



A photograph of a tree trunk in a sun-dappled forest. The tree trunk is dark and occupies the right side of the frame. The background is filled with bright green foliage, creating a bokeh effect. The ground is covered in grass and fallen leaves. The text "a bold step Forward" is overlaid in white, with "a bold step" in a cursive font and "Forward" in a bold, sans-serif font.

*a bold step*  
**Forward**

*Behind Singapore's clean, green environment, and keeping it going day to day is the National Environment Agency. Its officers work tirelessly to control pollution, ensure hygiene in food establishments, make sure the waste we generate is taken care of, prevent dengue outbreaks and provide weather forecasts and air quality readings.*



Take a walk. Take a deep breath. Drop by East Coast Park and have a swim. Round the day off with a feast at one of the many hawker centres dotting the island.

On almost any given day in Singapore, these are typical activities. We seldom pause to think how unusual it is that streets are litter-free, the air is fresh, the water is clean and the food is safe. In fact, the quality of environment we enjoy is nothing short of extraordinary.

We live in one of the most high density, compact cities in the world. Singapore spans just a little over 700 km<sup>2</sup> in size. More than five million residents live side by side with some 10,000 units of commercial developments, over 9,000 industrial establishments and close to a million vehicles. Unlike many other countries, Singapore does not have swathes of rural hinterland to counter the effects of urban development. Inevitably, our activities bring about pollution and generate domestic and industrial waste. And in such a densely-populated country, diseases borne by vectors such as mosquitoes have the potential to spread fast and on a large scale.

Yet we do not inhabit a polluted, unpleasant or even unhealthy city. On the contrary, pollution, litter and public health hazards are rarely daily concerns.

Behind this clean, green environment, and keeping it going day to day is the National Environment Agency (NEA). Its officers work tirelessly to control pollution, ensure hygiene in food establishments, make sure the waste we generate is taken care of, prevent dengue outbreaks and provide weather forecasts and air quality readings. They plan and put in place strategies and procedures to safeguard our surroundings. And, taking it one step further, they engage the community and industry to build a Singapore where everyone has a role to play in cherishing the environment. Without the work of these individuals, the environment we know and enjoy today cannot be sustained.

For all the work it does, the agency is surprisingly young. It was only in 2002 that the statutory board came into existence. Before that, day-to-day operations to protect and manage the environment fell on the Ministry of the Environment (ENV), now known as the Ministry of the Environment and Water Resources (MEWR). Today, the ministry takes charge of policy-making to ensure long-term environmental sustainability while NEA shoulders the operations of environmental management.



*“We went through a process of reflection. We had to find a solution for water, we had to find a solution to the disposal of solid waste. We had to find a way to solve our problems with public health. People were still littering, hawker centres and our public toilets were still not clean enough. I would say that provided the sense of long-term crisis, sense of urgency to change things.”*

— Lim Swee Say, Minister for the Environment (2002 - 2004)



(Source: Ministry of Information, Communications and the Arts, Courtesy of National Archives of Singapore)

## AN ACTING MINISTER, A RANKING, AND NEW CHALLENGES

To tell the story of how NEA came into being, one must start with a newly-appointed acting minister, a surprising international ranking and a horizon of increasingly complex environmental issues.

What got things rolling was a report ranking the state of environmental sustainability across 122 countries. The report was released in January 2001 by the World Economic Forum, a non-profit foundation. Singapore was ranked 65<sup>th</sup>. In several areas, Singapore’s performance was rated so poorly that it was placed near the bottom.

