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**OECD JOINT WORKING PARTY ON TRADE AND ENVIRONMENT:  
ENVIRONMENTAL GOODS:  
A COMPARISON OF THE APEC AND OECD LISTS**

Information Note by the OECD Secretariat

The attached paper has been received from the OECD Secretariat and is being circulated to Members of the CTE and the CTESS for information..

## **FOREWORD**

This report has been prepared in response to a request from the Joint Working Party on Trade and Environment (JWPTE). It was drafted by Ronald Steenblik in the Trade Policy Linkages Division of the Trade Directorate, under the supervision of Dale Andrew. The Secretary-General has agreed to declassify the document under his responsibility, as recommended by the JWPTE, with the aim of bringing information on this subject to the attention of a wider audience.

The report, which is also available in French, can be found on the OECD website at the following address: <http://www.oecd.org/trade> and <http://www.oecd.org/trade/env>

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## I. EXECUTIVE SUMMARY

1. Paragraph 31(iii) of the Doha Ministerial Declaration calls for negotiations on “the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services.” “Environmental goods” were not further defined in the Doha declaration. However, a substantial amount of work to identify the scope of environmental goods had already been undertaken by the OECD and APEC, culminating in two product lists of candidate goods, one from each organisation.

2. Counting only entries with corresponding Harmonized System (HS) codes, the OECD list appears to be about 50% longer than the APEC list. However, when one eliminates multiple listings at the 6-digit level, they are more similar in length: there are 132 unique HS codes in the OECD list, compared with 104 in the APEC list. The composite list has 233 entries identified with an HS code, covering 198 different goods. These magnitudes are small compared with the total numbers of lines contained in WTO Members’ national tariff schedules, which range from less than 6 000 (in the schedules of Australia and India) to over 11 000 (in the schedules of Hungary, Korea, Mexico, and Turkey). In all, less than 30% of the goods are common to both lists. The greatest areas of overlap are found in the categories of air-pollution control, recycling, incineration, and measuring and monitoring equipment.

3. In reviewing the developmental history of the OECD and APEC product lists of environmental goods, it is clear that the two exercises were interlinked and informed each other. For example, the drafters of the APEC list consciously based their categories of environmental goods in large part on the work being undertaken at the time by the OECD/Eurostat informal working group on the environment industry. However, the objectives of the two exercises differed, as did the procedures for generating the lists.

4. The OECD list was the result of an exercise intended to illustrate, primarily for analytical reasons, the scope of the “environment industry.” The selection of categories of goods could therefore be broad, because there were no specific policy consequences of adding products to the list. Moreover, the OECD’s larger list was created deductively: starting from general categories based on the classifications appearing in the environment industry manual, and adding more specific examples, in order to produce an estimate of average tariffs on a previously undefined class of goods.

5. The APEC approach started with nominations — not unlike the request/offer procedures traditionally used in trade negotiations — yielding a list of goods which was then arranged according to an agreed classification system. Further, since the aim of the APEC list was to obtain more favourable tariff treatment for environmental goods, APEC member economies limited themselves to considering only those specific goods that could be readily distinguished by customs agents and treated differently for tariff purposes. For this reason, issues related to “like products”, products defined by particular processes or production methods, and products defined by their life-cycle impacts, were not addressed, with the result that some goods were left off the list that could be included on the OECD list. This constraint of practicality could be relaxed in the OECD’s analysis because its aim was merely to illustrate what could potentially be included.

6. Perhaps the most elementary observation to make from any comparison of the various lists of environmental goods that have been produced to date is that the number of goods that could be included in an eventually agreed list is potentially large. Clearly, both the OECD and the APEC lists have helped frame the current WTO negotiations on environmental goods. But it is also clear that many, if not most, WTO members regard the lists as just that: helpful but not definitive.

## II. ENVIRONMENTAL GOODS: A COMPARISON OF THE APEC AND OECD LISTS

### A. INTRODUCTION

7. Paragraph 31(iii) of the Doha Ministerial Declaration calls for negotiations on “the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services.” “Environmental goods” were not further defined in the Doha declaration. However, a substantial amount of work to identify the scope of environmental goods had already been undertaken by the OECD and APEC<sup>1</sup>, culminating in two product lists of candidate goods, one from each organisation. Though these lists were developed for purposes other than the WTO negotiations, and therefore have to be regarded as only indicative, several countries have considered them to be useful starting points for those negotiations. Indeed, in September 2002 the WTO Secretariat was requested to circulate the two lists to the Negotiating Group on Market Access (NGMA), which is the WTO body conducting negotiations on environmental goods<sup>2</sup>, and subsequently to the Committee on Trade and Environment in Special Session (CTESS), with which the NGMA closely co-ordinates.<sup>3</sup> Since then, Japan has submitted a proposal which includes some goods from both of these lists.

### B. GENESES OF THE TWO LISTS

8. The dynamic nature of their market, together with the role they can serve in strengthening environmental protection, have made environmental goods obvious candidates for a trade-liberalisation initiative, one that could both benefit the environment and boost international trade. A basic difficulty confronts trade negotiators, however: there is no well-defined sector known as “the environmental goods sector.” Rather, environmental goods are spread across a wide range of industrial and trade classification nomenclatures. In the words of one analyst, “This is less a sector than an agglomeration of providers of many types of goods, services and technologies that are usually integrated into production processes and are often hard to tease out as separate items” (US Office of Technology Assessment, 1994, p. 149).

9. Specific end-of-pipe pollution abatement and clean-up technologies — such as catalytic converters for automobile exhausts — are obvious candidates for any list of environmental goods. But they are not the only goods used for environmental improvement. Classifying goods from outside this narrow area as “environmental” raises fundamental issues, however. Many goods that are used for environmental protection and resource management potentially have other uses: pumps can be used in a wastewater treatment facility, or in a variety of other industrial uses not related to environmental remediation. Other goods may be considered “good for the environment” by virtue of their relative (as opposed to absolute) performance in use — a criterion with the potential to render the definition extremely broad, as almost all goods and technologies have substitutes that are cleaner or more efficient. No attempt is made here to resolve these classification issues, but readers are advised to bear them in mind when considering the product coverage of any list of environmental goods.

10. In the following two sub-sections, the geneses of the OECD and APEC lists are treated separately. In fact, their developmental phases closely paralleled each other and intersected at several points, the one exercise informing the other. That is not surprising, as six (eventually seven)

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1. Asia-Pacific Economic Cooperation.

2. Under the negotiating structure adopted by the Trade Negotiations Committee in February 2002, negotiations on market access for non-agricultural products were to take place in the Negotiating Group on Market Access, and negotiations on services to take place in the Council for Trade in Services in Special Session. Negotiations on trade and environment were to take place in the Committee on Trade and Environment meeting in Special Session.

3. The lists are contained, respectively, in WTO documents TN/MA/S/6 and TN/TE/W/18.

countries<sup>4</sup> were members of both organisations. However, the purposes that the lists were intended to serve differed from the start. The OECD list was the result of an exercise intended to illustrate, primarily for analytical reasons, the scope of the “environment industry.” The selection of categories of goods could therefore be broad, because there were no specific policy consequences of adding products to the list. By contrast, the APEC list resulted from policy discussions directed toward anticipated changes in tariffs. And whereas the OECD list was meant to be indicative, particularly as a framework for undertaking economic analyses in general, and of trade flows and tariff barriers in particular, the APEC list — for which the negotiation process came to an end before full consensus was reached — was the direct result of negotiated offers in the context of a trade-liberalisation initiative.

