Gender, livelihoods and environment are powerful prisms with which to view and unpack processes of development in Southeast Asia. Changes in people’s lives and their identities are in part defined through the resources they use for daily living and livelihoods, and further mediated by their unequal gender, class and ethnic differences in society. Wider political and economic drivers also shape development and change in people’s lives, which may create paths of well-being, or place them at greater disadvantage. More intense and frequent exposure to climate and disaster risks, meanwhile, make life generally more difficult, as this impinges on an already long list of uncertainty factors that characterize vulnerable living for poor women and men in the region.

Feminist political ecology (FPE) emerged out of a concern for social equity and social justice issues in environmental change, and draws from the intrinsic political character of feminist theory: power and difference. FPE offers a multi-scalar analysis of gendered rights and responsibilities, knowledge production and, more pointedly, the workings of power and politics in the use, access and distribution of resources in the context of contemporary neoliberal economic growth trajectories in Southeast Asia.

Through an FPE lens, this chapter will aim to discuss and explain people’s experiences of two related but often treated as distinct drivers of development and change in Southeast Asia today: large-scale development investments, and climate change and disasters. The sections below will briefly discuss political ecology and its sub-field feminist political ecology, to be followed by a mix of original and secondary case studies conducted in parts of the region.

The view from feminist political ecology

No genealogical discussion of feminist political ecology is ever complete without meandering momentarily into political ecology itself, like a river artery to its source. Political ecology has fundamentally argued that environmental degradation is not an ‘unfortunate accident’ under advanced capitalism, but instead a part of the logic of that economic system, a consistent symptom of various logics and trajectories of accumulation (Peet et al. 2011, 26). Political ecology not only addresses degradation, but also current neoliberal efforts to ‘green’ the economy, governance and environment through conservation, clean technologies, carbon trade and offsets, and technomanagerial approaches to climate change mitigation and adaptation (Taylor 2014; Peet et al. 2011).
Like political ecology, the core defining feature of FPE is its critical positioning toward political economic drivers that appropriate resources and heighten people’s gendered and social risks to development-induced disasters. In the landmark 1996 publication of *Feminist Political Ecology: Global Issues and Local Experiences*, Rocheleau, Thomas-Slayter and Wangari (1996, 4) described FPE as a sub-field of political ecology that recognizes gender as power relations that are a “critical variable in shaping resource access and control interacting with class, caste, race, culture, and ethnicity to shape processes of ecological change.” FPE is a living, evolving platform of ideas that draws from the rich history of feminist theory. From its inception in the 1990s, when it aimed to highlight the materiality of women’s political struggles around resources and rights (Moeckli and Braun 2001), FPE has of late shown strong poststructuralist leanings that question received wisdoms on the production of gender and other social identities. It also brings the staunchly critical reading of the workings of power – neoliberal, androcentric and environmental injustices – to constantly new levels of analyses, instilling a fresh advocacy for sustainable development (Buechler and Hanson 2015; Harcourt and Nelson 2015; Leach 2015; Rocheleau and Nirmal 2015; Elmhirst 2011; Hawkins and Ojeda 2011; Nightingale 2006; Harris 2006). More than 20 years after the publication of *Feminist Political Ecology*, Rocheleau (2015, 57) tells us that:

FPE is more about a feminist perspective and an ongoing exploration and construction of a network of learners than a fixed approach for a single focus on women and/or gender. This constant circulation of theory, practice, policies and politics, and the mixing of various combinations of gender, class, race, ethnicity, sexuality, religion, ontologies and ecologies, with critique of colonial legacies and neoliberal designs, has characterized many feminist political ecologists. It is a work in process.

