



**Asia-Pacific
Economic Cooperation**

2011/SOM3/CD/018

Agenda item: 5.a

Strategic Framework for Chemicals in the Asia Pacific Region

Purpose: Information
Submitted by: CDSG Chair



**Chemical Dialogue Meeting
San Francisco, United States
13 September 2011**



Strategic Framework for Chemicals in the Asia-Pacific Region

By the APEC Chemical Dialogue

**Chemistry providing sustainable and
innovative solutions**



Preamble

The APEC Chemical Dialogue (Chemical Dialogue) serves as a forum for government officials and industry representatives to find solutions to challenges facing the chemical industry and users of chemicals in the Asia-Pacific region. It reflects APEC member economies' recognition of the importance of engaging with the private sector and building public-private sector dialogue and cooperation for mutual benefit.

Issues addressed by the Chemical Dialogue include chemical sector liberalisation related to non-tariff measures, chemical trade facilitation and capacity building. The Chemical Dialogue also focuses on improving regulatory policies and business practices with a view to enhancing trade liberalisation by driving workable regulatory programs to harmonise regulatory, health and safety, and environmental outcomes and thereby reducing trade barriers through the adoption of unique requirements.

The Chemical Dialogue has developed this Strategic Framework to guide a program of work to achieve its objectives and to help position the industry as a strategic contributor to the economy, sustainable innovation and trade in the region. The *APEC Chemical Strategic Framework for 2011-2013* (Strategic Framework) has been developed in line with the APEC Chemical Dialogue Terms of Reference and reflects broader APEC strategic objectives, such as: strengthening regional economic integration and expanding trade; promoting green growth; and expanding regulatory cooperation and advancing regulatory convergence.