## 1. The OECD list

11. OECD interest in the environmental goods and services arose initially as part of its work on environmental policy and industrial competitiveness. A report prepared by the Industry Committee in 1992 described market developments in the environment industry and the role of environmental policies (OECD, 1992). A subsequent report (OECD, 1996a) expanded and deepened the analysis, collected available data, and showed a clear need for improving information on the industry and undertaking further analysis.

12. Publication of these results prompted numerous questions. What had been the record in exporting environmental technologies? Could the impact on industrial competitiveness due to the application of cleaner technologies be measured? How could environmental and economic policy be modified to encourage and support growth, job creation and trade in goods and services of the environment industry? It soon became apparent that answering these questions would require addressing major statistical and methodological difficulties related to problems of industry delimitation and data availability.

13. In 1994 the US Government (the Environmental Protection Agency and the Department of Commerce) hosted a meeting of experts in Washington, D.C. The main aim of this meeting was to identify ways in which more-comprehensive and consistent information could be collected — particularly on production, employment, trade, investment and R&D — so as to provide a solid foundation for policy analysis (OECD, 1996b). Before statistics could be gathered, however, a clearer definition and classification of the environmental goods and services industry had to be developed. To this end, the OECD, in collaboration with Eurostat (the Statistical Office of the European Communities), formed an Informal Working Group on the Environment Industry composed of experts from OECD countries who, as part of their work at national ministries for economics or industry, national statistical offices, or public or private research institutes, were responsible for collecting and analysing data on the environmental goods and services industry.

14. At its first meeting in Luxembourg, in April 1995, the OECD/Eurostat Informal Working Group agreed on an interim definition of, and classification system for, the environment industry (OECD, 1996c). After considering various alternatives, the Working Group agreed on the following definition:

*The environmental goods and services industry consists of activities which produce goods and services to measure, prevent, limit, minimise or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems. This*

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4. Australia, Canada, Japan, Korea (which joined the OECD late in 1996), Mexico, New Zealand and the United States.

*includes cleaner technologies, products and services that reduce environmental risk and minimise pollution and resource use.*

15. The Working Group went on to add, “For cleaner technologies, products and services, despite their importance, there is currently no agreed methodology which allows their contribution to be measured in a satisfactory way” (OECD/Eurostat, 1999, p. 10). This limitation is why, for example, products defined in terms of their energy efficiency were not included in the original OECD list.

16. The definition and classification were tested during 1996 and 1997 by collecting new data and re-organising available data in OECD countries. In the mean time, Canada, the Commission of the European Communities, France and the United States started using the OECD/Eurostat classification to design and carry out new surveys and studies on the environment industry.

17. During 1997 the OECD/Eurostat Informal Working Group continued to refine and improve its interim definition and classification system. Meanwhile, the OECD’s Joint Working Party on Trade and Environment (JWPTE) began to take an interest in the subject. The OECD/Eurostat Informal Working Group was concentrating on defining relevant industry activities covering both goods and services, to improve analysis and develop coherent, comparable statistics for national surveys, whereas the JWPTE’s interest was on developing a framework for future trade liberalisation efforts in the environmental goods and services (EGS) sector. In the absence of any internationally agreed product list of environmental goods, an attempt was made to develop such a list — identified by 6-digit HS (Harmonized System) trade nomenclature product numbers — and arranged according to the groups, categories and sub-categories of environmental goods that had been developed by the Informal Working Group. Inherent in the nature of the OECD/Eurostat classification system, it was possible to identify a greater number of HS product numbers for the six sub-categories of group A (“Pollution Management”), than for the two sub-categories of group B (“Cleaner Technologies and Products”) or the ten sub-categories of group C (“Resources Management”). The final list, which is reproduced in Annex Table 1 to this document, was completed in 1998 and published subsequently in both a working paper of the JWPTE (OECD, 1999a) and the final report of the Informal Working Group (OECD/Eurostat, 1999b). It was also reproduced, unchanged, in the publication *Environmental Goods and Services: The Benefits of Further Global Trade Liberalisation* (OECD, 2001).

18. It must be stressed that the OECD list was meant to be illustrative rather than definitive, particularly for use in analysing levels of tariff protection. As the “Note” to the list published in the OECD/Eurostat (1999b) *Manual* explains, “The list is not exhaustive; not all environmental goods are covered. Some environmental goods have no equivalent HS commodity code. Some HS commodity codes include goods which may not be environmental goods.” It is with respect to the last point where some of the most important differences between the OECD and APEC lists are to be found. In producing the OECD list, no attempt was made to go beyond the 6-digit (sub-heading) HS codes and identify only those goods that could be considered “environmental”. By contrast, as described below, the APEC list was produced through an essentially “bottom up” process, and includes many “ex-headings” (nationally defined tariff lines) of goods falling under more aggregate commodity descriptions.

## **2. The APEC list**

19. The roots of the APEC list of environmental goods trace back to a November 1995 meeting in Osaka, Japan, wherein APEC Leaders agreed to identify industries in which the progressive reduction of tariffs could have a positive impact on trade and on economic growth in the Asia-Pacific region, or for which there was regional industry support for early liberalisation. A year later, at their meeting in Subic Bay, Philippines, APEC Leaders issued more-precise instructions, directing Ministers

responsible for trade<sup>5</sup> to “identify sectors where early voluntary liberalisation would have a positive impact on trade, investment and economic growth in the individual APEC economies as well as in the region and submit recommendations on how this can be achieved.”

20. At their May 1997 meeting in Montreal, APEC Trade Ministers directed officials to identify possible sectors that might be candidates for early voluntary liberalisation. Following this invitation, a wide variety of APEC economies put forward 62 sectorally based nominations, in total covering more than 40 sectors, for initial consideration at a subsequent meeting of senior officials held in August. Most proposals were supported by several economies, but few were supported by all (Yamazawa and Scollay, 2003). Environmental goods and services, as a distinct category, was proposed by four economies — Canada, Japan, Chinese Taipei and the United States — drawing on the original working OECD definition of the environmental sector to guide initial classification work (Dee *et al.*, 1998). Ultimately, a total of nine economies proposed goods under this category.