The intensification of environmental degradation and climate change (non-renewable energy markets and fossil fuel dependence, deforestation, desertification and urbanization in massive scales) has led to more risks to lives and livelihoods. In turn, solutions to mitigate these stresses – such as the emergence of the green economy (carbon trade, conservation enclosures, bio-energy development, payment for ecosystem services or PES) – pose difficult questions regarding trade-offs between environmental sustainability and social well-being. In these emerging contexts, FPE focuses on complex dimensions of gendered and social experiences of loss, disadvantage, dispossession and displacement within the multiple ecologies that human beings are intrinsically part of. This focus on multi-dimensional experiences marks out FPE’s concern for first, an intersectional analysis on society-environment relations that does not disentangle gender from race, ethnicity, class and disability and other social categories. Second, FPE also recognizes the importance of conducting ‘science from below’ or examines people’s embodied experiences of resource degradation, disasters, mobility and displacements, or dispossession as these connect with other scales of power and decision-making (Harding 2008; Hanson 2015). And third, FPE also interrogates knowledge production, governance and policy making, as they herald new forms of intervention and environmental governance that may be inflected with assumptions that deepen differentiated and unjust life opportunities and exclusions. Some of these principles will be applied to contexts of development and climate change in the next sections.

**Investment, dispossession, and clean and green investments**

The Dawei Special Economic Zone lies on a large swathe of borderland between Thailand and Myanmar, occupying former agricultural lands of rice farmers. Better-paying jobs go to men while women living in the Myanmar side, whose former livelihoods were farm-based,
A feminist political ecology prism

now devote their time to small, irregular and informal enterprises and are facing more insecure futures as a result of the labor-shedding outcomes of the new industrial complex (Lin Aung 2012). As in Dawei, large-scale investments increasingly transcend territorial borders in many parts of Southeast Asia today, where decisions made in one territorial state often impact on the lives of people in another state. Transboundary investments in many parts of today’s globalized world depart from the Westphalian view that the constitutional order of the modern territorial state determines patterns of advantage and disadvantage of its citizens (Fraser 2009). Land concentration, in this manner, can lead both to dispossession and exclusion, as well as unfavorable inclusion (Prugl et al. 2012).

State actors and local elites in Cambodia, Lao PDR, Myanmar, Thailand, Philippines, Indonesia and Vietnam have transacted the lease of huge land concessions with foreign and domestic public and private firms, similar to the Dawei case. The governments of Thailand and Vietnam have also transacted big projects such as hydropower and the lease of concessions for rubber plantations with Cambodia and Laos. Additionally, the agro-fuels boom in the region is being driven by rising global, regional and domestic demand for bio-energy and other uses, which in turn compete with traditional food crops, induce encroachment on so-called marginal lands where women’s food and garden crops are usually cultivated, and threaten to pollute soil and water sources. The expansion of ethanol production in Thailand and oil palm in Indonesia, for instance, is expected to have a serious impact on water quality near processing facilities (Leonard 2011). Vast acreage of land has been converted to produce ‘flex crops’ or those crops with multiple uses across food, feed, fuel and industrial complexes (e.g., sugar cane, palm oil, maize and soya), other major commodities (e.g., rice, wheat and other cash crops), and industrial materials such as rubber. In turn, water and use rights of local farmers are placed at risk or re-configured especially when land and water are ‘grabbed’ by these concessions.

Large-scale investments show a diverse spectrum of outcomes ranging from short-term benefits and opportunities for local people, increased mobility in search for better opportunities due to declining assets, to outright displacements from dispossession and eviction. These outcomes are in large part shaped by the historical conditions of the investments themselves, past and existing land tenure and labor regimes where these investments occur, politico-legal regimes that are supportive of these investments, and persistent gender-unequal practices that shape how these investments translate into uneven benefits or threats to existing rights and livelihoods. Meanwhile, documentations of the grim impacts of dispossession and land grabbing are circulating widely. Dramatic environmental and politico-legal issues often occupy the analytical center stage in these documentations, which side-step important gender issues, as well as market-driven logics. To compound matters, ambivalence is building around some of these projects because they are also being framed as serving the ends of sustainable development and are seen as supporting the build-up to a green economy. For instance, palm oil and other biofuel plantations are being seen to reduce dependence on fossil fuels and also offer income-earning options to some groups within local populations; hydropower development is considered a source of clean energy, and in large part fuels the regional power trade as a potent engine of economic growth favored by nascent developing Lower Mekong countries. These ‘green and clean’ framings are gaining traction, and a growing number of studies from different parts of the world have recently drawn attention to their gender-differentiated implications that highlight the disturbing social justice implications of these projects (Behrman et al. 2012; Daley et al. 2013; Julia and White 2012; Koopman and Faye 2012; Lin Aung 2012).