The assessment came as a shock to many. Even the authors of the report felt compelled to prepare a defence entitled “Isn’t Singapore’s score too low?” In a parliamentary sitting following the release, questions were posed to ENV. “... I am quite surprised to come across this study ... which rated Singapore as one of the 10 worst performers in the world,” expressed one member of parliament.<sup>1</sup> Another member opined, “... I would like to take the World Economic Forum Report as an early warning signal, a wake-up call, so to say. The question we should be asking ourselves is: are we still doing enough?”<sup>2</sup>

There were those who felt the assessment was unfair, or “simply ludicrous”<sup>3</sup>, as a journalist in *The Straits Times* put it. After all, another report released at about the same time by the Greening Industry Network ranked Singapore as one of the top performers among 36 countries surveyed in managing the environment. Moreover, compared to many other major cities, Singapore’s quality of environment then was clearly in good stead.

For someone who had just joined ENV, Singapore’s low ranking was out of the blue. Lim Swee Say, appointed in 2001 as Acting Minister for the Environment, came across an article reporting the rankings in *Newsweek* magazine. He recalls, “What got me thinking was this article, saying that Singapore was at the brink of environmental disaster. On one hand, we had always felt that we had done very well. Why was it that from an external angle, we were on the brink of environmental disaster? So that got me thinking, there were areas in which we might be doing well in the year 2000, but there were areas that we ought to try to do better for 2010, 2020 and so on. So I took that article in a positive way, more to remind us that no matter how well we did up to a point in time, we must always adopt the mindset that whatever we did was good enough for up to 2000, but might not be good enough for the year 2020 or beyond.”

Which was a timely reminder indeed. The environmental challenges Singapore faced at the onset of the 21<sup>st</sup> century had certainly grown in magnitude and complexity. Global issues, such as climate change, scarcity of potable water and dwindling natural resources, were increasingly pertinent. The transmission of infectious diseases had grown much faster and wider with globalisation. International conventions and standards for environmental health and management were also becoming more stringent.

On home ground, rising population density, more intensive land use, and growing consumption of resources and waste generation demanded longer-term and more innovative solutions. As a small and open country, Singapore was vulnerable to trans-boundary pollution, especially as its neighbouring countries developed.

*“Since its formation in 2002, the National Environment Agency has been playing the critical role of safeguarding our environment so that Singaporeans can continue to enjoy a high standard of living. The agency has a strong team of professionals to tackle the wide range of environmental issues such as keeping our streets clean, reducing the number of dengue cases, checking on hygiene standards of food outlets, encouraging the 3Rs (Reduce, Reuse, Recycle) and promoting energy efficiency. It also has specialists in weather forecasting, environmental health research and radiation protection. From day one ... NEA understands that the challenge of sustaining a high quality living environment will not be fully addressed if it does not have the support of Singaporeans.”*

— Dr Yaacob Ibrahim, Minister for the Environment and Water Resources (2004 - 2011) at NEA Community Day, 9 January 2010



As pointed out by a member of parliament, “The ... report was to measure the ability of a country to sustain its environment as it develops further into the future ... So in other words, I take it that, while the quality of our environment is high now, very good, the question remains that: can we sustain it and continue to keep the quality high in the future as more demands, such as population growth and economic development, are made on it? ... There are many disadvantages we have in this area, such as small land mass, lack of forest and rural areas, high population density, or relatively large industrial base, and the like, work against us in sustaining a good environment.”<sup>4</sup>

## REINVENTION

Clearly, it was time to foment change. At the ministry, Lim Swee Say immediately began a push for transformation. “We went through a process of reflection. We had to find a solution for water, we had to find a solution to the disposal of solid waste. We had to find a way to solve our problems with public health. People were still littering, hawker centres and our public toilets were still not clean enough. I would say that provided the sense of long-term crisis, sense of urgency to change things,” Lim remembers. “The article in *Newsweek* was actually very timely and most helpful for me, because it gave me a framework to rally the ministry. That, yes, we have done well, but we must always remind ourselves, that environmental sustainability is a journey with no end.”