21. By the time of the November 1997 APEC leaders’ meeting in Vancouver, the nominations had been arranged into 41 sectors. Out of that meeting, a subset of 15 sectors emerged as clearly enjoying the greatest support for EVSL among member economies. These fifteen sectors were then further divided into two tiers. The first tier comprised nine sectors identified for fast-track treatment: environmental goods and services, fish and fish products, forest products, medical equipment and instruments, energy, toys, gems and jewellery, chemicals, and a telecommunications mutual-recognition agreement. The second tier comprised those sectors (oilseeds and oilseed products, food, rubber, fertilisers, automotive and civil aircraft) that APEC member economies deemed would require more preparatory work before they would be ready for implementation.<sup>6</sup>

22. Acting on the decisions of Leaders and Ministers in Vancouver, senior officials instructed sectoral co-ordinators to finalise agreements or arrangements that would include, in addition to market opening, elements of facilitation and economic and technical co-operation. Building on extensive work as undertaken in the fall of 1997, including extensive inter-sessional work, two further rounds of experts’ meetings were held in Penang and Kuala Lumpur to further develop the Vancouver proposals in advance of the June 1998 Kuching meeting of APEC Trade Ministers. By the time of this meeting of Ministers, a framework for addressing EVSL, including draft product lists, end tariff rates and timetables, had been worked out. Both at Kuching and in subsequent meetings in 1998, including in Kuantan, work continued to further develop each of the proposals. A copy of the revised, consolidated list of environmental goods (also known as the “Kuantan version”) is attached to this document as Annex Table 2. This is the list that would eventually be transmitted to the WTO.

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5. Hereinafter simply “Trade Ministers”.

6. Proposals for the second tier of sectors were further developed for assessment and review by APEC Ministers at the Kuching meeting in June 1998 (Dee *et al.*, 1998).



**Table 1 APEC's EVSL for environmental goods: flexibility proposals by the sectoral co-ordinator**

Schedule target	Implementation schedule
Preferred outcome	Tariffs eliminated over 4 years, in 4 equal cuts, with the first cut taking place six months after conclusion of the agreement, subject to the completion of domestic legislative procedures, and subsequent cuts taking place by 1 January 2001, 2002 and 2003.
Minimum conformity	Industrialised Economies: 90% of tariff lines to be reduced to 0% by 1 January 2003.  Developing Economies: 80% of tariff lines to be reduced to 0% by 1 January 2003.
Flexibility	Industrialised Economies: any remaining non-zero tariff lines to be reduced to 0% by 1 January 2005.  Developing Economies: the first tranche (at least half) of any remaining non-zero tariff lines to be reduced to 0% by 1 January 2005; the last tranche of non-zero tariff lines to be reduced to 0% by 1 January 2007

*Sources:* Sectoral co-ordinator for environmental goods and services, “report on agreements/arrangements for market opening, facilitation and other measures”, 11 November 1998; Government of New Zealand, “Preparations for the 1999 Ministerial Conference — APEC’s ‘Accelerated Tariff Liberalisation’ (ATL) Initiative — Communication from New Zealand”, Document no. WT/GC/W/138 (26 January 1999), World Trade Organization, Geneva.

23. Because environmental goods are not defined as a sector in the HS nomenclature, liberalisation by necessity had to be pursued on a product-specific basis (Oxley, 1999). Proceeding from the OECD definition of what activities form part of an environmental industry, APEC economies identified, by HS codes, a positive list of products to be covered under the agreement. Tariffs for these specified products were, in principle, to be completely eliminated by 1 January 2003.<sup>7</sup> However, in recognition of the need to deal with product-specific concerns raised by individual economies in each sector, some flexibility was allowed. In the case of environmental goods, elimination of some tariffs could be delayed until 2005 for a small number of products, or by 2007 in the case of developing economies (Table 1).

24. This negotiating context gave rise to a certain amount of caution on the part of some economies, who may not have wanted to see items with high tariffs be targeted for liberalization. In addition, some economies were quite sensitive to the “dual use” issue. They reasoned that, while some items might have a use, even an important use, in an environmental context, they might also be used in other industries, with the result that the effects of tariff liberalisation would not be limited to the environment sector. Further, even where HS tariff lines contained items that were essential to the environment industry, there might also be other products that fell within the same 6 or 8 digit tariff heading that were not so environmentally-focused.

<sup>7</sup>Targets for the environmental goods and services sectors were initially “to be determined” and were only finalised subsequent to the June 1998 Kuching meeting of APEC Trade Ministers.

25. The APEC economies found ways to address many of these concerns through, for example, (1) the inclusion of a 6-digit heading if the products were predominantly environmental, or so central to environmental uses that their exclusion was absolutely necessary; or (2) the specification of an “ex-heading” where APEC economies essentially wished to provide duty-free treatment to a specific product. In the latter cases, it would have been left up to individual economies to specify how that product would be reflected in their own national tariff schedules. All of these issues tended to make economies more cautious about inclusion of HS headings and products, and made the APEC list shorter than it otherwise might have been.

26. Notably absent from the consolidated list of environmental goods were chemicals used for processes such as water purification or waste-water treatment. Chemicals were left off the environmental goods list, not because they were regarded as non-essential for environmental protection and remediation, but because APEC Members wanted to avoid entangling the EVSL initiative for environmental goods with the one for chemicals, particularly as the EVSL initiative for chemicals called only for harmonising tariff rates (Annex Tables 3 and 4). The proposal for EVSL of chemicals had a longer history, beginning with the Uruguay Round’s Chemical Tariff Harmonization Agreement (CTHA), to which several APEC economies had already become signatories as part of their Uruguay Round tariff commitments (Box 1).

27. The logic of avoiding overlap between EVSL lists was *not* applied to goods from the medical equipment and instruments sector, 36 of which are included in the environmental goods list under the category for monitoring and analysis equipment.<sup>8</sup> There is also some overlap between the list for energy and the list for environmental goods, but it is smaller, with only 17 tariff lines common at the 6-digit level, of which 10 refer to different ex-headings.

28. During the remainder of 1998 additional technical experts’ meetings took place to elaborate the details of the various EVSL frameworks. The resultant proposal, presented to Trade Ministers and APEC Leaders at their annual meetings in Kuala Lumpur in November 1998, was a comprehensive package that included undertakings on four elements: tariffs; services; non-tariff measures; and economic and technical co-operation (Ecotech). While noting the progress made in 1998 in finalising the EVSL package, Ministers could not agree to move forward on its tariff elements. A decision was therefore taken to refer the tariff elements of the EVSL proposals to the WTO, for possible adoption on a binding basis by the full WTO membership. In so doing, the Ministers also pledged to work “constructively to achieve critical mass in the WTO necessary for concluding agreement in all 9 [first-tier EVSL] sectors.”<sup>9</sup> Malaysia, as APEC Chair, communicated this outcome to the WTO General Council in December 1998.

29. New Zealand, as APEC Chair for 1999, later circulated two papers to the WTO Members, explaining the history of the EVSL initiative, and providing details on the liberalisation targets, flexibility approaches, and the positions reached by APEC economies for each sector by the time of the Kuala Lumpur Ministerial and Leaders’ meetings. The expectation was that the tariff elements of the “Accelerated Tariff Liberalisation” (ATL) initiative — as the EVSL initiative became known in the WTO — would be advanced as a whole for consideration and adoption at the Third WTO Ministerial Conference in Seattle (December 1999). Due to the complicated nature of the Seattle Ministerial, however, little progress was made on the package.

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<sup>8</sup> Several products included on the list (particularly under HS headings 9027 and 9031) also form part of the schedule of commitments entered into by Parties to the WTO’s Information Technology Agreement, several of whom are also members of APEC.

