



# Risks & Opportunities

TEMASEK REVIEW 2008

**TEMASEK  
HOLDINGS**



Sharing lessons and lasting friendships at St Teresa's School in Rawalpindi, PAKISTAN



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## Making New Paths

**Our success is rooted in our communities. As individuals and as an institution, we benefited from the contributions of those before us. We are here today because they have opened doors of learning and carved out new paths of possibilities.**

In turn, we seek to enrich the community by widening portals of knowledge and extending pathways of opportunities, be it the 1997 endowment to sponsor exchange programmes, the funding of scholarship and research endowments in 2001, or the time, money and effort for the recovery and reconstruction programmes post the 2004 tsunami.

At the heart of the institution is our commitment to make a difference, whether as individual donors or volunteers, or as a team patiently exploring ways to develop a sustainable framework to support the community.

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**“Traveller, there is no path;  
you make the path by walking.”**

**Antonio Machado, Spanish poet and playwright  
1875-1939**

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*Temasek Cares!* is a volunteer group initiated by our staff. It has adopted the Singapore Leprosy Association and the Spastic Children’s Association of Singapore. Our volunteers work directly with these charities to support their needy charges. Other ad hoc efforts include a charity auction to support the young children of two police coast guards who died in the line of duty, and structuring the proceeds into annuities to meet their education and living expenses from childhood to adulthood.

As an institution, we began searching for a more sustainable framework for community sponsorship in 2003, in the uncertain depths of the SARS epidemic.

We broke new ground by earmarking a share of our positive Wealth Added (WA) to fund community initiatives, similar to how we have set aside a share to fund our staff bonuses and performance incentives. It took several more years of meticulous planning and the accumulation of funds in parallel, before we launched two new non-profit philanthropic organisations in May 2007 – the Temasek Trust to manage donated funds; and the Temasek Foundation to focus on identifying or creating community support and development programmes for Asia. These organisations complement the other more Singapore-centric pro bono entities that we continue to support.

We also remain committed as a member of the global citizenry to help shape a shared future of hope and opportunities for our fellowmen. As the Chinese adage goes: 饮水思源 (yǐn shuǐ sī yuán) – remember the source when you drink the water.

### **Temasek Trust**

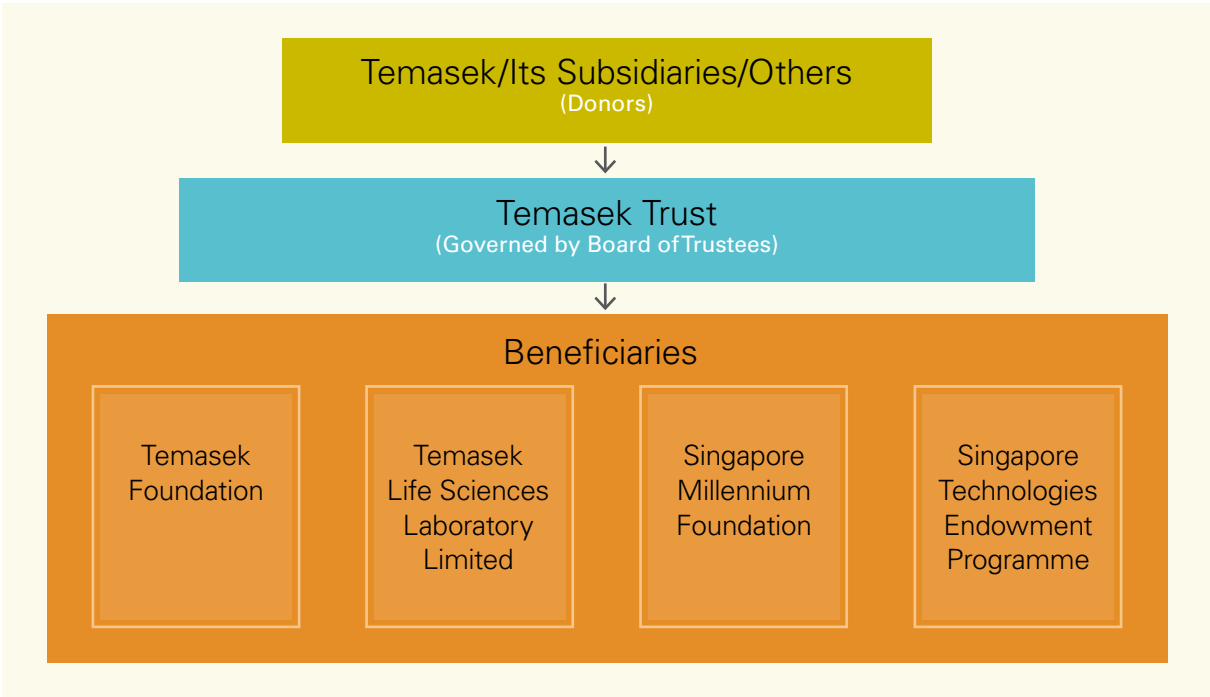
The Temasek Trust, guided by its Trustees, oversees the management of funds it receives from Temasek and other parties, and disburses them to designated non-profit or philanthropic organisations.