Rounds of brainstorming, reflection, discussions and meetings later, the leaders in the ministry finally decided to take a bold step forward. A couple of months after the rankings were published, Lim

announced to the parliament in March, “We are able to stay away from the threshold of environmental disaster because, all these years, we have been able to harness technology creatively and effectively. At the same time, we have applied our minds innovatively to protect our living environment with a great sense of commitment, responsibility and social discipline ... Looking ahead, our challenge in environmental management is to protect and enhance our living environment ... ENV will reinvent itself ... This will not happen overnight. Our aim is to achieve this over the next 18-24 months.”

This reinvention was to take more than a year. Over time, the responsibilities and purview of ENV had expanded considerably. To streamline the functions of the ministry, the first step was to separate policy-making and operations. In short, the ministry would become a lean outfit focusing on policies. New statutory boards, responsible for operations, would be formed under it.

Such a move would have several advantages. Freed from day-to-day operations, the ministry could concentrate on envisioning Singapore’s environmental future, identifying challenges on the horizon, and ensuring that the right policies and strategies were in place to bring about long-term sustainability. The statutory boards would focus on managing the environment and improving their operations to become more efficient and effective. Being closer to the ground, they would be faster and more flexible in addressing and responding to environmental needs and issues.

The transformed ministry would have two statutory boards under it. The Public Utilities Board (PUB), formed in 1963, would take charge of the country’s water resources, and the new National Environment Agency (NEA) would cover all aspects related to environmental health and protection.

## A New Agency

*“We had a large workforce strength of about 3,000, including our daily-rated workers. Hence, it was clear that we needed everyone to know what was expected of him or her to be an NEA person. Every NEA person can be the eyes and ears of NEA to gather feedback on our environment. Furthermore, how they should behave and represent NEA is all encapsulated in a handbook for their reference.”*

— Lam Joon Khoi, CEO, NEA (2002 - 2005)



On 1 July 2002, the National Environment Agency was formally established, bringing under it the Environmental Public Health Division as well as the Environmental Policy and Management Division from ENV. The Meteorological Service Singapore under the Ministry of Transport joined the new agency as well, as its capabilities would enhance the agency’s work, particularly in the areas of climate change and trans-boundary haze pollution.

It was an exciting time. The agency was to redefine environmental management in Singapore. Its new leaders, namely Lam Joon Khoi, CEO (2002-2005), and Professor Simon Tay, Chairman (2002-2008), set about the task immediately together with NEA’s workforce, many of whom had come from ENV with years of experience. Lam came from previous stints in ministries including the Ministry of Defence, bringing fresh perspectives to the operations, while Professor Tay was noted for his passion for the environment.

“I was happy to think about NEA and its mission and it was also helpful that I teach environment law. For me, passion was important,” reminisces Professor Tay. “I would have a weekly meeting with the CEO for debriefing. NEA has many functions under it, from waste management to hygiene. So I made it a point that I saw everything within a year, to get a texture of the job and what the staff did on a daily basis. I took it far beyond turning up once in two months for a

meeting. This is a subject one can love. It affects everyone, it affects our children, it affects the quality of our lives, it affects the whole of our cityscape, so how can you not be interested or passionate about it?”

Building on the legacy of ENV, the fledgling agency took progressive steps within its first few years. Divisions were restructured for more synergy and efficiency. New roles were created. Different ways to perform its duties were explored, including implementing technological solutions more extensively. At the same time, as a statutory board, it had to manage its resources more closely than ever.

Above all, a new identity had to be shaped. In his first year, Lam, together with NEA’s management, formulated a code to define the identity of the NEA Person. The comprehensive code covered diverse facets, from core values to guidelines for ethical behaviour in different situations. NEA’s culture had to undergo a fundamental shift as well. Environmental management had long relied on surveillance and enforcement. But, for long-term environmental sustainability, it was essential for NEA to partner the community in protecting the environment. Steps were thus put in place to nurture a new mindset of partnership. These early years put in place a framework for NEA to carry out its mission.



“The NEA Person does not stop caring about the environment no matter where he/she is. As the eyes, ears and nose of the organisation, their environmental vigilance helps everyone in NEA do their job better.”