<sup>9</sup> The APEC Ministers also noted that “This process of expanding participation beyond APEC will not prejudice the position of APEC members with respect to the agenda and modalities to be agreed at the Third WTO Ministerial Conference.”

**Box 1. The EVSL initiative for chemicals**

Chemicals such as hydrated lime and magnesium dioxide are used in many environmental processes, such as water purification, waste-water treatment and air-pollution control. They were left off APEC's Early Voluntary Sectoral Liberalization (EVSL) initiative for environmental goods because they were covered under a separate EVSL initiative for chemicals.

The chemicals EVSL initiative — later to become part of the Accelerated Tariff Liberalization (ATL) initiative — had its origins in the Uruguay Round of multilateral trade negotiations. In 1991, chemical associations from several countries proposed that chemical tariffs be harmonised at 0%, 5.5% or 6.5%, depending on the class of the chemical product. The harmonisation initiative covered all of HS Chapters 28-39, except for a handful of items that were considered to be part of the Uruguay Round agricultural negotiations. The industry proposal became the basis for the Uruguay Round Chemical Tariff Harmonization Agreement (CTHA), to which about two-dozen countries became signatories.\* Since then, several other countries have adopted the CTHA as part of their WTO accession commitments, and others still in the process of acceding have signalled their willingness to undertake the CTHA commitments. Currently, over 30 (mainly OECD member) countries are now in the process of implementing the CTHA, with more to join once their accession negotiations are completed.

When APEC Ministers called for the nomination of sectors for Early Voluntary Sectoral Liberalization in mid-1997, the United States and Singapore each nominated the full range of products covered by the CTHA and the tariff rates agreed to in the Uruguay Round for those products. Australia and Hong Kong, China joined with the United States and Singapore to co-sponsor a broad chemical initiative. Several other proposals were also received for subsectors of the chemical sector, and fertilisers was selected by APEC Ministers as a separate sector for liberalisation beyond that provided in the CTHA.

\* At the end of the Uruguay Round, the CTHA encompassed the Quad (Canada, the European Commission (on behalf of the 12 EU Member States) Japan, and the United States), Korea, Norway, Singapore and Switzerland. In 1995 this number increased with the addition of three new Member states to the European Union.

*Source:* Government of New Zealand, "Preparations for the 1999 Ministerial Conference — APEC's 'Accelerated Tariff Liberalisation' (ATL) Initiative — Communication from New Zealand — Addendum", Document no. WT/GC/W/138/Add.1 (22 April 1999), World Trade Organization, Geneva.

30. Meanwhile, work on other aspects of the EVSL initiatives — namely, reducing non-tariff barriers, facilitating trade, and encouraging economic and technical co-operation — has continued within APEC. For example, APEC members have been encouraged to submit and support proposals for economic and technical co-operation projects that will facilitate trade in environmental goods. An APEC Cleaner Production Strategy<sup>10</sup> has been developed and approved that includes a list of generic, illustrative activities for implementing the strategy: (i) cleaner-production training modules; (ii) sector-based demonstration projects and case studies; (iii) technical conferences and seminars; (iv) environmental management systems (e.g. ISO 14001) workshops and training activities; (v) study tours and cleaner-production fellowships; (vi) technical exchanges; (vii) electronic information exchanges; (viii) use of industrial-extension support systems to promote cleaner production among

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10. See [http://www.amz.com/apec2/HomePage/cp\\_strategy.html](http://www.amz.com/apec2/HomePage/cp_strategy.html)

SMEs; and (ix) development of guidebooks and manuals. In 2003, the APEC Secretariat plans to study the impacts on APEC economies of measures to liberalise and facilitate trade in environmental services.

### C. COMPARISON OF THE OECD AND APEC LISTS

31. Annex Table 5 combines the OECD and APEC lists of environmental goods into one composite list, to facilitate comparison. Goods have been organised according to the categories and sub-categories used in the OECD/Eurostat scheme and, within those sub-categories, ordered by 6-digit HS nomenclature sub-headings. In most cases, categories used in the APEC list correspond to those in the OECD list,<sup>11</sup> and hence the assignment of goods from the APEC list to OECD categories is straight-forward, though for a few goods assumptions had to be made as to which sub-categories they should be assigned. Also, in nine cases (see endnote to table), goods from the APEC list have been assigned here to OECD categories other than those to which they appear in the original APEC list. An example is ozone, an ex-heading under HS sub-heading 8543.89: in the APEC list it appears under the category of waste-water management; for the purposes of compiling a composite list it has been assigned also to potable water treatment.

32. Counting only entries with corresponding HS codes, the OECD list appears to be about 50% longer than the APEC list (Table 2). However, when one eliminates multiple listings at the 6-digit level, they are more similar in length: there are 132 unique HS codes in the OECD list, compared with 104 in the APEC list. The composite list has 233 entries identified with an HS code, covering 198 different goods. These magnitudes are small compared with the total numbers of lines contained in WTO Members' national tariff schedules, which range from less than 6000 (in the schedules of Australia and India) to over 11 000 (in the schedules of Hungary, Korea, Mexico, and Turkey).<sup>12</sup>

33. Strictly speaking, the two lists do not overlap much at the level of six-digit HS codes. In all, less than 30% of the goods in the combined list are common to both lists, and about half of the goods on either list can be found on the other. The greatest areas of overlap are found in the categories of recycling equipment (OECD sub-category A.3.6), incineration equipment (sub-category A.3.7), and measuring and monitoring equipment (sub-category A.6.1). Even then, for about one-quarter of the common goods, the APEC list refers to one or two specific goods, rather than to all the goods contained within the tariff line. For example, the OECD product list refers to "Parts for spark-ignition internal combustion piston engines", whereas the APEC list covers only the ex-heading category of industrial mufflers.

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11.The exception is the APEC category "Other Recycling Systems" (ORS), which corresponds to the OECD sub-category "3.6 Recycling Equipment" under the general category of "3. Solid Waste Management".

12.WTO Secretariat, "WTO Members' Tariff Profiles", WTO Doc. No. TN/MA/S/4/Rev.1, Geneva.

**Table 2** Summary statistics of APEC and OECD lists of environmental goods

Statistic	Number or %
<b>OECD list</b>	
Total HS subheadings	164
Unique HS subheadings	132
<b>APEC list</b>	
Total HS subheadings	109
Unique HS subheadings	104
— of which qualified by ex-Heading specification	44
<b>Composite list</b>	
Total HS subheadings	233
Unique HS subheadings	198
Tariff lines common to both the OECD and APEC lists	54
— of which qualified by ex-Heading specification	13
Percentage overlap (54 out of 198)	27 %

Source: Annex Table 5 to this document.

34. One reason for the surprising lack of overlap is a difference of emphasis. Under the category *Heat/energy savings and management*, the OECD list specifies 14 tariff lines and the APEC list only 3. The OECD list contains 5 tariff lines each under the sub-categories *Hazardous waste storage and treatment equipment* and *Waste collection equipment*; the APEC list contains none. On the other hand, the APEC list contains a much larger number of goods under the category *Environmental monitoring, analysis and assessment*, including some goods not mentioned in the OECD list, such as gas and electricity meters. Almost all of the goods contained in the OECD list under this category appear also on the APEC list.

