

East Asia's New Developmentalism: State Capacity, Climate Change and Low Carbon Development

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1. Introduction

The East Asia region¹ is the original source of the ideas, concepts and theories on the developmental state. These first began to emerge in the 1980s, based on historic overviews of initially Japan's industrialisation from the late 19th century and then a wider collection of fast developing East Asian states from the 1960s onwards, most notably Singapore, South Korea and Taiwan. Into the 1990s and 2000s, studies focused on East Asia's developmental statism remained largely preoccupied with evolving forms and patterns of state capacity, including some analyses contending that developmental statism was no longer relevant or had withered in the era of globalisation. Even most recent studies are still mainly concerned with traditional and 'conventionalised' debates on the subject.

This paper argues that to understand the relevance of developmental states in East Asia and elsewhere, we need to focus on the changing development agenda in the early 21st century, especially how this connects with the global challenge of climate change and thereby sustainable, low carbon development.² While progressively technological 'industrial development' is still assumed to be the principal pathway that developmental states pursue to realise transformative economic and social objectives, this no longer exclusively concerns the core heavy industries of the late 20th century. Many of the growth industries of our current age are 'green' industries. Moreover, low carbon, sustainable development is the aspiration of not just 'advanced' high-income nations but also increasingly lower-income, fast developing economies and societies. Environmental welfare has become a growing socio-political priority, although raising levels of material prosperity and income remain dominant development goals.

What we can thus observe, most clearly in East Asia, is the emergence of a 'new developmentalism', which can be defined as revitalised and refocused forms of state

capacity aimed at realising the transformative economic objectives associated with sustainable development. As is discussed, the analytical framework of this new developmentalism is a synthesis of state capacity theory (SCT) and ecological modernisation theory (EMT), the latter broadly entailing how to make capitalism environmentally sustainable by incremental change. Both political economic discourses have developed almost entirely independently of each other. However, over the last decade or so ecological modernisation has strengthened its influence over development policies worldwide, most notably in recent ‘green growth’ strategies. New developmentalism not only helps us understand current state capacity practice in a climate-challenged world but also how we have moved beyond original conceptions of developmental statism. This may be understood in the wider context of the sustainable development agenda and climate interventionism. As is argued, new developmentalism is most clearly evident in East Asia but is a concept that can be applied in a wider geographic sense where strong forms of developmental state capacity is exercised towards meeting transformative sustainable development goals. Two country case studies, on South Korea and Singapore, provide insights into key issues regarding East Asia’s new developmentalism.

2. Developmental Statism and State Capacity in East Asia

The profound economic transformation experienced by the East Asia region since the 1950s has been both remarkable and incomparable. Accounting then for around 4 percent of world gross domestic product (GDP), this share had risen to roughly 30 percent by the early 21st century.³ Developmental statism – a term first coined by Johnson’s in his seminal historic work on Japan⁴ – has become a powerful explanation of how many East Asian states achieved their sustained, dynamic development based on a combination of factors centring on the directive roles played by the government.⁵ This should not be confused with Western notions of state interventionism, where policy measures sought to manipulate markets and state-owned enterprises (SOEs) dominated nationalised industries. Developmental statism has crucial relational aspects, where governments form developmental partnerships or pacts with business and society to achieve transformative economic and social goals, traditionally improving income and material prosperity levels. It was founded on strong state

institutions with a capacity to develop and implement strategic policies to realise those goals, involving extensive co-ordination of resources among public and private sector agencies. Crucially, the East Asian developmental states were not socialist but capitalist economies, where powerful business sectors had over time been nurtured by the state. Economies that had effectively practiced the above may be considered 'hard' developmental states, such as Japan and the first generation 'tiger economies' of Singapore, South Korea and Taiwan. However, certain features of developmental statism may be practiced less rigorously and effectively in other nations (e.g. Thailand, Malaysia, Indonesia and the Philippines), and can hence be viewed as 'soft' developmental states.⁶

Developmental statism is part of a broader state capacity paradigm that includes conventionally classified 'socialist market' states like China and Vietnam. Here, strategic economic planning agencies are also prevalent but where heavy state interventionism entails more direct control over markets and the means of production, hence with SOE dominance over key areas of the economy.⁷ Socialist market economies nevertheless at times co-opt private enterprise to help meet strategic economic objectives, thus distinguishing them from pure socialist or communist economies. The state's capacity to realise transformative economic change links both developmental states and socialist market economies. As a rule, the term 'state capacity' has been used as a generic explanation of governments proactively shaping the paths of an economy's development.⁸

The nature and practice of state capacity in East Asia has evolved significantly over time in light of changing economic, business, political and technological realities. For example, the transnationalising forces of globalisation has made the pursuit of state 'national industry' development projects generally less relevant and tenable.⁹ Global firms such as Samsung and Sony no longer require state-assisted 'nurturing'. The development agenda, challenges and priorities of East Asian states have too changed significantly. Whilst techno-industrial upgrading and raising levels of material prosperity remain key development objectives in the region, these have had to be increasingly reconciled with environmental sustainability goals. This is mainly due to East Asia's rapid industrialisation making it an environmental victim of its own economic success. Acute air pollution in major cities and many other localised

environmental problems have had growing negative impacts on human welfare, creating domestic social and political pressures on East Asia's governments to 'green' their development policies accordingly. This has combined with mounting international pressures on East Asian states to take stronger actions on climate change given the region is by far the largest emitter of carbon dioxide and other greenhouse gases (GHGs). Addressing the challenges of sustainable development has, though, presented more of an opportunity than threat to state capacity practice in East Asia. This is because it requires new methods of tackling market failure, reformulations of state-business-society relations, and new approaches on industrial policy, e.g. promoting green energy. Regarding environment-related market failure, this involves firmer state policies to simultaneously address both negative externalities (e.g. reducing the 'social costs' of pollution and other forms of eco-damage) and positive externalities (e.g. promoting the 'social benefits' of clean energy).¹⁰ The two case studies on Singapore and South Korea presented later provides insights into this strengthening environmental dimension of developmental statism.