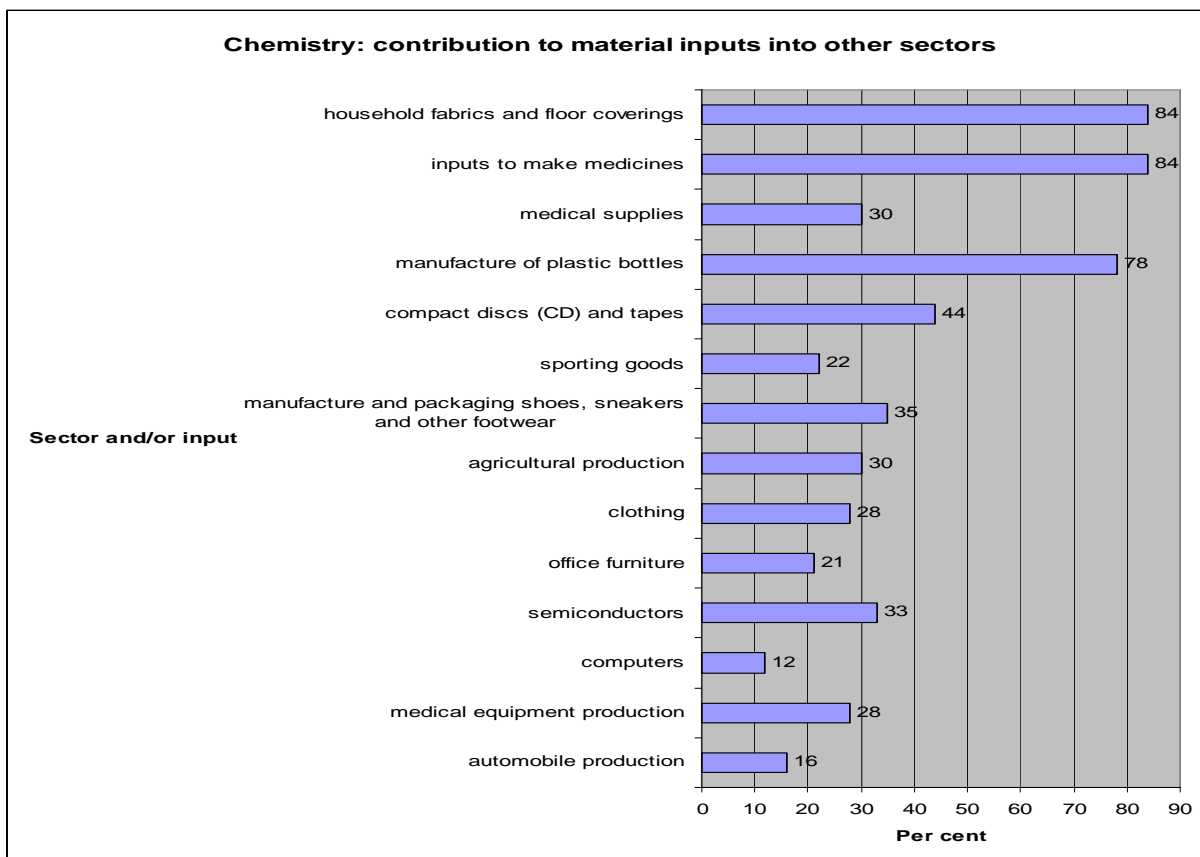


The importance of the chemical industry for APEC

As 2011 is the International Year of Chemistry it is important to recognise the contributions of the sector to the economy and general well being of society. Its products are widely traded across borders, and it is a key economic building block in APEC economies.

Chemical exports from North America, Asia and Russia were US\$492 billion in 2009, and accounted for just over one-third of global chemical exports¹. This share of global chemical exports has remained constant over the past five years². The average share of chemicals in APEC economies' exports of manufactured goods was 15.0 percent in 2009, compared with a global average of 17.3 percent³.

The chemical industry is a cross-cutting sector that contributes to almost all industrial and many non-industrial sectors. In terms of the value of material inputs into other sectors, estimates suggest that chemistry contributes:



(Source: *The Business of Chemicals is Everywhere*, APEC Chemical Dialogue, <http://www.apec.org/Groups/Committee-on-Trade-and-Investment/-/media/Files/Groups/CTI/TheBusinessOfChemistryIsEverywhere.ashx> accessed 24 January 2011)

¹ WTO International Trade Statistics 2010, Tables II.37 and II.38.

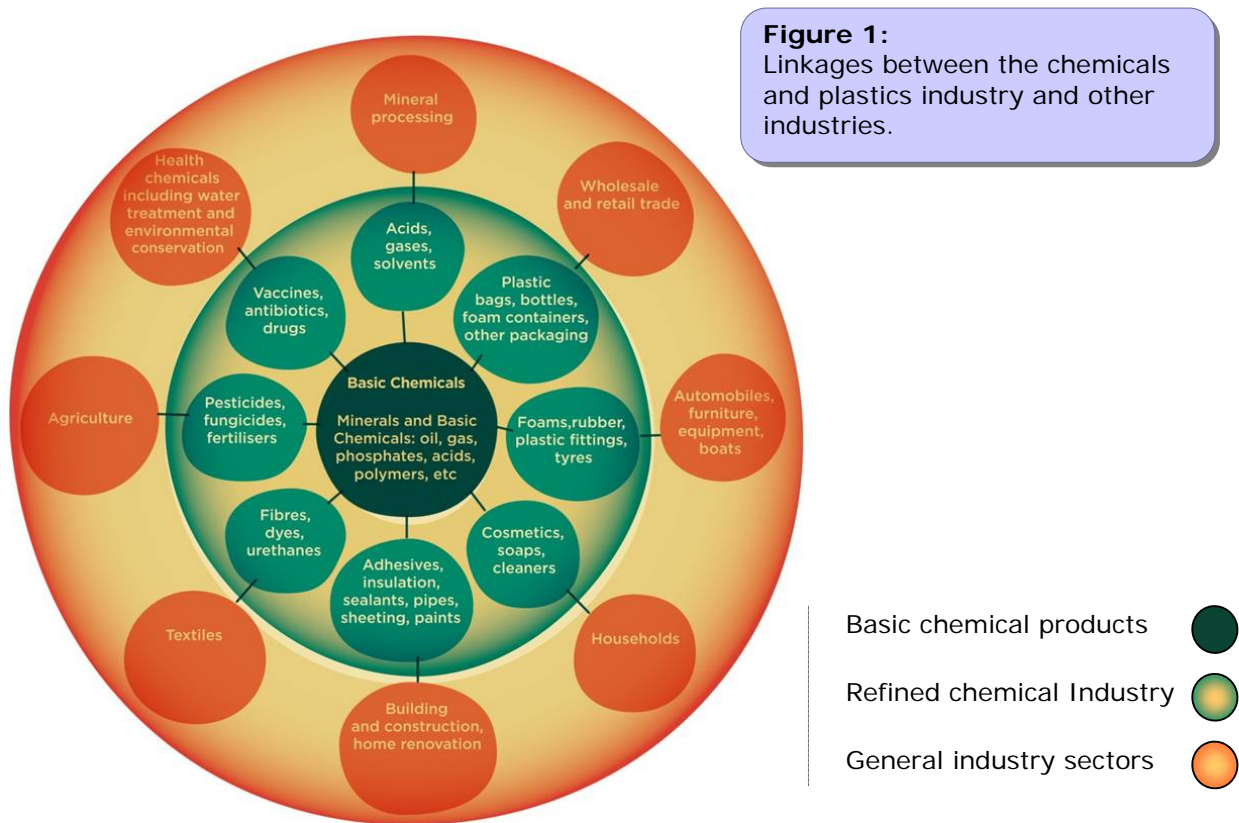
² WTO International Trade Statistics 2010, Tables II.37 and II.38 and WTO International Trade Statistics 2005, Tables IV.35 and IV.36. Here North America includes Bermuda, Canada, Mexico and the United States of America.