A feminist political ecology perspective will highlight the embodied or the grounded phenomenon of women and men’s lives, attending to: reconfigurations in women and men’s labor; threats or enhancement of gendered rights to land, water and other resources; political
actions and responses that traverse multiple scales of intimate relations, households, nation and the global; gender intersections with class, ethnicity and age that allow us to go beyond easy and simplified views of men as discrete winners and women as losers; and the effects of the implements of legal, discursive and normative gendered power that shape the trajectories and operations of large-scale investments. Briefly discussed below are recent studies on these investments that disclose gendered workings in commercial contract farming, urban real estate development and oil palm plantation expansion in parts of Southeast Asia that resonate with key aspects of FPE.

A recent FAO study on five sites of recent agricultural investments on rice, corn, cassava and bananas in Laos indicate that plantation-style investments and new contract farming arrangements provided more income opportunities for local residents, including women. But doubt remains whether these would lead to more secure livelihoods in the longer term, which is linked to the overall sustainability of the investing domestic and foreign-owned firms and their operations (Daley et al. 2013). Residents themselves are diverse, and intersections between class and gender define how groups of women may benefit from contract farming in very specific ways. For instance, married women who optimize household earnings by intensifying their time and labor in contract farms experience increased workloads because their husbands do not normally share reproductive and care obligations. Poorer women who head their households find their households more at risk because they incur debts to cover start-up costs for getting involved in contract farming. Despite the risks, they may have found it important to get involved in contract farming because not to do so creates greater social exclusions for them, as contract farming is becoming a source and index of wealth in these communities.

In Myanmar, apart from labor issues earlier described, land rights are being formalized dramatically after the end of the military regime. Under Myanmar’s new 2012 Farmland Law, Land Use Certificate (LUC) titling has been found to increasingly erode women’s customary land claims and rights. In the Dawei Special Economic Zone (SEZ) areas, both Karen and Tavoyan ethnic groups have bilinear inheritance traditions, however LUCs were instead granted to male household heads, effectively disenfranchising women from joint land claims that they had under their respective customary systems (Faxon 2015). While recognizing the adverse effects of the shift of customary to formal land rights on women in the Dawei SEZ context, FPE takes the view that neither customary or statutory regimes by themselves guarantee women’s autonomy in exercising their land and tenurial rights. Instead, FPE recognizes that their identities and multiple positions as different and changing types of women over time (e.g., eldest or youngest daughter, wife, widow, mistress, sister) define and shape their relationships with land and, in turn, define their rights under any regulatory regime (Faxon 2015; Jackson 2003).

FPE also recognizes that people make livelihood decisions not only on rational terms, but also on calculations of their social standing within their communities and the symbolic value of newly-introduced commercial crops as they appear to link rural communities with global value chains, such as possibly in the earlier Lao cases. This may also in part explain the optimism with which women favored the new income sources from oil palm plantations, as in the case of a community living in a forest margin in Jambi, Sumatra. Puzzled researchers were compelled to abandon their former assumptions of women having more sustainable resource management practices than men (Villamor et al. 2013). In West Kalimantan, indigenous women have become a new class of plantation laborers attracted to receiving regular cash income, despite losing their customary land tenure rights in light of the new statutory recognition of (male) family heads in smallholder plot registration. This ambivalence can also be found in similar patterns found in many other cases of expanding commercial agricultural production and dispossession of common resources (Julia and White 2012). This case also chimes in well with another FAO study.
on biofuels in the Mekong region citing that the privatization and dispossession of common resources – or the new carbon sink enclosures – pose potential risks to women through biodiversity loss and reduced availability of forest resources. These in turn affect women’s reproductive work, food security and household resilience to shocks. Despite the potential outcomes, the authors however suggest that the new technology within biofuel production might provide women with more employment opportunities than men, because women workers are often preferred in plantation agriculture (Rossi and Lambrou 2008).