Funds gifted to the Trust are co-invested with Temasek or placed with Temasek-approved fund managers. In this way, our management and staff are responsible not just for delivering results for Temasek's shareholder and earning incentives for themselves. We now have an additional stakeholder in the Trust which depends on us for good returns in order to increase the Trust's endowment for the community.

### Singapore Technologies Endowment Programme

Initiated in 1997 as part of the 30th anniversary celebration of the Singapore Technologies group, the Singapore Technologies Endowment Programme (STEP) focuses on building bridges of goodwill and understanding, especially among the youth of Asia.

To date, STEP has successfully organised 10 annual Sunburst Youth Camps (SYC) for more than 1,200 participants from 13 countries including those in ASEAN, China, India, Kazakhstan and the UK. The week-long camp provides opportunities for youths from diverse cultures to build friendships and foster a responsible global citizenry. STEP Alumni have been returning to share their experiences and to mentor new participants. A commemorative book "STEP: Engaging Youth, Across Nations, Beyond Borders" was published in 2007 to celebrate the programme's 10th anniversary. A scholarship programme was also launched, with the first batch of eight participants being offered sponsorships to study in Singapore.



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## More than 1,200

Built friendships at Sunburst Youth Camps

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### Singapore Millennium Foundation

Singapore's success is founded on the strength of the education that the country has provided its people. The Singapore Millennium Foundation (SMF) was first endowed in 2001 at the turn of the millennium to contribute to the development of human capital through research and higher studies, as a way to build upon the foundation of knowledge.

More than 200 scholarships for postgraduate studies and post-doctoral research have been given out, including 37 in 2007. These include areas such as engineering, physical and material sciences, life sciences, and environmental sciences, including water and renewable resources. For the first time, awards were given to medical doctors to pursue translational research.

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## S\$12.5m

Awarded for research in liver cancer, mental health and bio-diesel fuels

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In 2007, SMF also awarded S\$12.5 million over five years for research in liver cancer, mental health and bio-diesel fuels. It sponsored the Lee Kuan Yew Water Prize to recognise outstanding contributions by individuals or organisations towards solving the world's water challenges. The first LKY Water Laureate, Dr Andrew Benedek from Canada,

### Hainan raises the nursing bar



Rapid socio-economic development, along with an ageing population, rising patient expectations and advances in medicine, have resulted in an urgent demand for nursing professionals in China's Hainan Province. In a project funded by the Temasek Foundation, at least 10% of Hainan's 11,000 strong nursing population will be schooled in nursing pedagogy, critical care, emergency and perioperative nursing. These qualified nurses will be better equipped to carry out their roles as registered nurses throughout the island province.

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"The realistic simulated clinical set-up has left a deep impression on us, as have the e-learning strategies, specialised training and borderless concepts. We will share these methods and concepts with our colleagues back home and work to improve our nursing standards."

Ms Shu Liu, Section Chief  
Section of Technological Education  
Hainan Public Health Bureau

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was recognised in March 2008 for his pioneering work in membrane technology. SMF supported activities such as conferences and seminars as well as networking events to provide opportunities for scholars, scientists, researchers and policy makers to interact and exchange ideas.

Two young research scientists sponsored by SMF won the ASEAN Young Scientist and Technology Award and the Singapore Youth Achievement Award respectively in 2008.

### Temasek Life Sciences Laboratory

Set up in August 2002, Temasek Life Sciences Laboratory (TLL) has a research team of some 230 scientists from more than 25 countries. They are engaged in various streams of basic and applied research in molecular biology and genetics, covering microbial, plant and animal sciences. They also seek innovative solutions to practical needs for food supply, food safety, human healthcare and renewable bioresources. Among these is the development of low-cost easy-to-use diagnostic kits for the H5N1 bird flu virus.