3. Ecological Modernisation and Development

Ecological modernisation has played an instrumental role in shaping environmental thinking on recent state capacity practice in East Asia. Originating from the ideas and theories of European scholars in the 1980s and 1990s¹¹, ecological modernisation proposes how economic growth may be reconciled with sustainable development through gradual rather than revolutionary reform, and the adaption and improvement of existing economic, business and social structures to realise environmental objectives. EMT postulates that state, society and business all have roles to play in 'greening' capitalism, mainly through supporting the drive forward of new eco-industries and environmentally sustainable practices in production, distribution and new technology application.¹² Firms could thus still continue to make profit, expand market share and meet other corporate objectives whilst acting 'sustainably'. Financial markets need not be reinvented to fund sustainable development projects, rather adjusting themselves to exploit new 'green business' opportunities or incentivised to do so through government policy.¹³ Ecological modernisation thinkers also emphasise

the vital importance of policy interventions to address aforementioned environment-related market failures to help realise sustainable development objectives.¹⁴

After influencing European policy-making from the 1980s, the World Bank soon too began to apply EMT to its development policies, and its influence also grew within higher-income country policy-circles around this time, including Japan, South Korea and Singapore.¹⁵ By the mid-2000s, EMT's influence had become increasingly evident across East Asia and other developing regions.¹⁶ In China, it became closely associated with President Hu Jintao's 'scientific development concept' first proclaimed in 2004, thereafter becoming the official ideological basis for China's future economic and social development when ratified into the national constitution in 2007. In the same year, the Chinese Academy of Sciences published the *China Modernization Report 2007: Study on Ecological Modernization*, when the government also launched its Medium and Long-Term Development Plan for Renewable Energy as well as its National Climate Change Strategy, where in both cases EMT thinking was strongly evident.¹⁷ Ecological modernisation's emphasis on the state's role in promoting green capitalism and environmentally sustainable industries primarily manifested in East Asia through new low carbon development, 'green growth' and sustainable energy strategies introduced across the region from the early 2000s onwards, as shown in Table 1. Before we examine some empirical detail on this in our two case studies, let us explore more specifically how 'new developmentalism' combines both state capacity and ecological modernisation theory and practice into a synthesised analytical framework.

4. New Developmentalism as Concept and Theory

4.1. Outlining New Developmentalism

As Wylde explores in his own special issue paper¹⁸, the term 'new developmentalism' or 'neo-developmentalism' has been used elsewhere to explain new state-active policies (including industrial policies) in Brazil, Argentina and some other Latin American countries in a more-or-less conventional neo-Keynesian macroeconomic

sense, signifying a break from previous neo-liberal policies in this region and with no specified linkage made to low carbon development, environmental policies or climate interventionism.¹⁹ The ‘new developmentalism’ concept I deploy here is based on a distinctly different and broader theoretical approach and empirical foundation by combining two hitherto separate scholarly discourses – SCT and EMT. Both are principally concerned with transformative development and emphasise the critical role played by the state and institutions in shaping markets and paths of economic development, working in partnership with business and society. The core goals associated with each theory – progressive techno-industrial upgrading and sustainable development respectfully – have over time conflated. They are both also interested in how transformative development is governed, the former mainly with industrial policies, strategic plans, targets and outcomes, the latter in reflexive responses and tactical adaption to new changing environmental realities. To generalise, state capacity practice may be considered more planned and structured in approach whereas ecological modernisation is more incremental and evolutionary, yet these two approaches can be viewed as complementary. Developmental states have always had to adapt to changing domestic and international circumstances. As noted earlier, local (e.g. acute urban air pollution) and global (e.g. climate change) environmental imperatives have compelled development policy-makers to increasingly promote decarbonisation of their economies with gradually more ambitious plan targets.

All states are under growing pressure to take action on climate change as the principal global challenge and existential threat currently facing all humanity. While this is not exclusively governments’ responsibility, global climate governance and diplomacy is primarily an inter-governmental process under the aegis of the United Nations Framework Convention on Climate Change (UNFCCC). The COP21 Paris Agreement signed in December 2015 is the latest UNFCCC treaty to reduce greenhouse gas (GHG) emissions through the ‘national determined contributions’ (NDCs) mechanism, where each signatory government is obliged to set decarbonisation targets and implement policies to meet them. Each country will take its own NDC actions but because fossil fuel combustion accounts for around 80 percent of world GHG levels, green energy and low carbon development will be necessary policy priorities. In those countries with strong state capacity, ‘climate interventionism’ will comprise increasingly ambitious

macro-plans on these fronts. Here, climate interventionism refers to state policy actions that address the various market failures to have caused climate change.

As with developmental statism and state capacity practice generally, new developmentalism has relational aspects. Both SCT and EMT stress the importance of effective state-business partnerships to achieve transformative development goals. However, as the special issue paper from Jennifer Hsu explores, (civil) society has become a more proactive and empowered form of agency in the development process. Democratisation, the rise of non-government organisations, and the emergence of new civic institutions has created a more expansive set of development stakeholders. Nevertheless, as our country case studies reveal, a top-down authoritarian state approach to pushing through low carbon development strategies has often been a political and institutional feature of East Asia's new developmentalism. At the same time, works from both EMT and SCT have highlighted the growing influential role played by civil society and social movements as developmental partners.²⁰ As we later discuss, decarbonising economic activity involves, *inter alia*, various societal processes. Furthermore, 'stronger society' is able to feedback important intelligence and information on development issues and challenges, and make state authorities more accountable for good development policy and governance.

