed to settlement patterns and political centralization?

It has been suggested by Wittfogel that the management of river based societies with their irrigation schemes for agricultural purposes irrevocably led to a specific kind of state formation because of the bureaucratic structure that was needed. He suggested that irrigation was a 'unique cause of state formation'. On first sight this would seem to apply well to Southeast Asian society where periods of insufficient rain and excessive flooding every year, made some kind of water management necessary.

On closer observation it turns out, however, that the river basin populations were quite able to shoulder themselves such tasks at the communal village level. The large scale supervision of irrigation projects only played a role in the theocratic project of a strong ruler like the legendary Suryavarman II (1113-1145) of Angkor, who supervised the construction of the temples of Angkor Wat. Royal involvement in construction and irrigation works may have determined their scale, but the maintenance remained in the hands of the local institutions. According to Stargardt and Tanabe, both cited by Hagesteijn, farmers and court nobles had separate interests, with the farmers devoting themselves to agriculture, and the nobles focusing on transportation and the construction of large scale theocratic legitimation projects.

Irrigation for the cultivation of rice, i.e. moving water to the zone of the intended rice crop happened in various ways. The most natural method was the annual flooding by the swollen river of the plains during the rainy season. Farmers using this method, the so-called *seceding flood* agriculture, were active everywhere in the lower basin region. The Chinese author Zhou Daguan who visited Angkor in 1296 wrote: 'From the fourth to the ninth moon, it rains every day in the afternoons. The level of the water in the Great Lake (Tonle Sap) can then even rise seven to eight fathoms. ...The people who live beside the water all withdraw into the higher ground...Then from the tenth to the third moon not a drop of water falls. The great lake is then only navigable by small craft. In the deepest parts, there is only between three and five feet of water. The people then return. The farmers note when the rice is ripe and the places where the floods can reach at a

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<sup>22</sup> René Hagesteijn. *Circles of Kings*. KITLV Verhandelingen 138. Dordrecht: Foris Publications 1989. pp. 9-21.

particular time, and plant according to locality' ...<sup>23</sup> This description dovetails with the observations of Justus Schouten who in his *Description of Siam* of 1636 noticed that the Chao Phraya 'was flowing once a year so high that it covered most part of the Country, making it incredibly fruitful [ of rice] and destroying by this inundation (which continues four or five months) all obnoxious vermin and creatures.'<sup>24</sup>

Two types of man designed irrigation systems aiming at regulating the water supply were created: a) the central bureaucracy managed *hydraulic agriculture* method which took care of protective (flood) works as well as productive (irrigation) – here we think of Wittfogel's model - and b) the community based *hydro-agriculture* type of irrigation which only focuses on irrigation.<sup>25</sup>

There can be no doubt that for the labor intensive rice agriculture and irrigation linked work, the mobilisation of large labor forces was needed, and this demand of labor was a major cause of concern for pre modern rulers in Southeast Asia. On the other hand the bounty harvests of rice cultivation provided the potential to feed large numbers of people, and if necessary bonded labor. Once regional political structures turned into supra-regional systems, such as in Ayudhya and Pagan, warfare was often turned into a tool to increase production power: 'thousands of captives were marched back home by the victorious armies of Burma and Siam'.<sup>26</sup>

If hunting for manpower was cited as a *casus belli* in pre-modern Southeast Asia, the development of external trade has been cited as another factor in the centralization process. This certainly was the case of the port principalities of the archipelago that we shall soon turn to. International trade constituted their *raison vivre*.<sup>27</sup> Yet in the case of the river based realms I would suggest that internal exchange in the river basins (and the surrounding highlands) was the trigger that set off centralizing tendencies rather than overseas trade.

As already stated, considering the point that this lecture proposes to show how the river basins provided the ideal habitat for the pre-modern populations of Southeast Asia to engage in

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<sup>23</sup> Zhou Dagan, *The Customs of Cambodia*. (Edited and translated from the French by Michael Smithies). Bangkok: The Siam Society 2001. p. 55.

<sup>24</sup> C.R. Boxer, *A True Description of the Mighty Kingdoms of Japan & Siam by Caron and Schouten*. Amsterdam: N. Israel 1971. p.96.

<sup>25</sup> Robert C. Hunt, 'Irrigation' in Peter Boomgaard ed. *A World of Water. Rain, Rivers and Seas in Southeast Asian Histories*. Leiden: KITLV Press 2007. p. 188-89.

<sup>26</sup> Anthony Reid, *Southeast Asia in the Age of Commerce 1450-1680*. New Haven: Yale University Press . 1988, p. 17. Hagesteijn, *Circles of Kings*, p. 57-60.