³ WTO Statistics Database: time series on international trade <http://stat.wto.org/Home/WSDBHome.aspx?Language=E> accessed 28 January 2010.

The chemical industry is extremely diverse. Its products and services are fundamental to the economic and social wellbeing of member economies. The global chemical industry is intensely competitive and needs a level playing field in APEC economies to enable it to compete effectively in the global economy.

The chemical industry has been central to developing innovative products and services that make people's lives better, healthier and safer. From small improvements in everyday life to fundamental advancements in science and technology, the chemical industry has helped lift billions of people out of poverty and sickness and into a life of relative prosperity.

Chemistry is synonymous with innovation and innovative business practices. From medicine to energy to computing to transport and many more industries beyond, the chemicals and plastics industry has provided the products and services that make the world what it is today. Some of these products have been in response to an immediate need. Others have looked beyond the horizon, opening up entirely new markets and opportunities that have driven solutions today to problems that seemed only achievable several decades into the future.



Source: Plastics and Chemicals Industries Association *Workshop Forum: Key Themes and Directions, 22 April 2010*

To get a sense of the magnitude of the chemical industry's contribution to global productivity, it is important to consider how economies are positioned in terms of trade. Though the business of chemistry is worldwide in scope, the bulk of the world's US\$3.7 trillion chemical output is accounted for by only a handful of industrialized economies. The United States alone produced US\$689 billion,

18.6 percent of the total world chemical output in 2008. APEC member economies are proving to be a growing source of influence in the global trade of chemicals as the tables below show.

Chemicals Exports to the World

US dollars (millions) current prices

	1999	2006	2007	2008	2009	average annual growth rate (current prices)
Australia	2,487	5,168	6,496	7,071	6,308	0.0975
Brunei Darussalam	-	3	-	-	-	-
Canada	12,864	29,440	34,705	37,919	27,935	0.0806
Chile	764	2,453	2,569	3,173	2,320	0.1175
China	10,373	44,529	60,340	79,310	62,006	0.1958
Hong Kong, China	9,359	15,585	17,067	17,430	14,967	0.0481
Indonesia	2,381	5,396	6,425	6915*	5,808	0.0933
Japan	30,722	57,850	65,138	69,003	61,285	0.0715
Korea, Republic of	10,757	31,806	37,540	42,705	37,412	0.1327
Malaysia	2,727	8,756	10,608	11,784	9,472	0.1326
Mexico	4,530	8,832	10,131	11,397	10,095	0.0834
New Zealand	897	1,150	1,412	1,549	1,311	0.0387
Papua New Guinea	-	-	-	-	-	-
Peru	163	471	649	863	681	0.1537
Philippines	301	765	1,019	1,123	963	0.1233
Russian Federation	5727**	15,102	19,180	27,530	18,428	0.1240
Singapore	9,074	30,838	33,654	31,888	30,205	0.1278
Taipei, Chinese	7,054	22,391	28,553	31,218	25,872	0.1388
Thailand	2,980	10,440	12,179	13,778	12,438	0.1536
United States	71,989	135,404	154,945	179,609	159,761	0.0830
Viet Nam	142	790	1,028	1,446	989**	0.2142
World	537,217	1,243,368	1,475,113	1,676,065	1,447,125	0.1042