With a five-year additional grant from the SMF, TLL is carrying out research to improve the yield of the *Jatropha* plant as a sustainable non-food source of biofuels. This hardy plant is able to grow on marginal land and does not compete with food crops for the use of arable land. TLL is separately training scientists from Aceh, Indonesia, in rice cultivation. Together with a team from Syiah Kuala University, TLL will work on improving a local rice strain to improve yield and shorten the time to harvest. This is part of the pro bono contribution to the post-tsunami reconstruction.

### Filipino educators take a LEAP

Temasek Foundation sponsored 80 educators from nine Filipino public schools to attend the Leaders and Educators in Asia Programme (LEAP) conducted by Singapore's National Institute of Education in partnership with the Philippines' Ateneo de Manila University. LEAP will span two years from early 2008, covering leadership development, teacher education and professional development. The educators will form self-sustaining clusters to share their learnings with the broader teaching community. More than 30,000 students from the nine public schools are expected to benefit from this knowledge transfer.



“The training made a strong impact on me. It made me see where I am now. Knowing myself and my vision of what could be for my teachers and students tomorrow, I want to make a difference.”

Madam Salvacion O. dela Cruz  
Master teacher and Head of Department  
in Mathematics at an elementary school  
Quezon City, Philippines

### Temasek Foundation

The Temasek Foundation was established in May 2007 to provide a broader focus for corporate giving in line with its mandate to build people and their capabilities, build bridges among diverse people, build a culture of excellence and good governance, and rebuild lives and livelihoods affected by major natural disasters.

Independently managed and staffed with its own board, the Foundation had a very busy first year, focused on identifying and developing programmes with long-term impact and defined outcomes. Some S\$16 million has been committed to fund 14 programmes in Asia, including China, India, the Philippines, Vietnam and Singapore.

One programme approach is based on training the trainers or masters, in order to multiply capacity more quickly. Such programmes included English, leadership, and curriculum development courses for more than 80 principals and senior teachers from the Philippines, 480 master teachers and provincial trainers from Vietnam, and some 50 master teachers from Hainan. The Foundation also donated S\$2.5 million to sponsor deans, faculty members and management staff from nine MBA universities in western China to link with five coastal Chinese MBA universities to upgrade, improve and accredit their MBA curriculum and administration. Some 150 nursing instructors, educators and management personnel at nursing schools and hospitals in Hainan have completed their training in nursing management practices and training pedagogy in specific nursing disciplines.

To promote cross-cultural understanding among Asia's youth, the foundation supports

customised student exchange programmes at Singapore's three main universities and their partner universities across Asia. These programmes include community work and a host family programme to deepen cultural immersion. Selected student leaders also participated in the 10-day Model ASEAN Conference hosted by the National University of Singapore in December 2007. This conference marked the start of a two-year programme, where participants from around the region will be actively engaged in discussions on ASEAN policy issues.

The Foundation is sponsoring 140 government officials from Kerala, India to meet with various Singapore agencies to share knowledge and expertise in urban governance and master planning, urban township and facilities management, and sanitation services. The Foundation is also co-sponsoring the training of master builders in West Sumatra, Indonesia, for a low-cost method of strengthening existing walls and housing in order to delay their destruction during earthquakes. The Foundation is currently working on similar programmes for various provinces in China, including Sichuan.

The newly set up Temasek Foundation Centre for Trade & Negotiations at the S Rajaratnam School of International Studies will be another platform for learning and research on international trade and negotiations.

### Wealth Management Institute

The Wealth Management Institute (WMI) presents a very different facet of Temasek's corporate citizenship. Established in 2003 to develop expertise in wealth management for Asia, WMI has graduated 183 participants over the last four years under its flagship Master of

Science in Wealth Management course. The fifth batch of 52 students from 11 countries commenced their course in July 2008.

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“The programme allowed me to update my knowledge and expand my network of central and private bankers from around the region. It was an invaluable experience and one that I recommend for young professionals and budding wealth managers.”



Natsuda Bhukkanasut, THAILAND  
Senior Analyst, Bank of Thailand  
Recipient of Temasek Regional Regulators  
Scholarship (2007)

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As part of Temasek’s 30th anniversary celebrations in 2004, WMI launched the Temasek Regional Regulators Scholarship Programme. This year, scholarships were granted to seven participants from around Asia, including China, Indonesia, Korea, Malaysia, Thailand and Vietnam.

Another well-received programme is the WMI Certificate in Private Banking. Some 600 bankers from Asia, Europe, the Middle East and the US have used the programme as an effective introductory course into the private banking industry.