To summarise, new developmentalism is an analytical synthesis of state capacity and ecological modernisation theories. It has become especially relevant in the last decade or so in East Asia, in the context of growing disenchantment with the contemporary neo-liberal orthodoxy as well as the exigencies of tackling climate change and other critical environmental pressures. New developmentalism can be defined as revitalised and refocused forms of state capacity aimed at realising the transformative economic objectives associated with sustainable development. In terms of its empirical and functional elements, it is concerned with the governance of developmental process, state policy and strategy-making, development targets and objectives setting, and state-business-society relational dynamics. East Asia's new developmentalism is intended to synchronously promote sustainable and techno-industrial development within the same state policy and strategy context but as we discuss there exist some inherent tensions and contradictions regarding its underlying ideas, politico-

institutional processes, and technical practices, as well as its reconciliation with other development policies.

4.2 Further Outlining through Conceptual Differentiation

Other authors have too focused on the incorporation of sustainable development goals into developmentalist governance and practice in certain East Asian states. Kim and Thurbon's 'developmental environmentalism' centres on South Korea's recent green growth strategies, these being broadly conceived as "the reimagining of the relationship between the economy and the environment"²¹ by the country's policy-making elite, who – as Thurbon explores in a follow up work – continues to formulate national economic strategies generally with a 'developmental mindset'.²² Similar to the new developmentalism outlined in this paper, Kim and Thurbon argue that developmental environmentalism entails the simultaneous pursuit of economic growth and environmental protection by "efforts to develop, commercialize, produce, and export green technologies, products, and processes."²³ While 'developmental environmentalism' acknowledges the wider ideational and social dimensions to how South Korea's policy-elites formulated green growth strategies, it does not explicitly reference the influence of ecological modernisation thinking on these and other policy-elites in East Asia and elsewhere.

South Korea is also an empirical focus (others being China and Singapore) of the 'authoritarian environmentalism' concept,²⁴ which is closely related to, or almost synonymous with Beeson's notion of 'environmental authoritarianism'.²⁵ Both concepts fix on top-down, authoritarian state approaches to addressing environmental challenges where civil society stakeholders play very limited policy-influencing roles. According to Gilley, the former is a "public policy model that concentrates authority in a few executive agencies manned by capable and uncorrupt elites seeking to improve environmental outcomes"²⁶, where in Han's words: "non-participatory environmental governance, autonomous central governments, aided by exclusive groups of scientists and technocrats, dominate the policy process."²⁷ In the latter concept, Beeson applies a very similar analysis to China and Southeast Asia and comes to similar conclusions: compared to liberal democratic countries many authoritarian governed states are

proving more effective at realising low carbon development goals, the corollary of this being further legitimisation of continued authoritarianism and heavy ‘market correcting’ interventionism on tackling climate change and other environmental-related issues.²⁸

In contrast with these twin concepts, new developmentalism firstly casts a wider empirical net and a more political economic approach to explain why and how both authoritarian and democratic countries in East Asia have engaged with low carbon development, where revitalised state capacity is the common denominator. Its incorporation of ecological modernisation thinking into a conceptual synthesis with state capacity theory also presents a new way of thinking about developmental strategies and partnerships on low carbon development, as outlined in the previous section. While new developmentalism acknowledges that authoritarian exercises of state capacity on low carbon development may persist in some countries, it contends that over the longer term we can expect civil society and ‘localised’ actors and agencies to become progressively more important stakeholder partners to the state on efforts to decarbonise the economy and society. This is primarily due to the fundamental nature of low carbon development itself and the socio-technical revolutions it is already beginning to create. This is perhaps most evident in the ‘energy democratising’ impact of small/community-scale renewables and smart energy micro-infrastructure technologies that has created relatively autonomous local ‘energy societies’ to form in many parts of the world. Such low carbon technologies combined with social entrepreneurship and community-level initiatives have enabled this process, in most cases with state policy support.²⁹ Thus, ideal forms of new developmentalism allow for state capacity to be reflexive and responsive to the socio-technical and socio-cultural changes created by the longer-term deepening low carbon development and the impacts of its pervasive technologies on society.

5. New Developmentalism in Practice

5.1 Initial Phases and Evidence

States in developing regions began to implement modern sustainable development policies long before ecological modernisation ideas and theories became influential. Perhaps the deepest historical examples of this relate to what we would categorise today as ‘green energy’, although ironically these policies were not always at the time based on environmental motives. Hydropower dams were first used from the late 19th century and throughout the 20th century to help drive forward industrialisation in the developing world. Even in Japan, hydro-electricity was the country’s dominant power generation sector until the early 1960s.³⁰ China meanwhile started to develop its own solar photovoltaic (PV) energy technology in the late 1950s as part of its fledgling space satellite programme.³¹ After the 1973/74 oil crisis, a number of East Asian and other developing country governments began to introduce new green energy policies but primarily for the energy supply security reasons of diversifying source options, especially indigenously. Furthermore, green energy and green industry sectors generally have long been perceived now as emerging strategic industries with high growth potential. For example, the global wind energy sector has been expanding at an annual rate of around 20 percent annually and solar energy at around 35 percent.³² These are also dynamic industries from a technological perspective with high rates of innovation and R&D investment.