Chemicals Imports from the World

US dollars (millions) current prices

	1999	2006	2007	2008	2009	average annual growth rate (current prices)
Australia	7,581	14,027	16,625	19,862	17,090	0.0847
Brunei Darussalam	-	175	-	-	-	-
Canada	18,351	36,119	39,197	41,461	36,597	0.0715
Chile	1,926	3,911	4,723	6,489	4,563	0.0901
China	24,030	87,047	107,421	118,997	111,973	0.1664
Hong Kong, China	11,593	20,023	21,418	21,990	18,178	0.0460
Indonesia	4,497	8,675	10,045	15937*	11,775	0.1010
Japan	22,788	41,472	45,832	54,946	48,893	0.0793
Korea, Republic of	11,332	27,573	32,337	36,527	31,385	0.1072
Malaysia	4,901	10,220	12,067	13,726	11,227	0.0864
Mexico	12,931	27,525	30,246	33,822	27,772	0.0794
New Zealand	1,769	2,850	3,328	3,874	2,995	0.0541
Papua New Guinea	-	-	-	-	-	-
Peru	1,033	2,334	2,984	4,082	3,261	0.1218
Philippines	2,797	3,975	4,229	5,167	4,483	0.0483
Russian Federation	3931**	18,344	21,017	27,009	22,448	0.1903
Singapore	6,629	14,300	15,739	16,678	14,590	0.0821
Thailand	5,678	13,189	15,385	19,607	14,352	0.0972
Taipei, Chinese	12,669	26,065	28,737	30,559	23,935	0.0657
United States	64,095	146,576	159,162	180,913	153,956	0.0916
Viet Nam	2,025	6,287	8,369	10,285	8683**	0.1567
World	552,488	1,295,103	1,537,928	1,762,123	1,483,854	0.1038

Source: World Trade Organisation statistics database: time series

<http://stat.wto.org/CountryProfile/WSDBCountryPFHome.aspx?Language=E>
accessed 27 January 2011

* break in series

** estimated value

APEC Context

APEC Leaders have identified sustainable growth and innovation as key aspects of the APEC agenda for the near term, and have committed to accelerating work on regional economic integration issues such as border controls, improved regulatory frameworks and rules of origin. APEC Leaders have also encouraged inclusive growth, ensuring that small and medium enterprises benefit from regulatory reform and innovation.

The Chemical Dialogue developed this Strategic Framework to better direct its work, particularly in light of the increased focus by APEC member economies on chemical regulatory systems. APEC member economies that have recently amended or are anticipating revisions to their domestic chemical regulatory systems include Australia, China, Japan, Chinese Taipei, and the United States.

The Action Plan (included below) directs the work of the Chemical Dialogue and will be added to continually, up until the Framework is evaluated and reviewed in 2013.

Global Context

Chemicals management is high on the international agenda over the next three years. The 2010-2011 cycle of the UN Commission on Sustainable Development includes chemicals, waste, and sustainable consumption and production on its agenda. The UN Conference on Sustainable Development (or Rio+20 Earth Summit), scheduled for 2012, is likely to consider the contribution of chemicals to sustainability in the context of its focus on the green economy. Additionally, the Strategic Approach to International Chemicals Management (SAICM) continues to focus on reaching its goal of achieving safer chemicals management by 2020. The Chemical Dialogue made an important contribution to the SAICM implementation at the Second International Conference on Chemicals Management (ICCM2) in 2009 by introducing its *Principles for Best Practice in Chemical Regulation* and the Dialogue's report on implementing the UN Economic Commission for the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as APEC contributions to SAICM implementation. Both of these documents were endorsed by APEC Trade Ministers in 2008.

The Chemical Dialogue has also continued its exchanges with the European Union (EU) on its programme to review its existing chemicals through the Registration Evaluation and Authorisation of Chemicals (REACH) legislation, in order to enhance compliance for trade across regions. The Chemical Dialogue also continues to engage in dialogue with the Organisation for Economic Cooperation and Development (OECD) and undertake significant work to continue to implement the GHS. These activities, along with the following objectives and identified deliverables, will direct the Chemical Dialogue's efforts towards its mandate of improving the mutual understanding of key imperatives for the development of future policy and for enhancing the competitiveness of the industry.

Challenges and Opportunities

Over the next three years, APEC meetings will be hosted by economies with important roles not only in the business of chemistry, but in the role of chemistry as an innovative solutions industry that promotes energy efficiency, greenhouse gas reductions, and technology breakthroughs in electronics, aerospace and medicine, among many others.

The APEC region and its member economies' regulatory and industrial entities are diverse and complex. The Chemical Dialogue has already demonstrated significant interest in increasing the pace and intensity of discussions on chemical-related issues. The Chemical Dialogue has established a "Regulators' Forum" and on 1 and 2 March 2010 hosted the first in a series of capacity-building workshops and seminars to share information, highlight priorities and needs, and build upon the agreed *Principles for Best Practice in Chemicals Regulation*.

There are substantial challenges facing the APEC region's chemical sector. The global chemical regulatory environment is undergoing significant change and governments are becoming increasingly committed to facilitating innovation. If APEC member economies are to meet these challenges, they need to enhance and expand the role of the chemical sector as an enabler of solutions.