In July this year, WMI launched a new programme called the WMI Advanced Wealth

Management Programme. This is targeted at the training gap between the introductory certificate course and the rigorous and comprehensive Master of Science degree course.

At WMI, industry practitioners share their experiences and insights to uplift the level of professionalism among the participants and provide them with a unique balance between academic and practical perspectives.

The success of WMI in its fifth year of operation has helped build expertise and sophisticated capabilities at individual and industry levels to support the fast-growing wealth management opportunities in Asia.

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“WMI’s multifaceted programme provides a platform for industry professionals and academics to converge – allowing for an interesting mix of views and opinions. Participating in these diverse exchanges gave me an excellent overview of asset management and private banking.”



Darren Tay, SINGAPORE  
Head of Trading, Fullerton Fund  
Management Company  
Graduate, Masters of Science  
in Wealth Management (2006)

### Think, tinker, teak

Temasek Life Sciences Laboratory's (TLL) research in forestry science, which started about five years ago, was prompted by an increasing demand for wood and wood products, especially by the fast-developing countries in Asia.



The research has blossomed into a spin-off company, Bioforest Pte Ltd, which together with TLL and its partners, initiated a community programme in Sulawesi, Indonesia to contribute improved *Gmelina arborea* (also known as white teak) tree seedlings to farmers in the Indonesian province.

This ongoing community project helps in the reforestation process by slowing down the depletion of natural forests through the creation of an additional source of log supply for the industry.

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“Once the trees have matured, typically in the fifth year, the farmers can harvest the timber for sale. This will generate extra income for their families and improve their living conditions.”

Dr Hong Yan, Director, Plant Biotechnology  
Temasek Life Sciences Laboratory

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### Yielding healthier harvests



The research team at the Temasek Life Sciences Laboratory spent years investigating how plants assemble a defence mechanism against diseases. They isolated a disease-resistant gene in rice which confers resistance to bacterial blight, a devastating disease. Their work was recently published in the scientific journal *Nature*.

In July 2008, the team embarked on a programme to work with scientists from Syiah Kuala University in Aceh, Indonesia, to take the resistant rice strain out of the laboratory and into the paddy fields. The collaboration with Syiah Kuala University includes training two scientists on breeding technologies and molecular biology, and improving techniques of cultivation of the new rice variety.

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“With the knowledge sharing and cultivation activities, we believe the farmers will benefit from better quality rice and in time to come, reap the benefits of a bountiful harvest.”

Dr Yin Zhong-chao, Associate Director  
Temasek Life Sciences Laboratory

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## STEPping out, STEPping back

Ny Sokhour from Phnom Penh, Cambodia, participated in the Sunburst Youth Camp (SYC) in Singapore in 2003 as a 17-year old – his first trip outside his home country.

He added, “Most of the Cambodian participants at SYC have come from the capital Phnom Penh. My goal is to reach out to youths in the provinces and give them an equal chance of participating in the programme. I am pursuing this with my fellow SYC alumni members.”



“We recently visited a private school about 20km outside Phnom Penh to speak to students. We will soon visit more schools in other provinces.”

Today, Sokhour is working with other SYC alumni to help STEP build bridges across Asia by encouraging Cambodians, especially those in the rural provinces to participate in SYC.

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“I was excited to meet so many people from such diverse cultural backgrounds. Interacting with them allowed me to learn about different countries and cultures.”

Ny Sokhour  
Cambodian participant, Sunburst Youth Camp

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## Pulling together for Sichuan

Fullerton Financial Holdings’ Chengdu-based employees worked with the Red Cross of China to distribute tents, food packs, sleeping bags, and portable search lights in the aftermath of the Sichuan earthquake.

Many of Temasek’s portfolio companies, ST Engineering for example, assisted with search and rescue as well as logistics efforts. Great Wall Airlines, a joint venture of SIA Cargo, airlifted 12,000 tents from Pakistan to Sichuan, while Singapore Airlines’ Silkair extended free carriage for about 20 tons of relief materials to the earthquake zone.



Temasek, its portfolio companies and group employees also contributed about S\$11 million to relief and reconstruction efforts as at June 2008. Temasek Holdings made a direct contribution of US\$1 million.

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“Schoolchildren, some still in hospital, expressed great interest in returning to school. We are supporting physical and psychological rehabilitation by building temporary schools.”

Joseph Han, Project Leader, Mass Market  
Fullerton Financial Holdings

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