The promotion of green industries is thus consistent with the aforementioned industrial policy practice and techno-industrial upgrading motives (i.e. market growth, high value-added employment, and new enterprise formation) of conventional developmental statism. Moreover, East Asian and other countries that possess strong state capacity on strategic industry policy have the apparatus to promote green industry development. In the meantime, environmental policies have been introduced over time in East Asia, the earliest being typically in response to human health related problems. Japan introduced emission control policies in the 1950s and 1960s to deal with a series of industrial pollution crises, and South Korea similarly in the 1970s. The bustling city-port of Singapore enacted its Clean Air Act in 1971. In 1983, the Chinese government confirmed environmental protection as a basic national policy aim.³³

Low carbon development strategies and green energy policies across East Asia began to take firmer shape by the 1990s and early 2000s, when the influence of ecological modernisation began to more widely spread in the region³⁴, but these were not yet coherent multi-sector strategies. At this time, sustainable development policy actions in many parts of the region were generally *ad hoc* and sector-specific (principally green energy), or embedded in broader development policy frameworks where both carbon-intensive and decarbonising activities were often being simultaneously promoted.

However, by the early 2000s, East Asian states began to construct ‘first-phase’ multi-sector green energy strategies.³⁵ South Korea (2001 Basic Plan for New and Renewable Energy Development), Malaysia (2001 Small Renewable Energy Programme – integrated into the 8th Malaysia Plan, 2001-2005) and Vietnam (2001 Renewable Energy Action Plan, part of the Master Plan of Power Development, 2001-2010) were the earliest protagonists, soon followed by the Philippines (Renewable Energy Policy Framework, 2003-2013), and Thailand (2004 Strategic Plan for Renewable Energy Development). This was an important precursor of wider low carbon development macro-plans introduced by the mid-2000s across the region, as well as national climate change strategies, signifying an early formulation of ‘green growth’ strategies in East Asia. ³⁶ China’s 11th FYP (2006-2010) contained elements of new developmentalism, and as Table 1 illustrates there was a gradual spread of new developmentalist practice by the late 2000s, including a ‘second phase’ of more coherent, ambitious and substantive green energy strategies among a wider set of nations. A key catalyst for this development was the 2008/09 global financial crisis.

5.2 The Global Financial Crisis and ‘Green Growth’

The 2008/09 global financial crisis was arguably the biggest shock to the world economy since the end of World War 2. This global-scale market failure caused ultimately by poor financial market regulation precipitated a comprehensive re-evaluation of the neo-liberal economic model, globalisation, and economic governance generally. As part of international co-ordinated efforts to fix the global financial system, national governments around the world implemented various fiscal and

monetary stimulus counter-measures. Many countries decided to combine this with their climate action agenda and new upgraded EMT-inspired industrial strategies, and led to a step-change up on 'green growth' strategy-making in East Asia.³⁷

The stimulus package incorporated into South Korea's new Green Growth Strategy (2009-2013) – the subject of our first country case study below – accounted for around four-fifths of the government's total post-crisis stimulus measures, and 2 percent (US\$87 billion) of national GDP. Meanwhile, China's own US\$219 billion package in response to the 2008/09 crisis were dedicated to low carbon development initiatives.³⁸ Vietnam announced its own Green Growth Strategy in 2011, and Cambodia's its National Strategic Plan on Green Development a year later based on an earlier 'road map' formulation devised in 2010. Other East Asian states were more sector-specific. Taiwan's Green Energy Industry Sunrise Plan and Malaysia's Green Technology Strategy were both launched in 2009. As later discussed in our second case study, the Singapore government launched its own Sustainable Singapore Blueprint plan in 2009.

As Table 1 indicates, though, many East Asian governments embedded their low carbon development strategies within their existing macro-plan frameworks, e.g. China, Indonesia, Laos, Malaysia and Thailand. Most significantly, a core element of China's 12th FYP (2011-2015) was the Strategic Emerging Industries (SEI) programme, drawing on RMB4 trillion (US\$610 billion) of state-directed support to develop seven targeted sectors (environmental protection and energy efficiency, new energy, next-generation information technology, biotechnology, high-tech manufacturing, clean energy vehicles, and new material science) with annual 20 percent sectoral growth targets set, and to collectively account for 8 percent of national GDP by 2015 and 15 percent by 2020. Meanwhile, the prime aim of Japan's New Growth Strategy (NGS) introduced in 2010 was the 'creation of a low-carbon society' (METI 2010). However, with a change of government and ruling party in the country, the original NGS was ditched in favour for another with the same name. Prime Minister Shinzo Abe's own launched NGS (mark II) was not primarily low carbon development focused, rather preoccupied with conventional macro-economic stimulus measures. The following two case studies on South Korea and Singapore illustrate in some depth the evolution and mechanics of new developmentalism in practice, as well as some of its inherent

contradictions and tensions. Their combination of similar and contrasting features makes for a useful comparative analysis. Both are renowned 'hard' developmental states but with different forms of political governance. Both have relatively strong economies and high-income levels but one is a medium-sized nation the other a small city-state.

5.3 Case Study: South Korea

South Korea's dynamic economic development over the last 50 years has been largely based on successful rapid industrialisation and techno-industrial upgrading strategies undertaken by the state and the country's *chaebol* conglomerated firms in close developmental partnership for most of this period. This, combined with high rates of urbanisation and material prosperity, has made it one of East Asia's most carbon-intensive societies. An Environment Conservation Act was ratified in 1977 but ecological modernisation ideas only began to shape South Korea's development strategy-making from the early 1990s under Kim Young-sam's presidency.³⁹ His successor, Kim Dae-jung, established the Presidential Commission on Sustainable Development in 2000, this being followed by the creation of a National Strategy for Sustainable Development in 2005 under then President Roh Moo-hyun.⁴⁰ The new policies arising from these new institutionalised arrangements were, though, largely limited to a series of market-based incentives and regulatory measures to compel firms to adopt more environmentally-friendly business practices.⁴¹ President Lee Myun-bak's Green Growth Strategy (GGS) was first time the country had formulated an eco-oriented development strategy with an activist industrial policy dimension.