All these demonstrate that outcomes of large-scale investments are complex: often multiple, varied and ambiguous in their gains and losses. By also employing a FPE optic, Elmhirst et al. (2015) present a multi-layered view with which to understand complex variations that unsettle easy dichotomies of discrete winners and losers, agents and victims, in their investigation of five cases of expanding oil palm plantations in East Kalimantan, Indonesia. Depending on historically and ecologically embedded gender norms, landscape and livelihood histories and the communities’ modes of incorporation into a wider capitalist economic system, oil palm cultivation had varied outcomes. For some, oil palm cultivation augmented income returns from traditional livelihoods like rice swidden agriculture, and for others it was increasingly displacing swidden farming and non-timber forest product collection. These ramified the intensity of involvement of different groups of women in oil palm cultivation, where some placed more priority in swidden farming. In returning migrant communities, some women returnees from oil palm plantations in Malaysia invested in smallholdings to cultivate oil palm, mobilizing returnee kin networks from the same ethnic groups, thus blurring gender inequality but highlighting ethnic and kin elite formation. In a community with a large oil palm company driving an increase in wage labor opportunities, women began to sell processed food for a growing non-farming but wage-earning consumer market due to oil palm investments. While enterprises were heavily and traditionally feminized, formal land ownership was recognized as ‘household-owned’ tacitly referring to ownership of male heads typically found all over Indonesia. At the same time, persistent gender ideologies compel women to carry out their reproductive obligations and swidden farming tasks despite the increased diversity in their activities and heavier workloads. Overall, gender ideologies of women as finance and business managers of small enterprises and men as the public face of resource ownership remained persistent despite the class and ethnic variations in the people’s relationship with oil palm.

A significant point in the study attributed ‘agency’ to oil palm itself, as it carried different meanings to different communities: on one hand, to some communities, it was the new portent of wealth and ‘modernity,’ and to others, it was seen as the exclusive crop of the rich man, the benefits of which were unattainable by common folk.

Other studies squarely look into the unrest wrought by dispossession from large-scale development, highlighting the grounded experiences of women activists and how their experiences blur the boundaries between the public and the private in land eviction. Brickell’s study of 14 women activists’ accounts of land eviction due to land concessioning near an urban wetland at the heart of Phnom Penh, the Cambodian capital, demonstrates how forced land evictions are an embodied, emotional and grounded phenomenon (Brickell 2011). A Chinese-backed private development company planned a satellite city with private villas and commercial establishments, contravening Cambodia’s 2001 Land Law that enshrined local residents’ formal possession rights. The company evicted thousands of residents in August 2008, as they poured mud and sand into the lake to pave the way for real estate construction. The study shows that women’s activism against forced evictions were both ‘intimate’ and ‘geopolitical,’ linking their homes, bodies, the nation state and the geo-political, as their voices drew ‘the whole world watching.’ Their eviction and activism traverse multiple scales of engagement, which have intimate implications on
their private domestic lives as some husbands threatened to put a stop to their activism, but simultaneously drew the attention of global audiences to their cause and plight.

Harvey (2007) refers to this as the new round of primitive accumulation through dispossession, or the acquisition of resources by firms for control and production, in many instances dispossessing poor communities of vital natural assets. As these studies draw attention to the gendered and social dynamics, ambivalences and variations of large-scale investments in parts of Southeast Asia, shocks and stresses impinge on people’s resources and their daily lives. An FPE understanding of climate and disaster risks serves to unpack the ‘marginal notes’ – or the more textured stories of people – that are often lost in managerial planning that offer resilient solutions.

Increasing risks to climate change and disasters

Almost half of natural disasters between 2004 and 2013 occurred in the Asia Pacific, where Southeast Asia – predominantly Indonesia and the Philippines – were hardest hit, killing more than 350,000 in more than 500 incidents (UNESCAP 2015). The political ecology of climate change and disaster risks is increasingly drawing wider analytical attention. Hazards are not completely natural or inevitable, but that they have a history and may be co-produced by and include social and biophysical elements.