Strategic Objectives

To this end, the Chemical Dialogue has agreed to the following overarching strategic objectives for the *APEC Chemical Strategic Framework*:

- 1. To facilitate alignment of the Leaders' goals for sustainable economic growth and regulation.**
- 2. To promote regulatory capacity and convergence to facilitate trade while enhancing environmental and health protection.**
- 3. To enhance chemical management and product stewardship over the life cycle and in cooperation with other initiatives and institutions where appropriate, e.g., the OECD, UN, SAICM, WHO.**
- 4. To identify barriers to utilizing chemicals, products and processes to achieve sustainable and innovative solutions to global problems.**
- 5. To strengthen the positioning of the sector globally as an enabler of technological change and innovation as part of meeting challenges across the three key areas of focus for APEC – trade and investment liberalisation; business facilitation; and economic and technical cooperation.**



A way forward

To achieve these strategic objectives, the *APEC Chemical Strategic Framework 2011-2013* will focus on making progress in key areas. Shared goals have been agreed and an integrated, coherent approach will be taken to fulfilling these goals.

Shared Goal 1: Expand and Support Cooperation and Mutual Recognition among Chemical Regulators in the Region to facilitate trade by:

- a. Building support for and participation by chemical regulators in the Regulators' Forum and Chemical Dialogue to exchange information on best practices in the sound management of chemicals.
- b. Expanding the opportunities created by the Regulators' Forum to address key issues of mutual concern to economies in the region. (e.g., cooperation with industry associations such as the OECD Business and Industry Advisory Committee (BIAC) and domestic trade associations, as well as government delegations).
- c. Identifying specific opportunities to contribute and collaborate with other international chemical fora e.g. SAICM, Commission on Sustainable Development (CSD), OECD, UN, etc., in the sound management of chemicals.
- d. Promoting greater awareness and involvement of stakeholders along the value chain, across economies and society in the work of the Regulators' Forum and the Chemical Dialogue.
- e. Continuing to serve as a focal point for regional contact with the European Union regarding implementation of the REACH and CLP Regulation (Classification Labelling and Packaging Regulation of substances and mixtures), while also conducting outreach to SMEs and along the value chain on relevant requirements, in order to promote common understanding and facilitate exports from the region.
- f. Promoting harmonised implementation of the GHS across member economies to facilitate trade.
- g. Identifying opportunities to enhance regional economic integration in chemicals, for example through GHS implementation and APEC efforts to enhance implementation, and possible examination of how trade related aspects of chemicals are covered in Free Trade Agreements (FTAs) and Regional Trade Agreements (RTAs) in the region.

Strategies for meeting Goal 1:

- 1.1 **Maintain the APEC Regulators' Forum** via annual meetings to discuss regulatory best practice and promote regional harmonisation. The next forum will be held in Washington in February/March 2011.
- 1.2 **Conduct Chemical Management Best Practice Seminars** including train-the-trainer seminars and developing a Regulatory Best Practice Checklist. The next seminar will occur in Washington in February/March 2011.
- 1.3 **Engaging with the European Chemicals Agency (ECHA)** to communicate APEC member economy concerns with implementation of REACH and highlighting potential barriers to trade.
- 1.4 **Obtain APEC member economies' input into REACH** surveys and on ECHA deliberations on REACH implementation issues, including ensuring SME issues are addressed. This occurred in April 2010 and will be ongoing.
- 1.5 **Monitor and promote the GREAT project** via member economies providing resources on GHS implementation.
- 1.6 **Maintain the GHS Consumer Products Working Group** to develop an APEC Chemical Dialogue Principles Framework for GHS and Consumer Goods for use by member economies.
- 1.7 **Maintain the GHS Virtual Working Group** to gather information and develop practical case studies to guide industry and government in GHS transition and implementation, and continue compiling the GHS reporting template to assist member economies' understanding of global progress with implementation.
- 1.8 **Improving the business environment** "behind the borders" to remove impediments for trade liberalization through WTO, FTA and individual actions.
- 1.9 **Establish a Virtual Working Group** to scope policy and regulatory issues related to "chemicals in articles".

Shared Goal 2: Enhance Understanding of the Chemical Industry's Role as an Innovative Solutions Industry by:

- a. Identifying barriers for the sector in utilising chemicals, products and processes to achieve sustainable and innovative solutions to global problems.