Of notable political and institutional significance was how the GGS reconstructed many elements of the developmental state apparatus that had been previously dismantled under the two Kim presidencies during the 1990s and early 2000s. Both the first GGS under Lee Myun-bak and the second that followed under Park Geun-hye were similar in conception and design to the FYPs that had operated from 1962 to 1993, with a structure of layered goals and targets over phase periods, prioritised techno-industrial sectors to develop, governance mechanisms, funding formulas and state support budgets. For Thurbon, this was further proof of the aforementioned

‘developmental mindset’ philosophy that persisted in South Korea’s policy-making elite.⁴²

The First GGS was conceived principally as a post-crisis response to revitalise the South Korean economy and create a new developmental path forward into the 21st century. Other motive factors were also relevant. The nation’s high fossil fuel import dependency had created growing energy supply security concerns, exacerbated by oil price increases in the years leading up to the global financial crisis: from US\$30 per barrel in 2003 to over US\$100 by 2007, and then spiking to almost US\$150 in 2008. A 28 percent depreciation of the Korean Won against the US dollar between August and November 2008 compounded the problem.⁴³ Thus, the GGS included long-term plans to boost renewable and nuclear energy capacities, both involving extremely little or no import requirements or notable susceptibilities to commodity price volatility. Oil is used mainly for energy transportation purposes, and there was also an ambitious strategy on developing South Korea’s electric vehicle (EV) sector, like solar, wind and other renewable energy technologies perceived as a fast emerging strategic industry. The government allocated US\$1.8 billion to support EV and other low carbon vehicle development, Hyundai and its network of sub-contractor production firms being the state’s main developmental partner in this project. The above encapsulates how environmental sustainability, energy security and emerging strategic industry promotion are three key political economic motivations behind East Asia’s new developmentalism.⁴⁴

The GGS also presented a politico-institutional opportunity to Lee Myun-bak to concentrate economic policy-making authority around a small powerful elite-group over which he wielded considerable influence. The newly inaugurated president quickly established the National Future and Vision Office in February 2008 within his own presidential Blue House office, appointing close ally Kim Sang-hyup to lead it organisationally and intellectually. The Office was charged with identifying ‘strategic growth sectors’ to revitalise the economy, and after sounding out advice from prominent think tanks at home and abroad Kim Sang-hyup made the decision to make ‘green growth’ the core around which new industrial and development policy ideas clustered.⁴⁵ President Lee responded very positively to this proposal, soon thereafter

laying political, institutional and policy foundations for his administration's Green Growth Strategy.

The co-ordinating centre or pilot agency of the GGS was the Presidential Commission on Green Growth (PCGG), overseen by President Lee himself and its 50 members were mainly handpicked technocrats and economists with very few civil society representatives.⁴⁶ The Lee administration also conferred important policy-making and implementation authority to a new consolidated Ministry of Land, Transport and Maritime Affairs. Lee utilised this new formed super-ministry to centralise bureaucratic power and push through his flagship GGS scheme, the Four Major Rivers Restoration (FMRR) project. This absorbed over a third of the Strategy's budget and the project's involved heavy mass construction attracted much public and environmental group criticism.⁴⁷ Democratisation from late 1980s onwards in South Korea had created political liberal conditions for environmental and other civil society groups to flourish, as well as public concerns over environmental degradation to enjoy greater political traction.⁴⁸ However, the Lee administration's resolve to complete the FMRR project to its target objectives reportedly ignored significant public opposition and took legal-bureaucratic procedural short-cuts.⁴⁹

The First GGS was structured around three strategic approaches: (1) measures for climate change and energy independence; (2) creation of new growth engines, mainly developing green high-tech industries and greening of industrial practices; (3) contribution to international community that included externalising South Korea's green growth approach through diplomacy and best-practice sharing. While the Strategy achieved some notable low carbon development successes, such as the EV project and building the world's largest energy smart grid on Jeju Island, according to evidence examined by Sonnenschein and Mundaca (2016) it had virtually no impact at the end of the 2009-2013 FYP period of reversing South Korea's long-term trend of rising carbon emissions. Its renewable energy targets also lacked ambition compared to other East Asian countries' new developmentalist plans.⁵⁰ When Lee Myun-bak was succeeded by Park Geun-hye in 2013, her government replaced the PCGG with the new Prime-Ministerial Green Growth Committee in October that year. The Second GGS launched in 2014 by the Park Geun-hye government and also based on a FYP format (i.e. 2014-2018) ran concurrently with a policy strategy on 'Creative Economy', and

continued to pursue many of the first strategy's initiatives in a revised framework.⁵¹ Yet, as more widely discussed in the conclusion, the future of the Second GGS is unclear after President Park's impeachment in March 2017.