The feminist political ecology of disaster risk and climate change is still fairly nascent. In more recent gender, climate change and disaster studies, Hyndman (2008), Cupples (2007) and Arora-Jonsson (2011) challenge ideas of essentializing women’s vulnerability to disasters. Along with others, they instead emphasize the need to recognize the historical contexts of women’s (and men’s) lives prior to a disaster, which could explain the differentiated vulnerable positions of women in the wake of a disaster that do not easily fit into the singular and undifferentiated category of ‘disaster victim’ (Enarson and Chakrabarti 2009; Enarson 2012; Bradshaw 2015; Resurrección and Sajor 2015). These ideas also chime with political ecology’s growing concern with socio-natures (Castree and Braun 2001), where in particular, disasters are viewed as being socially, politically and biophysically produced and instantiated, but additionally, as Cupples (2007) argues, subjectivities are also performed, materialized and reworked through both extreme and slow-onset disasters. In what follows, I will discuss women’s embodied experiences with climate-related water risks, culled from original research in Vietnam and the Philippines. The women’s water practices in these research contexts also show us that there are other ways to understand how water is tied to power and inequality that go beyond differences in technical distribution and access rights (Truelove 2011).

Sta Rosa, Laguna, a municipality lying at the low-lying peri-urban fringes of Metro Manila in the Philippines has a pluralism of formal and informal water distribution institutions relying largely on groundwater extraction through deep wells. Exclusive gated residential communities, high-end shopping malls, theme parks and huge industrial complexes have their own independent deep wells and distribution systems. The top five of 45 companies account for 68 percent of industrial demand for water. The dense clustering of wells, especially among residential and industrial wells, may result in the lowering of the water table in the long term (WWF 2011). While the local government is able to monitor the extraction behavior of a private local water service provider, the massive extraction of water by independent commercial and private users having their own deep wells is, however, not monitored. The unregulated extraction of water by these privileged water users – exacerbated by longer dry spells due to a changing climate – is the major driver for water shortages now being felt by poorer communities living at the periphery of industrial and commercial complexes.
Women in an informal slum settlement, Barangay Sinalhan, manage the supply and distribution of water in their households. They heavily relied on pumping out water from their artesian wells to meet their daily domestic water supply requirements. But since two years ago, the water began drying up, and the little that was extracted emitted a foul smell. In addition to the problems with access to household water supply, most wells are poorly maintained, located in flood zones, beside canals, near toilets, piggery farms and other point sources of pollution. With more frequent flooding due to more severe cyclones and heavier precipitation occurring in this low-elevation zone, water quality is also steadily worsening. The public water supply provider, Laguna Water, is unable to offer legal connections to households in Barangay Sinalhan because the land these households occupy is privately owned by a local resident of Sta Rosa, and therefore residents are considered as illegal squatter dwellers. None of these women can show formal land titles. Recently, some women have been paying water sellers monthly for a supply of piped water through illegal connections with households outside the informal settlement. Poorer, younger women with young children have weaker or no access to these connections.

Another study in Central Vietnam showed that Ky Nam commune is susceptible to storms and droughts and localized chinooks (warm dry wind) in the dry season (January to August) and heavy rains and floods during the annual rainy season (Huynh and Resurrección 2014). According to climate change scenarios for Vietnam, this commune will be among the most vulnerable regions to water shortages due to increasingly high temperatures and dwindling rainfall (MoNRE 2011). To complicate the situation, Ky Anh district authorities recently confiscated nearly 100 hectares of which nearly 80 percent was cropland being cultivated by local households for establishing shrimp farming. Shrimp farming was a business that was run by small firms that were not from the locality. Local farm residents and firms began to increasingly compete for scarce water.

Irrigated rice cultivation partly reflects gender disparities in rights to water. In Vietnam, farmers usually exercise water use rights for irrigation regardless of their land tenure rights. Yet individual female farmers exercise their rights to water differently. In male-headed households, adult men had chief responsibility for irrigation, but both spouses flexibly manage sufficient time and labor to irrigate their rice fields. This, however, is a major task of women in female-headed households. As compared with farmer couples, female heads have de facto limited irrigation water rights especially during periods of water stress because (a) they are not able to compete physically with male farmers and their spouses at channeling water to their fields and/or (b) they have difficulty devoting time and labor for irrigating fields due to their heavy domestic workloads. A household survey also showed that households with female heads who have irrigated rice land experienced about 20 percent lower rice yield per hectare. They registered even lower yields particularly in 2008, the year of a severe drought, because of their inability to irrigate their fields. In short, in their attempts to adapt to water scarcity through irrigation management, female heads found themselves more disadvantaged than couples from male-headed households, and as a result, some of them had to altogether reduce their farming activities.