<sup>27</sup> It also was the case in the kingdom of Ayudhya where the ruler of this extended river based agricultural region also was able to monopolize the revenues of the trading activities at his capital close to the sea.

state formation it makes little sense here to embark a further exposé on the Indianized models of organizational structure that characterized as well the Pagan, Ayudhya or Angkor kingdoms. Suffice to say that the fertile river basins not only provided the opportunity to engage in rice cultivation but also offered unique means of transportation to extend and establish their rule over large distances on a more permanent basis. What started out as short term polities ended up into ever consolidating, centralizing and integrating statehoods.

### *Island Southeast Asia*

Let us now turn to the archipelago and see to what extent rivers and estuaries played a role in the formation of the Malay polities of the island world. Here we are not concerned with the Hindu-Buddhist agrarian kingdom of Majapahit (1293-1520) and its Islamic successor state Mataram (1613-1756), concentric Mandalas of central Java which derived their existence from the rich volcanic soil where they germinated. Rivers did play a useful role in those kingdoms for transport to and fro the coast, but did not explain for the settlement pattern and the power structure of these kingdoms. First of all a word of caution about the term Malay if one talks about Malay state formation processes,. Here ‘Malay’ will not be used as a discrete term for the Malay people as such, but in the sense of the loosely configured ‘Malay world’ of the Austro-Malay speaking people.<sup>28</sup>

There is now a broad consensus based on archeological and linguistic evidence that, just like the Burmans and Thais moved into the Southeast Asian mainland from China, the proto-Malays started trickling down from Taiwan (and probably earlier from the Chinese mainland) into the Indonesian archipelago starting from 2,000 BC and that the homeland of the Malayic speakers should be sought in Borneo. A distinct Melayu culture began to emerge in the estuaries of the great rivers of southeast Sumatra around the beginning of the Christian era. From there the Malays have fanned out all over the archipelago over the past two millennia. The name ‘Melayu’ first appears in Chinese sources in connection with the Buddhist Kingdom of Srivijaya which by the end of the seventh century had grown into a full blown maritime power that controlled the strategic area around the Strait of Melaka which acted as a corridor for all the shipping between the Indian Ocean and the South China Sea. There still is some debate about the

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<sup>28</sup> For discussion of Malayness see the interesting collection of essays edited by Timothy P. Barnard, *Contesting Malayness, Malay Identity across Boundaries*. Singapore: Singapore University Press 2004.

actual position of Srivijaya but it now seems to be generally agreed that this polity must have been situated in the neighborhood of today's Palembang in the estuary of the Musi River of South Sumatra.

The Malay *kerajaan* or principalities which sprang up all over the Indonesian archipelago were for the larger part established in the estuaries of rivers which gave access to the hinterlands, production sites of forest products and cultivated spices like pepper. The emergence of these port principalities throughout the Indonesian archipelago was closely connected with the collection of products from the tropical forests for export to China and later the world at large. Janet Abu Lughod has described in detail how in the beginning of the thirteenth century an intercontinental trade network if not 'the first global economy' took shape in the Indian Ocean.<sup>29</sup> The trade in precious spices took an eminent position in what has been called the first World System. In the eastern extremity of the Indonesian archipelago the tiny kingdoms of Tidore and Ternate, soon grew into regional powers on account of the productions of cloves for which they had to amass large production forces of bonded labor. They did so by organizing (often with the help of their tributaries) maritime raids against the surrounding islands but for their trade relations with the outer world they remained dependent on Malay and Javanese traders, until these were pushed out by the Portuguese and later Dutch newcomers.<sup>30</sup>

For reasons of clarity let us mainly focus on two types of polity: ports situated at a very strategic location where they acted as entrepots for long distance shipping passing through sea straits, or port settlements situated in the estuary of a large river controlling all the in- and out going traffic of that river. The Sultanate of Melaka was the prototype of the first type, while Jambi and Palembang situated in the estuaries of the Batang Hari and Musi rivers, were fine examples of the second type.