5.4 Case Study: Singapore

Since it gained independence in 1959, Singapore has been continually governed by the Peoples' Action Party (PAP), which adopted a developmental statist approach to economic management from the onset. It has overseen the city-state's transformation into one of East Asia's most developed economies and highest income per-capita society through an effective multi-dimensional development strategy based on high value-added manufacturing, financial hub services, entrepot port trade, foreign direct investment, human capital and infrastructure investment, and high-tech research and development. In many respects, Singapore could be viewed as a pioneer of East Asia's new developmentalism. Its government was among the region's first to implement recognisable environmental policies (from the early 1970s) and assimilate ecological modernisation ideas on economic development.⁵² The government unveiled its first environmental master-strategy in 1992, the Singapore Green Plan (SGP), although this was essentially an economic growth model intended not to compromise the environment.⁵³ While this and its sequel SGP launched in 2002 included some ventures on preserving certain habitats, a defining feature of Singapore's sustainability approach has been the creation of 'urban garden' areas rather than conserving natural wildernesses. The city-state's motivation behind its socio-technical endeavours to 'green' Singapore's living spaces in ever more imaginative ways is driven by the imperatives of finding new ways of enhancing its citizens' welfare and in turn also their satisfaction with ruling PAP governments. Like in other higher-income East Asian nations where certain material prosperity thresholds have been reached, environmental welfare has become an increasing societal priority in Singapore, and thus ever more important to maintaining the PAP's political legitimacy.⁵⁴

Nevertheless, inherent tensions and contradictions exist between Singapore's economic and industrial development plans and its environmental master-strategies. For example, in 1995 – just three years after the first SGP's inauguration – the

government ordered that the seven naturally formed Jurong Islands just off the southwest coast be terraformed into a singular merged landmass as part of its 25-year petrochemical industry development plan.⁵⁵ Singapore eschewed setting carbon emission reduction targets around the time of the UNFCCC Kyoto Protocol mainly due to its plans to further develop this and other carbon-intensive sectors. This is a key feature of the East Asia new developmentalism story, where both carbon-intensive and decarbonising activities are promoted within concurrent development strategy contexts.

As with South Korea under President Lee Myun-bak, decision-making authority in Singapore's new developmentalism has been concentrated in a tight circle of state bureaucratic and political elites, whom under mono-regime political conditions have consistently pursued a strong anthropological approach to reconciling environmental and economic development goals.⁵⁶ Institutionally speaking, development-oriented bureaucratic agencies have remained dominant partners in the formulation of the state's sustainability plans. The original Singapore Sustainability Blueprint and its upgraded 2015 version was devised primarily by both the Ministry of National Development and the Ministry of the Environment and Water Resources, with the Prime Minister's Office also closely involved. This was Singapore's most comprehensive environmental or eco-development masterplan to date, covering a wide range of policy areas (e.g. transport systems, waste management, resource efficiency, energy-efficient buildings and environmental standards) backed by a significant budget of S\$1.5 billion. The SSB 2015 public document cites around 20 other state agencies that were involved in the consultation and design process.⁵⁷ No civil society organisations are listed. However, in its review of the original SSB the government claims to have considered general public feedback from more than 130,000 people on specific projects (e.g. Land Transport Master Plan 2013 and Urban Redevelopment Authority's Master Plan 2014), conducted a series of 'focus-group' dialogue sessions with a sample of the populace, and consulted 6,000 people in other dialogues and surveys on the SSB generally.⁵⁸

The Singapore government has increasingly sought public feedback in policy-making and implementation processes as a kind of societal intelligence-gathering mechanism. Nevertheless, the Singapore state continues to strictly regulate civil society groups, and

their input into development policy formation must still conform to ecological modernisation norms, consistent with past practices.⁵⁹ For Han, the Singapore state's top-down, non-participatory governance approach has notable parallels with South Korea's authoritarian environmentalism.⁶⁰ In a similar vein, Wong argues that Singapore's core policy elite have placed too much faith in the idea that "society can modernise itself out of its environmental crisis" by a series of technocratic and technological fixes, where environmental issues are "too narrowly defined by state and industrial interests", and that civil society needs to be more actively engaged as a policy stakeholder to form more balanced and holistic sustainable development strategies.⁶¹

In some contrast to most other forms of East Asian new developmentalism, the SSBs have paid relatively little attention to developing new green industry sectors, rather 'greening' existing ones. The strategy did commit Singapore to expand the number of its 'innovation business districts' mainly to promote best corporate environmental practice and sought to scale up solar and bioenergy power generation through new schemes such as SolarNova. Yet there were again no references to altering the economy's industrial structure, where energy-intensive sectors like petro-chemicals remain prominent. Singapore's urban-focused new developmentalism can too be understood as part of the eco-city development trend that has become popular across East Asia and other developing country regions. Cities are where carbon-intensive activity is concentrated and thus have a key role to play in decarbonising economies and societies.⁶² East Asia's new developmentalist strategies all contain city and provincial-level actions to some degree, varying in accordance to national political structures.

6. Conclusion: The Future of New Developmentalism

This paper has explored how new developmentalism, by combining state capacity theory and ecological modernisation theory, presents a new understanding of developmental statism in the early 21st century, when environmental sustainability and climate action has become increasingly critical in both national and international development agenda settings. In this concluding section, we consider paths ahead for

new developmentalism, assessing the key conditions needed for its future success and critiquing areas of state capacity practice that could be improved.

The first condition is that *deeper societal participation and engagement* will be required for new developmentalism to more effectively achieve sustainable, low carbon development. Both SCT and EMT have stressed the importance of the state co-opting society into transformative development projects. Low carbon development is as much a societal process as an economic one, encompassing individual lifestyle and choice issues at the micro-level as well as macro-level industrial and infrastructural strategies. Civil society is a crucial stakeholder in terms of contributing ideas on strategy design and providing useful societal intelligence feedback on strategy impact.⁶³ From East Asia's experience we have seen how state planners have at least acknowledged the importance of establishing a low carbon society and engaging civil society stakeholders in new developmentalist strategy-making.