35. Another reason for the small degree of overlap is the omission of some tariff lines from the APEC list because the particular goods were already included on lists prepared for other EVSL initiatives — notably that for chemicals. Thus, whereas particular chemicals, such as chlorine, hydrogen peroxide and magnesium hydroxide, all falling within HS chapters 28 through 39, are sprinkled across the OECD product list under categories ranging from air-pollution control to renewable energy (in the case of methanol), with most listed under waste-water management, they are with one exception<sup>13</sup> entirely absent from the APEC list for environmental goods. However, all of the chemicals appearing on the OECD list were covered by APEC's separate EVSL proposal for chemicals (see paragraph 17, above), which was more encompassing.

13. The exception relates to two products listed under HS code 3926.90 (Other articles of plastics and articles of other materials of headings 3901 to 3914; other): bio-film medium that consists of woven fabric sheets that facilitate the growth of bio-organisms; and rotating biological contactor consisting of stacks of large (HDPE) plates that facilitate the growth of bio-organisms. The APEC list includes these under the category of waste-water management.

36. In several cases, the APEC list provides greater specificity for goods that are mentioned in the OECD list but for which no HS codes were provided. Examples are trash compactors and parts for trash compactors (corresponding to the OECD's sub-category "compactors"), electromagnets (OECD: "magnetic separators"), inflatable oil-spill recovery barges (OECD: "oil spillage cleanup equipment"), wind-powered electric generating sets (OECD: "wind turbines"), and hydraulic turbines and water wheels (OECD: "hydroelectric plant"). No doubt had the OECD gone into greater detail in these sub-categories the degree of overlap between the two lists would have been greater.

37. Notably, the APEC list includes some specific products — including several goods from or for agriculture — corresponding to categories of goods suggested by the OECD but for which not only no HS codes were specified but no concrete product examples were provided. For example, New Zealand had nominated biodegradable erosion-control matting and ecologically-safe ground covers (both ex-headings of HS code 4601.20), as well as hot-water weed-killing systems (an ex-heading of HS code 8436.80), for EVSL. All three of these items are classified in the APEC list as relating to waste-water management. (Under the OECD list they would more logically be classified as goods used to make agriculture more sustainable.) Similarly, Canada nominated booms or socks consisting of ground cobs of corn (maize) contained in a textile covering (an ex-heading of HS code 2302.10) as an environmental good used in remediation and cleanup.

#### D. OTHER LISTS

38. In November 2002 Japan submitted a list of environmental goods as part of a broader proposal on market access for non-agricultural products communicated to the NGMA and CTESS (reproduced in this document as Annex Table 6).<sup>14</sup> Japan's list, which contains 166 entries (corresponding to 157 unique HS codes), incorporates many goods from both the OECD and the APEC lists, plus an additional 30 products that do not appear on either list. Most of the newly proposed products appear under the heading "Cleaner Technology and Products", and almost all are less-polluting or more energy- or resource-efficient versions of similar goods covered by the same 4- or 6-digit HS codes. Examples include "inverter type air conditioners" (an ex-heading under HS heading 8415), "ultrasonic dish-washing machines" and "dish-washing machines capable of saving detergents" (ex-headings under HS code 8422.11), and "double-hulled oil tankers" (an ex-heading under HS code 8901.20).

39. Other candidate lists of environmental goods are currently under preparation by several other WTO Members and are expected to be submitted to the NGMA and CTESS during 2003. In all likelihood, these lists, too, will incorporate goods from both the OECD and the APEC lists, as well as propose some new ones. The variation reflects to some extent national priorities in the negotiations on trade in goods in general. But it also reflects differences in views regarding which goods countries consider to be truly "environmental".

#### E. CONCLUSIONS

40. In reviewing the developmental history of the OECD and APEC product lists of environmental goods, it is clear that the two exercises were interlinked and informed each other. For example, the drafters of the APEC list consciously based their categories of environmental goods in large part on the work being undertaken at the time by the OECD/Eurostat informal working group on the environment industry.<sup>15</sup> At the broad level, therefore, the two lists are quite similar.

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14. Government of Japan, "Market Access for Non-Agricultural Products — Communication from Japan", WTO document no. TN/MA/W/15 & TN/TE/W/17, 20 November 2002, World Trade Organization, Geneva.

15. See WTO document no. WT/GC/W/138.Add.1 (22 April 1999).

41. However, the objectives of the two exercises differed, as did the procedures for generating the lists. The OECD's larger list was created deductively: starting from general categories based on classifications appearing in the environment industry manual, and adding more specific examples, where available, in order to produce an estimate of average tariffs<sup>16</sup> on a previously undefined class of goods. The APEC approach started with nominations — not unlike the request/offer procedures traditionally used in trade negotiations — yielding a list of goods which was then arranged according to an agreed classification system.

42. It is important also to understand the APEC list in the context of the larger Early Voluntary Sectoral Liberalisation (EVSL) initiative with which it was associated. Environmental goods constituted only one of 15 sectors falling under the EVSL initiative, and one of 9 when it was referred to the WTO and became part of the Accelerated Tariff Liberalisation (ATL) initiative. Neither the APEC nor the OECD exercise sought to exclude any particular categories of goods *a priori*. However, because of the broad coverage of the EVSL initiative and its segmentation into distinct sectors, each with a different set of liberalisation target dates and rates, certain goods such as chemicals, which clearly are necessary for limiting or correcting environmental damage, were not included in the EVSL initiative for environmental goods. This was more apt to be the case the further the liberalisation targets for other sectors diverged from those for environmental goods.

43. Further, since the aim of the APEC list was to obtain more favourable (different) tariff treatment for environmental goods, APEC member economies limited themselves to considering only those specific goods that could be readily distinguished by customs agents and treated differently for tariff purposes. For this reason, issues related to “like products”, products defined by particular processes or production methods, and products defined by their life-cycle impacts, were not addressed, with the result that some goods were left off the list that may have been included in the OECD list. This constraint of practicality could be relaxed in the OECD analytical study because its aim was to illustrate what could potentially be included.

44. Perhaps the most elementary observation to make from any comparison of the various lists of environmental goods that have been produced to date is that the number of goods that could be included in an eventually agreed list is potentially large. Clearly, both the OECD and the APEC lists have helped frame the current WTO negotiations on environmental goods. But it is also clear that many, if not most, WTO members regard the lists as just that: helpful but not definitive.

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16. For the latest information on tariffs, see the table at <http://www.oecd.org/env>.

### III. BIBLIOGRAPHY

Dee, P., A. Hardin and M. Schuele (1998), *APEC Early Voluntary Sectoral Liberalisation, Productivity Commission Staff Research Paper*, AusInfo, Canberra.

OECD (1992), *The OECD Environment Industry: Situation, Prospects and Government Policy*, OECD Publications, Paris.

OECD (1996a), *The Global Environment Goods and Services Industry*, OECD Publications, Paris.

OECD (1996b), *The Environment Industry — The Washington Meeting*, OECD Publications, Paris.

OECD (1996c), “Interim Definition and Classification of the Environment Industry”, OCDE/GD(96)117, Paris.