— The NEA Person Code

*“I think the most important transformation in NEA during my stint was in the overall approach and manner in which NEA carried out its work. The agency was then seen as a strict and rigid enforcer of environmental rules and regulations. However, such an approach was not sustainable in the long term. For NEA to succeed in its goal of safeguarding the environment and keeping Singapore clean and green, it was critical to gain the support of the people. We needed to inculcate in the people and community a pro-environment mindset.”*

— Lee Yuen Hee, CEO, NEA (2005 - 2009)



## CONSOLIDATION AND TRANSFORMATION

Consolidation, fine-tuning and furthering the mission of NEA marked the key concerns of the agency after the first few years. In 2005, Lee Yuen Hee, who had filled senior positions in several ministries such as the Ministry of Trade and Industry, joined as the second CEO of NEA. He recalls, “Although NEA was still young as a statutory board, I was fortunate that my predecessor had laid a strong foundation which I was able to build upon. As CEO, my main priorities were to consolidate and build upon the good work that had been laid down to deepen the capabilities of NEA in dealing with existing and new environmental challenges that surfaced.”

Under Lee, NEA’s bid to become a facilitator and partner also received greater focus. “I think the most important transformation in NEA during my stint was in the overall approach and manner in which NEA carried out its work. NEA was then seen as a strict and rigid enforcer of environmental rules and regulations,” shares Lee. “However, such an approach was not sustainable in the long term. For NEA to succeed in its goal of safeguarding the environment and keeping Singapore clean and green, it was critical to gain the support of the people. We needed to inculcate in the people and community a pro-environment mindset.” The vision of NEA was revised to become more inclusive, “embracing all in caring for our clean and healthy environment”.

Partnering the private sector reached greater heights when Chew Gek Khim, a well-known corporate leader, assumed the position of

Chairman in 2008. Her experience in the private sector, network and knowledge of good corporate governance proved to be invaluable to the agency. In her first term, she noted, “Whilst some may quip that NEA stands for ‘nearly everything agency’, its mission can be summed up by rallying society to embrace the mantra, ‘Clean and Green Singapore’... In this respect, I hope to complement NEA’s efforts in engaging the corporate sector to espouse the Clean and Green Singapore concept.”

By the late 2000s, the environmental challenges faced by Singapore had evolved to become more complex and cross-cutting. Just as ENV once underwent transformation to meet rising challenges of the time, likewise, it was time for NEA to renew itself. This was top of the agenda when Andrew Tan took over the helm as CEO in 2009. He says, “I would say that my first priority, coming in with fresh perspectives from my previous postings in the Ministry of Foreign Affairs and the Ministry of Defence, is whether this organisation is prepared to respond to the challenges ahead. This may seem like a very simple question, but actually it goes back to the fundamental mission of NEA and also whether we have the capabilities to achieve our mission. To achieve this, I would say that we are tackling a very huge task, because we are talking about organisational transformation. So that was the platform which I came on, to transform the organisation, to get it future-ready for the 21<sup>st</sup> century.”