Yet we have to get beyond the planning document rhetoric to analyse how well is the state drawing upon society as an intelligence resource and working in stakeholder partnership. We saw in the case of Singapore – where state capacity is extraordinarily strong – that the government sought public opinion concerning the Sustainable Singapore Blueprint's design, implementation and outcome stages but was nevertheless criticised for being essentially elite-technocrat driven and top-down generally. South Korea's recent political leaders – especially President Lee Myun-bak – have too generally adopted a top-down approach in pushing through their own sustainable development agendas. Authoritarian governance of low carbon development in East Asia may be a persistent feature of new developmentalism for some time yet. However, in the longer-term states we may expect states to work in closer partnership with civil societal stakeholders because such a partnership is key to realising the most effective and smarter forms of low carbon society.

The second condition relates to *addressing contradictions and inconsistencies* often evident within new developmentalist plans themselves, and between those plans and other concurrent development policies. For example, the scaling up of green energy applications has not only been used to decarbonise developing countries but meet the growing energy and industrial demands of fast-growing economies, as articulated in

government green growth strategies. In South Korea, the First GGS co-existed with the then Ministry of Trade, Industry and Energy's parallel industrial strategy of upgrading various stalwart energy-intensive sectors such as shipbuilding and steel.⁶⁴ Singapore's aforementioned burgeoning petrochemical complex in Jurong Island remains central to the government's core industrial policy.

Thirdly, *consolidation and continuity of strategy* will prove crucial to new developmentalism's future effective implementation. South Korea's President Park Geun-hye continued with the Green Growth Strategy FYP framework of her predecessor but her impeachment in March 2017 leaves the future of the country's new developmentalism unclear. We may expect on the other hand mono-regime authoritarian states to adhere to long-term new developmentalist strategies and thereby consolidate their gains.⁶⁵ Certainly, China has proved more successful for example at meeting its green energy sector targets than Japan, South Korea and Taiwan.⁶⁶ As long as 'authoritarian environmentalism' delivers results, especially in terms of key welfare measures like reduced air pollution, this form of new developmentalism may persist for a while yet, although as argued earlier we can expect over the longer-term more organic, bottom-up societal influence on shaping future paths of low carbon development.

The fourth condition is that new developmentalism is *nationally devised and implemented but will become increasingly part of a much larger international climate action project*. Development strategies in East Asia are still being formulated more or less in the same technocratic fashion, most commonly in national year-plan frameworks (Table 1). These plans have always had an international dimension, such as export targets and attracting foreign investment, and today's sustainable development strategies are essentially framed on national economies. However, the core goals of new developmentalism derive ultimately from the global agenda of decarbonising economic activity and international efforts to tackle climate change. The United Nations 'Sustainable Development Goals' (SDGs) launched in 2015 (superseding the previous Millennium Development Goals) are together with the UNFCCC Paris Agreement the most important latest attempts by international society to tackle climate change and steer humanity towards a more environmentally sustainable development path. New developmentalist plans and strategies reference

their contribution to such wider international endeavours on low carbon development. The further thickening of global environmental governance and climate action generally is likely to strengthen new developmentalism at the national level as states comply with their international commitments here, as previously mentioned regarding the ‘national determined contributions’ mechanism of the UNFCCC Paris Agreement. Another interesting development has been South Korea’s internationalisation of its national green growth strategy in which it has positioned itself as a green ‘middle power’ in global climate governance, seeking especially to shape the low carbon development agenda.⁶⁷ For example, it successfully bid to host the new UN Green Climate Fund (GCF) that is tasked with raising US\$100 billion annually to help fund sustainable development in low-income nations.⁶⁸ .

The fifth and final condition follows on from the previous one, and concerns the *continued mounting pressures on low-income countries worldwide to adopt new developmentalism*. Governments from these countries are under domestic pressure to devise macro-plans on boosting economic growth in order to deliver higher levels of material prosperity. At the same time, deteriorating environmental welfare at home together with growing international pressures on developing countries to take firmer action on climate change compel them to ‘green’ their development strategies. Both global development and environmental situations are predicted to get worse before they better. The combination of diverging income-gaps in the world economy and persistently rising GHG levels and other ecological problems only serves to strengthen the imperative to find new developmentalist solutions. As most global GHG emission growth is located in developing regions – especially Asia – their own national development policies and strategies have been an important focus of attention to the wider international community. Developing countries have been subject to ‘carbon-offloading’ due to the gradual relocation of many energy-intensive industries from high-cost to low-cost economies for business competitiveness reasons. This fact notwithstanding, East Asia is not the only developing country region where ‘green growth’ strategies have been pursued and where the twin pressures on states to intervene on development and climate coincide. As has been argued throughout, strong state capacity working in close developmental partnership with business and society is required for effective action on both fronts.

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Endnotes

¹ Comprising the two sub-regions of Northeast Asia and Southeast Asia.

² Sustainable development and low carbon development are treated as broadly inter-changeable terms in this paper. The latter term has become increasingly synonymous with multiple-level efforts to tackle climate change due to the global ecological impact of rising carbon dioxide levels, and decarbonising economic activity being the prime sustainable development challenge facing humanity.

³ Dent, *East Asian Regionalism*.

⁴ Johnson, *MITI and the Japanese Miracle*.

⁵ Amsden, *Asia's Next Giant*; Evans, *Embedded Autonomy*; Pereira, "Whither the Developmental State"; Weiss, *Myth of the Powerless State*; Woo-Cumings, *The Developmental State*.

⁶ Doner *et al*, "Systemic Vulnerability."

⁷ Nem Singh and Chen, this volume.

⁸ Beeson and Pham, "Developmentalism with Vietnamese Characteristics"; Weiss, *Myth of the Powerless State*; Weiss, "The State in the Economy"

⁹ Mok and Yep, "Globalisation and State Capacity."