The typical Malay harbor principality was usually situated in a river estuary, providing an entrepot for foreign merchants coming to purchase commodities brought from up-river. Care was taken to situate the settlement not too close to the sea in order to avoid surprise raids by pirates or rival rulers. The up and downstream river traffic connecting the coast with the settlements of the tribal people of the hinterland was closely controlled by the Raja, who specifically had the

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<sup>30</sup> How such raids were organized with help of Papua tributaries is well described in Muridan Widjojo, *The Revolt of Prince Nuku, Cross-cultural Alliance making in Maluku, c. 1780-1810*. Leiden: Brill 2008

monopoly on the sale of salt, an item that those living inland could not do without. Barbara Andaya in her captivating study of the rivaling sultanates of Jambi and Palembang has thrown new light on the relationship between the *ilir* (downstream) and *ulur* (upstream). Curiously in this particular case those living upstream – the pepper cultivating people of the Minangkabau – were commercially speaking *not* at the mercy of these coastal sultanates. When they deemed that the down river bids for the pepper were too low, they simply shipped the pepper via a river on the other, western side of the island to the port of Padang where they could obtain a better price. State formation was in this case closely connected with the handling and taxation of of im- and export products. In this patriarchic ‘riverine’ state, or *kerajaan*, all power was in the hands of a Muslim ruler, ideally a ‘big man’ with attributes of supernatural power.<sup>31</sup> The *Raja* was assisted by a number of ministers to exercise power of government, to conduct external relations, and to provide leadership in wars. In a society in which large segments of followers often walked out on one ruler to join another, wealth could be accumulated through trade or through piracy or loot, *merampas*. Like Homer's ancient Achaeans, the Malays traditionally drew little distinction between trade and loot. As a result, the concern of the ruler was not necessarily with trade but with wealth in political terms. Wealth enabled the Raja to gather more attendants around himself and thus to enlarge his personal following. Such occasional war like raids or outings were not without personal risk for the rulers who were supposed to show their personal bravery as men with ‘soul stuff’ in the campaigns. When in 1595 the Dutch merchants arrived in the Javanese *kerajaan* of Banten, an important entrepot on west Java where traders from the India and China met, they were told that only a few days earlier the young sultan of Banten had been killed during a raid in nearby Sumatra.

The demographic character of the traditional Malay polity was of a fleeting and unsteady nature as unsatisfied followers of a Raja might vote with their feet: they could run away and join a rival raja if they no longer agreed or felt comfortable with their ruler’s behavior or policies. The Raja's main concern was therefore how to attract a large following of retainers and how to keep these in line. This was not just a theoretical concern as A. C. Milner shows citing the case of the highly frustrated Sultan of Perak on the Malay Peninsula, who in 1816 complained that 80 percent of his people had fled to a neighboring ruler.<sup>32</sup> Observing that by the end of the

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<sup>31</sup> Wolters, O. W. *History, culture, and region in Southeast Asian perspectives*, rev. ed. Ithaca, N.Y. : Southeast Asia Program Publications, Cornell University, 1999.

<sup>32</sup> A.C. Milner, *Kerajaan: Malay Political Culture on the Eve of Colonial Rule*, Tucson, 1982, p. 7.

seventeenth century Dutch hegemony in the archipelago had clipped the wings of the erstwhile powerful polities of Makassar and Banten Anthony Reid in his magnum opus *Southeast Asia in the Age of Commerce* Anthony Reid dates the high time of the Malay kerajaan in the long sixteenth century of 1450-1680. Recent studies by Milner, Trocki and Warren show that this may have been too pessimistic a view.<sup>33</sup> Malay polities continued to show much survival power right into the nineteenth century, with Sulu and its far reaching raiding expeditions throughout the archipelago as the most extreme representative of the power wielding port principality.

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In this lecture which , owing to limitation of time has to be sketchy , I have shown how distinct state formation processes in mainland and island Southeast Asia were inextricably connected with the river habitat. Without wishing to sound as a geographic determinist, I would like to suggest that rivers as organisms acted like catalyzers for those riparians who were willing to use and interact with the opportunities that were offered by river basins and estuaries respectively in mainland and island Southeast Asia. In the great alluvial plains surrounded by highlands the Irrawaddy, the Chao Phraya and the Mekong and their tributaries provided the necessary irrigation facilities for rice cultivation and acted as the main avenues of communication. They thus enabled the formation of strong inland states. In the maritime regions of the archipelago where supra-regional trade reigned paramount it was up to those who gained control of the estuaries to impose their will on those residing in the less commercially privileged interior zones of the tropical islands. Because both on the mainland and in the archipelago, rivers, in interaction with human agency, served as agents, providers of energy and resources they may indeed be called driving forces in the history of Southeast Asia.

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<sup>33</sup> Carl Trocki, *Prince of Pirates: The Temenggongs and the Development of Johor and Singapore 1784-1885*. Singapore : Singapore University Press 1979. Jammers F. Warren, 'A Tale of two centuries. The globalisation of maritime raiding and piracy in Southeast Asia at the end of the eighteenth and twentieth centuries.' in Boomgaard, *A World of Water*.pp. 125-152.