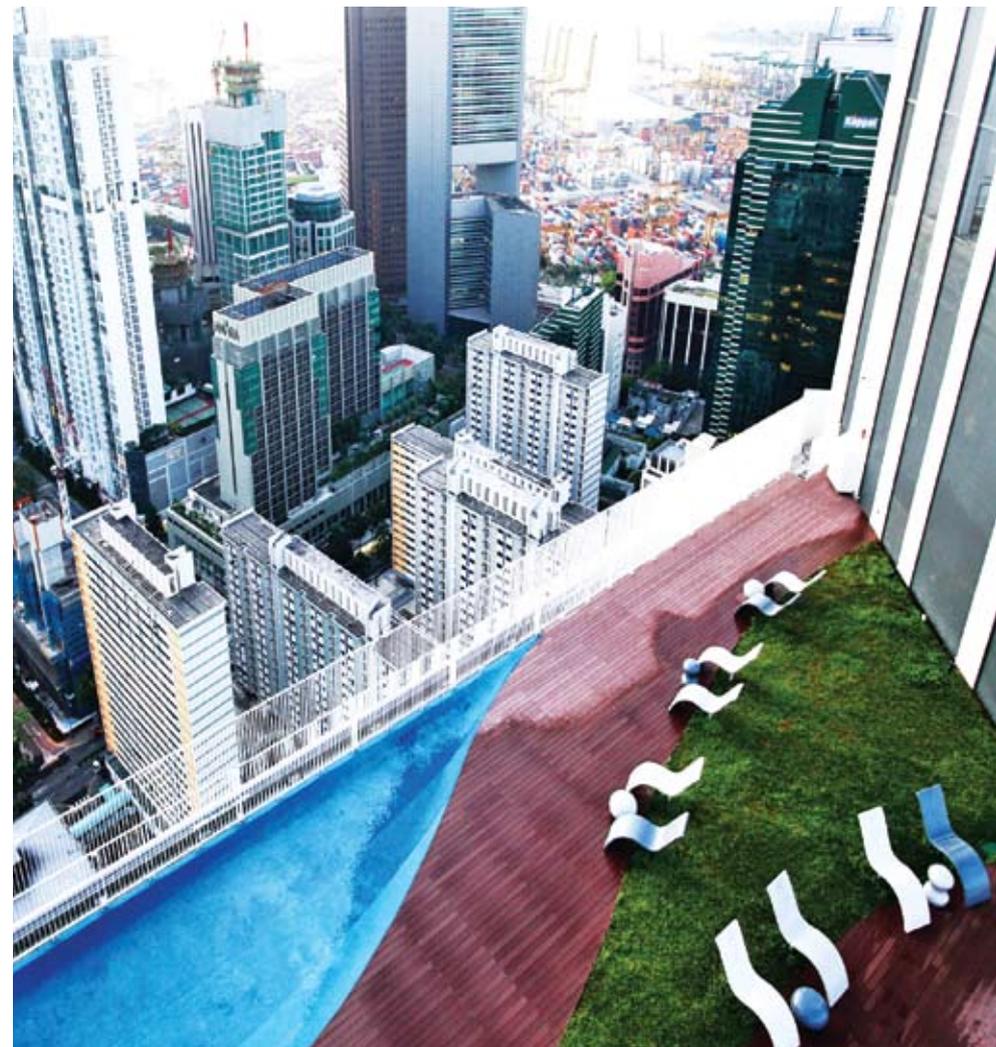
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— Andrew Tan, CEO, NEA



In addition to the various initiatives launched, such as the development of new capabilities, re-allocation of resources and increased focus on research to support operations, Andrew Tan also applied the concept of total defence to the environment. “We reframed our mission to ‘safeguard, nurture and cherish’. So it comes out very strongly that there’s something important enough, not only for NEA but also the community at large to safeguard. ‘Nurture’ and ‘cherish’ have to do with not just looking at the current generation, but at future generations. We want to bring up future Singaporeans with a sense of responsibility towards the environment and whom we are able to hand over the environment to.”

Within a short decade of its founding, NEA has come far in its journey. It has faced and overcome diverse challenges, renewing itself constantly to become better and faster. It has played critical roles in national crises time and again. This is the story of NEA, and the people who made a clean, liveable, healthy, sustainable Singapore a daily reality.



1 Kenneth Chen Koon Lap. 2001. Budget, Ministry of the Environment. Sitting No.: 10. 15 March.  
2 Heng Chiang Meng. 2001. Budget, Ministry of the Environment. Sitting No.: 10. 15 March.  
3 Nathan, Dominic. 2001. Singapore: Green Paradise or Polluted City? *The Straits Times*. 29 January.  
4 Heng Chiang Meng. 2001. Budget, Ministry of the Environment. Sitting No.: 10. 15 March.