OECD (1999a), “Future Liberalisation of Trade in Environmental Goods and Services: Ensuring Environmental Protection as well as Economic Benefits”, COM/TD/ENV(98)37/FINAL, Paris.

OECD/Eurostat (1999b), *The Environmental Goods and Services Industry: Manual on Data Collection and Analysis*, OECD Publications, Paris.

OECD (2001), *Environmental Goods and Services: The Benefits of Further Global Trade Liberalisation*, OECD Publications, Paris.

Oxley, Alan (1999), “The importance of the WTO negotiations to APEC and Australia’s related national interests”, Australian APEC Study Centre Issues Paper 15, Australian APEC Study Centre, Monash University, Melbourne, Australia, May. <http://www.arts.monash.edu.au/ausapec/iss15.htm>

US Office of Technology Assessment (1994), *Development Assistance, Export Promotion, and Environmental Technology – Background Paper*, OTA-BP-ITE-107, US Government Printing Office, Washington, DC.

US Office of Technology Assessment (1994), *Industry, Technology and the Environment: Competitive Challenges and Business Opportunities*, OTA-ITE-586, US Government Printing Office, Washington, DC.

Yamazawa, Ippii and Robert Scollay (2003), “Towards an assessment of APEC trade liberalisation and facilitation”. Available from [http://www.apec2003.org/eng/apecthai/thaiandapec\\_Ippii.html](http://www.apec2003.org/eng/apecthai/thaiandapec_Ippii.html)



## ANNEXES

Annex Table 1. The OECD's illustrative product list of environmental goods

Category and product description	HS code
<b>A. POLLUTION MANAGEMENT</b>	
<b>1. Air pollution control</b>	
<i>1.1 Air-handling equipment</i>	
Vacuum pumps	841410
Compressors of a kind used in refrigerating equipment	841430
Air compressors mounted on a wheeled chassis for towing	841440
Other air or gas compressors or hoods	841480
Parts for air or gas compressors, fans or hoods	841490
<i>1.2 Catalytic converters</i>	
Filtering or purifying machinery and apparatus for gases	842139
Parts for filtering or purifying machinery	842199
<i>1.3 Chemical recovery systems</i>	
Limestone flux	252100
Slaked (hydrated) lime	252220
Magnesium hydroxide and peroxide	281610
Activated earths	
Filtering or purifying machinery and apparatus for gases*	842139
Parts for filtering or purifying machinery*	842199
<i>1.4 Dust collectors</i>	
Filtering or purifying machinery and apparatus for gases*	842139
Parts for filtering or purifying machinery*	842199
<i>1.5 Separators/precipitators</i>	
Other glass fibre products	701990
Machinery for liquefying air or other gases	841960
Other machinery for treatment of materials by change of temperature	841989
Filtering or purifying machinery and apparatus for gases*	842139
Parts for filtering or purifying machinery*	842199
<i>1.6 Incinerators, scrubbers</i>	
Other furnaces, ovens, incinerators, non-electric	841780
Filtering or purifying machinery and apparatus for gases*	842139
Parts for filtering or purifying machinery*	842199
Industrial or laboratory electric resistance furnaces	851410
Industrial or laboratory induction or dielectric furnaces	851420
Other industrial or laboratory electric furnaces and ovens	851430
Parts, industrial or laboratory electric furnaces	851490
<i>1.7 Odour control equipment</i>	
Parts for sprayers for powders or liquids	842490

Category and product description	HS code
<b>2. Wastewater management</b>	
<i>2.1 Aeration systems</i>	
Compressors of a kind used in refrigerating equipment*	841430
Air compressors mounted on a wheeled chassis for towing*	841440
Other air or gas compressors or hoods*	841480
Parts for air or gas compressors, fans or hoods*	841490
<i>2.2 Chemical recovery systems</i>	
Limestone flux*	252100
Slaked (hydrated) lime*	252220
Chlorine	280110
Anhydrous ammonia	281410
Sodium hydroxide solid.	281511
Sodium hydroxide in aqueous solution	281512
Magnesium hydroxide and peroxide*	281610
Activated earths*	
Aluminium hydroxide	281830
Manganese dioxide	282010
Manganese oxides (other)	282090
Lead monoxide	282410
Sodium sulphites	283210
Other sulphites	283220
Phosphinates and phosphonates	283510
Phosphates of triammonium	283521
Phosphates of monosodium or disodium	283822
Phosphates of trisodium	283523
Phosphates of potassium	283524
Calcium hydrogenorthophosphate	283525
Other phosphates of calcium	283526
Other phosphates (excl. polyphosphates)	283529
Activated carbon	380210
Water filtering or purifying machinery and apparatus	842121
Other machinery for purifying liquids	842129
Parts for filtering or purifying machinery*	842199
<i>2.3 Biological recovery systems</i>	
<i>2.4 Gravity sedimentation systems</i>	
Flocculating agents	
<i>2.5 Oil/water separation systems</i>	
Other centrifuges	842119
Parts of centrifuges	842191
Water filtering or purifying machinery and apparatus*	842121
Other machinery for purifying liquids*	842129
Parts for filtering or purifying machinery*	842199

Category and product description	HS code
<i>2.6 Screens/strainers</i>	
Other articles of plastic	392690
Water filtering or purifying machinery and apparatus*	842121
Other machinery for purifying liquids*	842129
Parts for filtering or purifying machinery*	842199
<i>2.7 Sewage treatment</i>	
Flocculating agents	
Woven pile & chenille fabrics of other textile materials	580190
Tanks, vats, etc. > 300l	730900
Tanks, drums, etc. >50 l < 300 l	731010
Cans < 50 l, closed by soldering or crimping	731021
Other cans < 50l	731029
Hydraulic turbines	8410 00 - 13
Parts for hydraulic turbines	841090
Incinerators, non-elec*	841780
Weighing machines capacity <30 kg	842381
Weighing machines capacity >30 kg <500 kg	842382
Weighing machines	842389
Parts for sprayers for powders or liquids*	842490
Industrial/lab electric resistance furnaces*	851410
Industrial/lab induction, dielectric furnaces*	851420
Industrial/lab electric furnaces & ovens, nes*	851430
Parts, incl & lab elec furnaces*	851490
<i>2.8 Water pollution control, wastewater reuse equipment</i>	
<i>2.9 Water handling goods and equipment</i>	
Articles of cast iron	732510
Root control equipment	
Positive displacement pumps, hand operated	841320
Other reciprocating positive displacement pumps	841350
Other rotary positive displacement pumps	841360
Other centrifugal pumps	841370
Other pumps	841381
Valves, pressure reducing	848110
Valves, check	848130
Valves, safety	848140
Other taps, cocks, valves, etc.	848180
Instruments for measuring the flow or level of liquids	902610
Instruments for measuring or checking pressure	902620
<b>3. Solid waste management</b>	
<i>3.1 Hazardous waste storage and treatment equipment</i>	
Other articles of cement, concrete	681099
Other articles of lead	780600
Other electric space heating and soil heating apparatus	851629
Lasers	901320
Vitrification equipment*	
<i>3.2 Waste collection equipment</i>	