¹⁰ In externality theory, market's 'fail' to account for social costs and social benefits in the private transactions between producers and consumers, for example in energy markets.

¹¹ Hajer, *The Politics of Environmental Discourse*; Huber, *Die Verlorene Unschuld der Ökologie*; Jänicke, *Umweltpolitische Pravention*.

¹² Jänicke, "Ökologische Modernisierung"; York and Rosa, "Key Challenges".

¹³ Buttel, "Ecological Modernisation"; Langhelle, "Why Ecological Modernisation".

¹⁴ Buttel, "Ecological Modernisation"; Huber, *Die Verlorene Unschuld*; Jänicke, *Umweltpolitische Pravention*; Murphy and Gouldson, "Environmental Policy".

¹⁵ Massa and Andersen, "Special Issue Introduction".

¹⁶ Dent, *Renewable Energy*; UNESCAP, *Green Growth @ a Glance*; UNESCAP, *Greening Growth in Asia*.

¹⁷ NDRC, *Medium and Long-Term Development Plan*; NDRC, *China's National Climate Change Programme*.

¹⁸ Wylde, this volume.

¹⁹ Bresser-Pereira, *From Old to New Developmentalism*; Carrillo, "The New Developmentalism"; Milanez and Santos, "Topsy-Turvy Neo-Developmentalism".

²⁰ Weiss, "The State in the Economy"; Toke, "Ecological Modernisation".

²¹ Kim and Thurbon, "Developmental Environmentalism", 227.

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- ²² Thurbon, *Developmental Mindset*.
- ²³ Kim and Thurbon, “Developmental Environmentalism”, 215.
- ²⁴ Eaton and Kostka, “Authoritarian Environmentalism Undermined”; Gilley, “Authoritarian Environmentalism”; Han, “Authoritarian Environmentalism”; Han, “Singapore, a Garden City”.
- ²⁵ Beeson, “Environmental Authoritarianism”.
- ²⁶ Gilley, “Authoritarian Environmentalism”, 288.
- ²⁷ Han, “Authoritarian Environmentalism”, 811.
- ²⁸ Beeson, “Environmental Authoritarianism”.
- ²⁹ Dent, *Renewable Energy*.
- ³⁰ Ushiyama, “Renewable Energy Strategy”.
- ³¹ Yang *et al*, “Status of Photovoltaic Industry”.
- ³² REN21, *Global Status Report*.
- ³³ UNEP, *Green is Gold*.
- ³⁴ Dent, *Renewable Energy*.
- ³⁵ Dent, *Renewable Energy*.
- ³⁶ UNESCAP, *Greening Growth in Asia*.
- ³⁷ Jacobs, “Green Growth”; Jänicke, “Green Growth”; UNESCAP, *Low Carbon Green Growth*.
- ³⁸ World Bank, “From Growth to Green Growth”.
- ³⁹ Dent, *Renewable Energy*.
- ⁴⁰ Cho, “Emergence and Evolution”.
- ⁴¹ Kim and Thurbon, “Developmental Environmentalism”; Moon, “Korea’s Sustainable Development Strategy”.
- ⁴² Thurbon, *Developmental Mindset*.
- ⁴³ Han, “Korea’s Pursuit”; Kim and Thurbon, “Developmental Environmentalism”. South Korea spent US\$140 billion – around a third of its foreign exchange earnings from exports – on energy imports in 2008.
- ⁴⁴ Dent, *Renewable Energy*.
- ⁴⁵ Kim and Thurbon, “Developmental Environmentalism”.
- ⁴⁶ Han, “Authoritarian Environmentalism”.
- ⁴⁷ Han, “Authoritarian Environmentalism”; Moon, “Korea’s Sustainable Development Strategy”.
- ⁴⁸ Ku, “The Structural Change”; Lee, “Environmentalism in Korea”; Jeong and Seo, “Democratization, Decentralization, and Environmental Governance”.
- ⁴⁹ Han, “Authoritarian Environmentalism”.
- ⁵⁰ Dent, *Renewable Energy*.
- ⁵¹ Kim, “South Korea Doubles Down”.
- ⁵² Neo, “Challenging the Developmental State”.
- ⁵³ Singapore Government, *The Singapore Green Plan*.
- ⁵⁴ Neo, “Challenging the Developmental State”; Wong, “The Developmental State”.
- ⁵⁵ Dent, *Foreign Economic Policies*.
- ⁵⁶ Han, “Singapore, a Garden City”.
- ⁵⁷ Singapore Government, *Sustainable Singapore Blueprint 2015*.

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- ⁵⁸ Singapore Government, *Sustainable Singapore Blueprint 2015*.
- ⁵⁹ Barnard and Heng, “A City in a Garden”; Wong, “The Developmental State”.
- ⁶⁰ Han, “Singapore, a Garden City”.
- ⁶¹ Wong, “The Developmental State”, 95.
- ⁶² Delman, “Urban Climate Change Politics”, Franzén, “Local Governments”.
- ⁶³ Martinelli and Midttun, “Editorial – Introduction”.
- ⁶⁴ Dent, *Renewable Energy*.
- ⁶⁵ Beeson, “Environmental Authoritarianism”.
- ⁶⁶ Dent, *Renewable Energy*.
- ⁶⁷ Blaxekjær, “Korea as Green Middle Power”; Han, “Korea’s Pursuit”.
- ⁶⁸ Relatedly, Cambodia and Vietnam’s green growth plans include measures to attract ‘green aid’ from foreign donors to help realise national sustainable development goals set by those plans.