- b. Identifying specific projects to enhance industry capacity, encourage industry innovation especially among SMEs and produce specialty chemicals and/or inputs to industry.
- c. Identifying areas where the appropriate use of chemical products helps address regional issues such as energy efficiency, greenhouse gas reductions, health and hygiene and food security.

Strategies for meeting Goal 2:

- 2.1 Undertake an initial investigation** of the extent to which the sector provides innovative solutions, including any scope for improvement.
- 2.2 Initiate dialogue and develop a proposal on measures to support areas of chemical innovation** that align with APEC focus areas before the review of this Strategic Framework.
- 2.3 Promote the sector as a source of innovative solutions** to global issues in other APEC areas such as the food system, agricultural biotechnology and industrial science and technology.
- 2.4 Investigate the integration of APEC trade facilitation working group strategies** with the role of the chemicals sector as providers of innovative solutions.

Shared Goal 3: Encourage Chemical Product Stewardship, Safe Use and Sustainability by:

- a. Expanding cooperation with the OECD Chemicals Committees.
- b. Leveraging voluntary industry activities (e.g., industry's Responsible Care program, industry commitments to provide appropriate hazard, use and exposure information, risk assessment, ICCA/GPS etc).
- c. Undertaking work on specific tools that can enhance chemicals management capabilities (e.g., life cycle assessment and risk assessment), taking into account the special needs of SMEs.
- d. Considering how chemical product stewardship and information contributes to growth in environmental goods and services and facilitates sustainable growth.

Strategies for meeting Goal 3:

- 3.1 **Maintain dialogue established through Best Practice Workshop** with the UN and WHO throughout 2011.
- 3.2 **Engage in SAICM** at SOM1 in 2011. This includes undertaking a mapping exercise of APEC Chemical Dialogue work against SAICM core objectives, developing and promoting a plan of action and common positions; consulting other APEC stakeholders as appropriate; and convening informational seminars.
- 3.3 **Promote chemical industry global and regional initiatives, including voluntary industry programs** during 2011 by preparing an APEC CD contribution on risk reduction programs and efforts to strengthen domestic capabilities for chemicals management, and preparing for an APEC role in the UN Commission on Sustainable Development meetings and Rio+20 Earth Summit meeting in 2012.
- 3.4 **Monitor safe use capabilities and tools** to facilitate targeted chemical product stewardship.
- 3.5 **Identify and develop tools that would assist industry** to enhance their chemical management capabilities.

Conclusions

The APEC region's chemical agenda is diverse and challenging, but vital in many ways to the overall APEC strategic agenda. The chemical industry must face its current challenges while simultaneously embarking on a fresh process to position itself as a provider of sustainable and innovative global solutions. The Chemical Dialogue will continue to promote best practices and information exchange in chemicals regulation and management in the APEC region to help the sector adapt to regulatory change. The Chemical Dialogue will progress work that contributes to sustainable growth and the advancement of the sector as an enabler of innovative solutions that make people's lives better, healthier and safer.



APEC Action Plan for Chemical Strategic Framework 2011-2013

Activities	Years	Economies
Shared Goal 1: Expand and Support Cooperation and Mutual Recognition among Chemical Regulators in the Region to facilitate trade		
1.1 Maintain the APEC Regulators' Forum via annual meetings to discuss regulatory best practice and promote regional harmonisation.	Ongoing	Australia/Chinese Taipei/New Zealand/US
1.2 Conduct Chemical Management Best Practice Seminars including train-the-trainer seminars and developing a Regulatory Best Practice Checklist.	Ongoing	Australia/Chinese Taipei/New Zealand/US
1.3 Engaging with the European Chemicals Agency (ECHA) to communicate APEC member economy concerns with implementation of REACH and highlighting potential barriers to trade.	Ongoing	Japan
1.4 Obtain APEC member economies' input into REACH surveys and on ECHA deliberations on REACH implementation issues, including ensuring SME issues are addressed. This occurred in April 2010 and will be ongoing.	Ongoing	Japan
1.5 Monitor and promote the GREAT project via member economies providing resources on GHS implementation.	Ongoing	Chinese Taipei
1.6 Maintain the GHS Consumer Products Working Group to develop an APEC Chemical Dialogue Principles Framework for GHS and Consumer Goods for use by member economies.	SOM 1 2011	Australia/Japan/ Chinese Taipei/New Zealand/US
1.7 Maintain the GHS Virtual Working Group to gather information and develop practical case studies to guide industry and government in GHS transition and implementation, and continue compiling the GHS reporting template to assist	Ongoing	Australia