<b>Category and product description</b>	<b>HS code</b>
Household & toilet articles of plastic	392490
Brooms, hand	960310
Brushes as parts of machines, appliances	960350
Mechanical floor sweepers	980390
Trash bin liners (plastic)	
<i>3.3 Waste disposal equipment</i>	
Compactors	
Refuse disposal vehicles	
Polypropylene sheeting, etc.	392020
<i>3.4 Waste handling equipment</i>	
<i>3.5 Waste separation equipment</i>	
Magnetic separators	
<i>3.6 Recycling equipment</i>	
Magnetic separators*	
Machinery to clean, dry bottles, etc.	842220
Other mixing or kneading machines for earth, stone, sand, etc.	847439
Other machines for mixing/grinding, etc.	847982
Other machines, nes, having individual functions	847989
Tire-shredding machinery	
<i>3.7 Incineration equipment</i>	
Other furnaces, ovens, incinerators, non-electric*	841780
Parts of furnaces, non-electric	841790
Industrial or laboratory electric resistance furnaces*	851410
Industrial or laboratory induction or dielectric furnaces*	851420
Other industrial or laboratory electric furnaces and ovens*	851430
Parts, industrial or laboratory electric furnaces*	851490
<b>4. Remediation and cleanup</b>	
<i>4.1 Absorbents</i>	
<i>4.2 Cleanup</i>	
Other electric space heating and soil heating apparatus*	851629
Lasers*	901320
Vitrification equipment*	
<i>4.3 Water treatment equipment</i>	
Surface active chemicals (not finished detergents)	
Oil spillage cleanup equipment	
Other electrical machines and apparatus with one function	854389

Category and product description	HS code
<b>5. Noise and vibration abatement</b>	
<i>5.1 Mufflers/silencers</i>	
Parts for spark-ignition internal combustion piston engines	840991
Parts for diesel or semi-diesel engines	840999
Silencers and exhaust pipes, motor vehicles	870892
<i>5.2 Noise deadening material</i>	
<i>5.3 Vibration control systems</i>	
<i>5.4 Highway barriers</i>	
<b>6. Environmental monitoring, analysis and assessment</b>	
<i>6.1 Measuring and monitoring equipment</i>	
Thermometers, pyrometers, liquid-filled	902511
Other thermometers, pyrometers	902519
Hydrometers, barometers, hygrometers, etc.	902580
Other instruments for measuring liquids or gases	902680
Parts of instruments for measuring, checking liquids or gases	902690
Instruments for analysing gas or smoke	902710
Chromatographs, etc.	902720
Spectrometers, etc.	902730
Exposure meters	902740
Other instruments using optical radiation	902750
Other instruments for physical or chemical analysis	902780
Parts for instruments, incl. microtomes	902790
Ionising radiation measuring & detecting instruments	903010
Other optical instruments	903149
Other measuring or checking instruments	903180
Manostats	903220
Hydraulic/pneumatic automatic regulate, control instruments	903281
Other automatic regulate, control instruments	903289
Auto emissions testers	
Noise measuring equipment	
<i>6.2 Sampling systems</i>	
<i>6.3 Process and control equipment</i>	
Thermostats	903210
Electrical process control equipment	
On-board monitoring/control	
<i>6.4 Data acquisition equipment</i>	
<i>6.5 Other instruments/machines</i>	

Category and product description	HS code
<b>B. CLEANER TECHNOLOGIES AND PRODUCTS</b>	
<b>1. Cleaner/resource efficient technologies and processes</b>	
Electrochemical apparatus / plant	
Extended cooking (pulp)	
Oxygen delignification	
Ultrasonic cleaning	
Fluidised bed combustion	
<b>2. Cleaner/resource efficient products</b>	
CFC substitutes	
Hydrogen peroxide	280110
Peat replacements (e.g. bark)	
Water-based adhesives	
Paints and varnishes, in aqueous medium, acrylic or vinyl	320910
Other paints and varnishes, in aqueous medium	320990
Double-hulled oil tankers	
Low-noise compressors	
<b>C. RESOURCES MANAGEMENT GROUP</b>	
<b>1. Indoor air pollution control</b>	
<b>2. Water supply</b>	
<i>2.1 Potable water treatment</i>	
<i>2.2 Water purification systems</i>	
Chlorine*	280110
<i>2.3 Potable water supply and distribution</i>	
Water, incl. natural or artificial mineral water	220100
Distilled and conductivity water	285100
Ion exchangers (polymer)	391400
<b>3. Recycled materials</b>	
<i>3.1 Recycled paper</i>	
<i>3.2 Other recycled products</i>	
<b>4. Renewable energy plant</b>	
<i>4.1 Solar</i>	
Instantaneous gas water heaters	841911
Other instantaneous or storage water heaters, non-electric	841919
Photosensitive semiconductor devices, incl. solar cells	854140

Category and product description	HS code
<i>4.2 Wind</i>	
Windmills	
Wind turbines	
<i>4.3 Tidal</i>	
<i>4.4 Geothermal</i>	
<i>4.5 Other</i>	
Methanol	290511
Ethanol	220710
Hydroelectric plant	
<b>5. Heat/energy savings and management</b>	
Catalysts	381500
Multiple walled insulating units of glass	700800
Other glass fibre products*	701990
Heat exchange units	841950
Parts for heat exchange equipment	841990
Heat pumps	
District heating plant	
Waste heat boilers	
Burners: fuel other than oil or gas	
Fluorescent lamps, hot cathode	853931
Electric cars	
Fuel cells	
Gas supply, production and calibrating metres	902810
Liquid supply, production and calibrating metres	902820
Thermostats*	903210
<b>6. Sustainable agriculture and fisheries</b>	
<b>7. Sustainable forestry</b>	
<b>8. Natural risk management</b>	
Satellite imaging	
Seismic instruments	
<b>9. Eco-tourism</b>	
<b>10. Other</b>	

\* Indicates that the HS code appears previously in the table.

**Annex Table 2. Proposed product coverage under APEC’s EVSL initiative for environmental goods**

<b>Environ. activity<sup>1</sup></b>	<b>HS No.</b>	<b>ex<sup>2</sup></b>	<b>HS 6-digit description</b>	<b>Additional product specification</b>
1	R/C	2302.10	ex Bran, sharps and other residues, whether or not in the form of pellets, derived from the sifting, milling or other working of corn	Booms or socks consisting of ground corn cobs contained in a textile covering
2	WWM	3926.90	ex Other articles of plastics and articles of other materials of headings 3901 to 3914; other	Bio-film medium that consists of woven fabric sheets that facilitate the growth of bio-organisms.
3	WWM	3926.90	ex Other articles of plastics and articles of other materials of headings 3901 to 3914; other	Rotating biological contactor consisting of stacks of large (HDPE) plates that facilitate the growth of bio-organisms.
4	WWM	4601.20	ex Mats, matting, and screens of vegetable materials	Erosion control matting (biodegradable)
5	WWM	4601.20	ex Mats, matting, and screens of vegetable materials	Ecologically safe ground covers (biodegradable)
6	WWM	5603.14	ex Non-wovens, whether or not impregnated, coated, covered or laminated: of manmade filaments; weighing more than 150 g/m <sup>2</sup>	Fabric of polyethylene/polypropylene/nylon for filtering wastewater.
7	WWM	5911.90	ex Textile products and articles, for technical uses, specified in note 7 to this chapter; other	Environmental protection cloth
8	M/A	6902.10	ex Refractory bricks, blocks, tiles and similar refractory ceramic constructional goods, other than those of siliceous fossil meals or similar siliceous earths; containing by weight, singly or together, more than 50% of the elements Mg, Ca or Cr, expressed as MgO, Ca O or Cr <sub>2</sub> O <sub>3</sub>	Industrial incineration
9	M/A	6902.20	ex Refractory bricks, blocks, tiles and similar refractory ceramic constructional goods, other than those of siliceous fossil meals or similar siliceous earths; containing by weight more than 50% of alumina (Al <sub>2</sub> O <sub>3</sub> ), of silica (SiO <sub>2</sub> ) or of a mixture or compound of these products	Industrial incineration