The cases in the Philippines and Vietnam demonstrate that inequalities in water access between women under conditions of rising temperatures and low precipitation combine with land issues of tenure and state appropriation, and water resource competition with industrial estates. The relationship that women have with water in these study sites is therefore fraught with tension and uncertainty due to growing water scarcity and pollution complicated by both climatic changes, insecure tenure arrangements, competition with industry, and state appropriation of both land and water. Privatization and commodification of the natural ‘commons’ such as water and land, Wichterich (2015) points out, indicate the decline of real and direct democracy, and compromise the public good, compelling women in the Philippine case to
resort to unprotected means of accessing water. Embodied, everyday and emotional experiences in the risky use of water – due to its increasing scarcity and toxicity – runs the grain of favoring commercialization of the water commons for advancing neoliberal urban economic growth (Harris 2015).

**Concluding remarks: connecting the drivers of development and change**

This chapter highlights the agile capacities of feminist political ecology to attend to people’s socially and politically grounded and gender-differentiated experiences of livelihoods, development and environmental change, and addresses the multi-scaled drivers that generate and maintain inequality, injustice, vulnerability and disadvantage in their lives. The chapter also demonstrates how changes in people’s gendered lives and livelihoods in Southeast Asia are driven by large-scale development investments and climate change and disasters.

Development is evolving in many parts of rural, urban and peri-urban Southeast Asia where huge and medium-sized foreign and domestic capital investments reap profits at low wage rates utilizing semi- and low-skilled labor changing the physical and social landscape of resource use. Livelihoods have also become more multi-local, designed for a mobile rural-urban footloose workforce to address the need for optimizing livelihood opportunities and buffering income shortfalls from declining resources probably due to slow-onset climate changes. Incidences of dispossession create insecure living conditions for people who already have meager assets to live by. Simultaneously, more intense and frequent exposure to climate and disaster risks exacerbates livelihood survival strategies that place lives even more precariously on the edge, and embed them in conditions of insecurity and resource scarcity to the point of resorting to unprotected access and other precarious means.

Investments, climate and disasters are drivers of development and change often treated apart from each other, where respective solutions and responses however similarly undergo neat technocratic scrutiny and program design in boardrooms and conference halls.

Analyses of large-scale investments, climate risks and disasters have their own respective epistemic communities who converse rarely and maintain their own blind spots. On the one hand, the concern for climate change and disasters connects very little with agrarian and urban development, and the incorporation of livelihoods and markets into the wider neoliberal-driven economy. On the other hand, social analyses on large-scale investments hardly discuss the effects of climate change and disasters on the investments themselves, and the new labor and property regimes that support them. The empirical cases in this chapter remind us of the need to make these vital connections, as people experience these changes in often interrelated ways.

Feminist political ecology – through its ontological, grounded, embodied and intersectional lenses to the workings of gender embedded in ecological and agrarian contexts – can make the connections between economic growth through investments and climate and disaster risks. This begins with its critical positioning toward neoliberal projects and practices, unequal resource capitals, and differentiating the workings and effects of power among groups of poor, ethnic or racialized women and men.

FPE is deliberately conscious of how gender constantly intersects with other axes of power such as ethnicity and class, therefore accounting for variations of outcomes, and it follows, underscoring the need for nuanced responses to disadvantage from large-scale investments, climate change and disasters. Additionally, with its focus on embodied experience and grounded ontological workings of power, FPE can also creatively engage with other power frameworks.
that are critical of ‘truth’ and ‘expert’ claims of technocratic and managerialist discourses and practices, many of which offer one-size-fits-all solutions, which may stand at stark odds with people’s complex and changing lives on the ground.

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