Activities	Years	Economies
<p>member economies' understanding of global progress with implementation.</p> <p>- Mexico to explore the "Single Window " application by the Sub-Committee on Customs Procedures for GHS/Customs interface.</p>		Mexico
1.8 Improving the business environment "behind the borders" to remove impediments for trade liberalization through WTO, FTA and individual actions.		
1.9 Establish a Virtual Working Group to scope policy and regulatory issues related to "chemicals in articles".		Australia/US
Shared Goal 2: Enhance Understanding of the Chemical Industry's Role as an Innovative Solutions Industry		
2.1 Undertake an initial investigation of the extent to which the sector provides innovative solutions, including any scope for improvement.		US
2.2 Initiate dialogue and develop a proposal on measures to support areas of chemical innovation that align with APEC focus areas before the review of this Strategic Framework.		
2.3 Promote the sector as a source of innovative solutions to global issues in other APEC areas such as the food system, agricultural biotechnology and industrial science and technology.		
2.4 Investigate the integration of APEC trade facilitation working group strategies with the role of the chemicals sector as providers of innovative solutions.		US
Shared Goal 3: Encourage Chemical Product Stewardship, Safe Use and Sustainability		
3.1 Maintain dialogue established through Best Practice Workshop with the UN and WHO throughout 2011.		CD
3.2 Engage in SAICM at SOM1 in 2011. This includes undertaking a mapping exercise of APEC Chemical Dialogue work against SAICM core objectives, developing and promoting a plan of action and common positions; consulting other APEC stakeholders as appropriate; and convening informational seminars.	End date 2012	CD

Activities	Years	Economies
<ul style="list-style-type: none"> - Establish a Virtual Working Group to present APEC CD work to SAICM. 		Australia/Chinese Taipei/New Zealand/USCIB/US
<p>3.3 Promote chemical industry global and regional initiatives, including voluntary industry programs during 2011 by preparing an APEC CD contribution on risk reduction programs and efforts to strengthen domestic capabilities for chemicals management, and preparing for an APEC role in the UN Commission on Sustainable Development meetings and the Rio+20 Earth Summit meeting in 2012.</p> <ul style="list-style-type: none"> - Establish a Virtual Working Group to develop a project on the importance of chemistry to the green economy. 		Australia/Japan/US
<p>3.4 Monitor safe use capabilities and tools to facilitate targeted chemical product stewardship.</p>		
<p>3.5 Identify and develop tools that would assist industry to enhance their chemical management capabilities:</p> <ul style="list-style-type: none"> - Scope development of economy-by-economy information repository to facilitate emergency response to the transport of dangerous goods. 		Mexico/US

ATTACHMENT

Extracts from 11/10 Leaders and Ministers Statements

The 18th APEC ECONOMIC LEADERS' MEETING – Yokohama, Japan, November 2010

THE YOKOHAMA VISION - BOGOR AND BEYOND

Economies should strengthen their resilience and capacity to manage emergencies and natural disasters. Infectious disease preparedness, non-communicable disease control, and health systems should be enhanced. The availability of and access to reliable, nutritious, safe, and affordable food should be further ensured. Efforts to combat corruption and illicit trade and improve governance should be strengthened.

We will fight poverty and hunger by taking concrete steps to help all peoples in the region maintain a reasonable standard of living. We will identify and implement initiatives to secure the region's economic systems from terrorist attack, disruption, and misuse, counter terrorism financing, facilitate trade recovery, and enhance cyber security. We will continue our efforts to fight corruption and promote transparency, and call for improved and regular reporting by APEC on its efforts to meet our commitments in this area. We will further develop practical disaster risk management mechanisms to strengthen the ability of our economies to manage emergencies and natural disasters. We will improve the capacity of economies for responses to infectious diseases, control of non-communicable diseases, and strengthening of health systems. We will facilitate sustainable agricultural production, trade and investment in agricultural products, technical cooperation, development and use of science-based regulations, and other initiatives to strengthen regional and global food security, bearing in mind the exceptional role of food as an absolute necessity for all human societies. We will encourage all economies to strengthen international and regional cooperation to achieve the goal of safer food.

Under our green growth agenda, we will assess the potential for reducing the energy intensity of economic output in APEC economies further than called for in our Sydney Declaration in 2007, enhance work on meeting the aspirational goal in the Sydney Declaration of increasing forest cover in the region by at least 20 million hectares of all types of forests by 2020, and instruct our officials to take concrete steps toward this goal. We will also enhance our cooperation to address concerns with illegal logging and associated trade and to promote sustainable forest management and rehabilitation. We will implement policies to create new green jobs, technologies, and industries to enhance regional energy security, decrease environmental degradation and the effects of climate change, and promote sustainable growth. We will promote energy-efficient transport. We will increase the dissemination and utilization of environmental goods and services, reduce existing barriers and refrain from introducing new barriers to trade and investment in such goods and services, and enhance our capabilities to develop this sector, by prioritizing work related to addressing non-tariff measures on environmental goods, technology, and services. We will rationalize and phase out inefficient fossil fuel subsidies that encourage wasteful consumption, while recognizing the importance of providing those in need with essential energy services, and review progress toward this goal on a voluntary basis. We will promote deployment of low-emission power sources - renewable, nuclear, and fossil fuels with carbon capture and storage - to make our energy supply cleaner. We will create low-carbon communities in the region. We will facilitate the diffusion of climate-friendly technologies, including through ECOTECH and capacity building activities. We will ensure the sustainable development of our oceans, seas, and coasts, including their resources, and the conservation of the marine environment.

THE APEC LEADERS' GROWTH STRATEGY

APEC economies should encourage new green industries and jobs, including by introducing market-based mechanisms as an important tool to achieve sustainable growth and address climate change. APEC should help to establish a low-carbon society in which we maintain economic growth while protecting the environment. It can do so by taking steps to facilitate the diffusion of clean energy technologies and systems, including by reducing barriers to trade and investment in energy efficient

products, conducting international joint research, building capacity, promoting public-private partnerships, and providing appropriate incentives for investment in energy efficient and low-carbon energy supply, buildings, industry, and transport.

Adaptation to climate change impacts is also critical. Water stress, including water-related risks such as flooding and droughts, is likely to increase as a result of climate change, which may negatively impact food security, human health, and freshwater resources. Different situations in different economies will likely require different sets of adaptation measures. All relevant parties, including scientists, policy makers, and other stakeholders in APEC economies should therefore be engaged to develop the integrated approach needed to resolve this problem

- ❖ Enhance dialogues and information sharing on innovation policy. Innovation policy requires multi-dimensional approaches, including human resource and entrepreneurship development, R&D investment, tax incentives, financial measures, public-private partnership, and international cooperation. APEC will strengthen innovation policies by sharing best practices for more effective policy making and implementation.
- ❖ Promote innovation and creativity through effective, comprehensive, and balanced intellectual property (IP) systems. APEC economies will improve their intellectual property rights protection and enforcement capabilities, and the IP utilization and commercialization environment in the region, which in turn will contribute to the development and dissemination of technology. To this end, APEC economies will strengthen efforts to develop a global IP infrastructure for the promotion of innovation consisting of improved legal/administrative, human resource, and ICT components. Cooperative efforts in this context will include those under J APEC's Anti-Counterfeiting and Piracy Initiative and the Cooperation Initiative on Patent Acquisition Procedures. APEC will continue dialogues, information exchange, experience sharing, technical cooperation, and capacity building across all stakeholder groups in member economies.
- ❖ Promote cooperation on standards. APEC will promote cooperation on standards in coordination with the Specialist Regional Bodies and promote greater alignment of domestic standards with international standards, as well as cooperation on standardization in advanced technologies.

The 22nd APEC MINISTERIAL MEETING – Yokohama, Japan, November 2010

JOINT STATEMENT

Engaging Stakeholders in APEC

51. APEC is uniquely positioned to help address the challenges that the Asia-Pacific region faces by deepening public-private interactions with ABAC and other stakeholders. We welcomed the valuable inputs that ABAC provided this year on REI, the APEC Leaders' Growth Strategy, and human security.

52. We reaffirmed the critical roles of APEC's industry dialogues in bringing attention to practical and urgent issues and in proposing solutions to the challenges in the region. In this regard, we commended the endeavours that the Automotive Dialogue made this year, including its initiatives on green technologies, preferential ROOs, harmonization of technical regulations, and collaboration with other APEC fora. We endorsed the Chemical Strategic Framework for 2010-2012 developed by the Chemical Dialogue, and instructed officials to continue to work on best practices for sound chemicals management in the region. We also welcomed the valuable contributions of the Life Sciences Innovation Forum in identifying ways to take advantage of health innovations, enhancing the investment environment for the life sciences to drive growth, advancing regulatory harmonization, goals and target dates and addressing the challenges of the aging population, and of chronic, infectious and re-emerging diseases in the region. We welcomed the report of the High Level Policy Dialogue on Agricultural Biotechnology this year on conventional and bio-technological means to help the agricultural sector adapt to and mitigate the impacts of climate change.