	<b>Environ. activity<sup>1</sup></b>	<b>HS No.</b>	<b>ex<sup>2</sup></b>	<b>HS 6-digit description</b>	<b>Additional product specification</b>
10	M/A	6902.90	ex	Refractory bricks, blocks, tiles and similar refractory ceramic constructional goods, other than those of siliceous fossil meals or similar siliceous earths; other	Industrial incineration
11	M/A	6903.10	ex	Other refractory ceramic goods (for example, retorts, crucibles, muffles, nozzles, plugs, supports, cupels, tubes, pipes, sheaths and rods), other than those of siliceous fossil meal or of similar siliceous earths; containing by weight more than 50% of graphite or other carbon or of a mixture of these products	Laboratory refractory equipment
12	M/A	6903.20	ex	Other refractory ceramic goods (for example, retorts, crucibles, muffles, nozzles, plugs, supports, cupels, tubes, pipes, sheaths and rods), other than those of siliceous fossil meal or of similar siliceous earths; containing by weight more than 50% of alumina (Al <sub>2</sub> O <sub>3</sub> ) or of a mixture or compound of alumina and silica (SiO <sub>2</sub> )	Laboratory refractory equipment
13	M/A	6903.90	ex	Other refractory ceramic goods (for example, retorts, crucibles, muffles, nozzles, plugs, supports, cupels, tubes, pipes, sheaths and rods), other than those of siliceous fossil meal or of similar siliceous earths; other	Laboratory refractory equipment
14	M/A	6909.19	ex	Ceramic wares for laboratory, chemical or other technical uses; other	Laboratory equipment
15	M/A	7017.10		Laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated; of fused quartz or other fused silica	
16	M/A	7017.20		Laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated; of other glass having a linear coefficient of expansion not exceeding 5 X 10 <sup>-6</sup> per Kelvin within a temperature range of 0 C - 300 C	
17	M/A	7017.90		Laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated; other	
18	APC	8404.10		Auxiliary plant for use with boilers of heading No. 8402 or 8403 (for example, economizers, super-heaters, soot removers, gas recoverers)	

	<b>Environ. activity<sup>1</sup></b>	<b>HS No.</b>	<b>ex<sup>2</sup></b>	<b>HS 6-digit description</b>	<b>Additional product specification</b>
19	APC	8404.20		Condensers for steam or other vapour power units	
20	APC	8405.10	ex	Producer gas or water gas generators, with or without their purifier; acetylene gas generators and similar water process gas generator, with or without their purifiers	Include only those with purifiers.
21	N/V	8409.91	ex	Parts suitable for use solely or principally with the engines of heading No. 8407 or 8408; suitable for use solely or principally with spark-ignition internal combustion piston engines.	Industrial mufflers
22	APC	8409.99	ex	Parts suitable for use solely or principally with the engines of heading No. 8407 or 8408; other	Industrial mufflers
23	REP	8410.11		Hydraulic turbines and water wheels of a power not exceeding 1,000 kW	
24	REP	8410.12		Hydraulic turbines and water wheels of a power exceeding 1,000 kW but not exceeding 10,000 kW	
25	REP	8410.13		Hydraulic turbines and water wheels of a power exceeding 10,000 kW	
26	REP	8410.90		Hydraulic turbines and water wheels; parts, including regulators	
27	WWM	8413.60	ex	Pumps for liquids, whether or not fitted with a measuring device; other rotary positive displacement pumps	Submersible mixer pump to circulate water in wastewater treatment process; sewage pumps, screw type
28	WWM	8413.70	ex	Pumps for liquids, whether or not fitted with a measuring device; other centrifugal pumps	Centrifugal pumps lined to prevent corrosion; centrifugal sewage pumps
29	PWT	8413.81	ex	Pumps for liquids, whether or not fitted with a measuring device; other pumps	Wind turbine pump
30	M/A	8414.10		Vacuum pumps	
31	APC	8414.59		Fans (and blowers) other than table, floor, window, ceiling or roof fans with a self contained electric motor of an output not exceeding 125W	

	<b>Environ. activity<sup>1</sup></b>	<b>HS No.</b>	<b>ex<sup>2</sup></b>	<b>HS 6-digit description</b>	<b>Additional product specification</b>
32	M/A	8414.80		Air or vacuum pumps, air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, whether or not fitted with filters; other	
33	S/H	8417.80	ex	Industrial or laboratory furnaces and ovens, including incinerators, non-electric; other than bakery ovens and furnaces for treatment of ores	Waste Incinerators
34	S/H	8417.90	ex	Parts of Industrial or Laboratory Furnaces and Ovens, Including Incinerators, Non-electric	Parts of waste incinerators
35	REP	8419.19	ex	Other instantaneous or storage water heaters, non-electric	Solar Water Heaters
36	M/A	8419.40		Distilling or rectifying plant	
37	H/E	8419.50		Heat exchange units	
38	M/A	8419.60		Machinery for liquefying air or other gases	
39	M/A	8421.19		Centrifuges, including centrifugal dryers, other than cream separators and clothes -dryers	
40	WWM	8421.21		Filtering or purifying machinery and apparatus for liquids: for filtering or purifying water	
41	WWM	8421.29		Filtering or Purifying Machinery and Apparatus For Liquids; other	
42	APC	8421.39		Filtering or Purifying Machinery and Apparatus For Gases; other	
43	M/A	8421.91	ex	Parts of Centrifuges, Including Centrifugal Dryers	Centrifuges, Accessories & Parts; except clothes dryers and clothes dryer furniture
44	APC	8421.99		Parts of filtering or purifying machinery and apparatus for liquids or gases	
45	ORS	8422.20		Machinery for cleaning or drying bottles or other containers	
46	WWM	8428.33	ex	Other continuous-action elevators and conveyors, for goods or materials; other, belt type	Belt-type above ground conveyor used to transfer solids or slurries between plants
47	WWM	8436.80	ex	Other agricultural, horticultural, forestry, poultry-keeping or bee-keeping machinery	Hot water weed killing system

<b>Environ. activity<sup>1</sup></b>	<b>HS No.</b>	<b>ex<sup>2</sup></b>	<b>HS 6-digit description</b>	<b>Additional product specification</b>
48	S/H	8462.91	ex Machine tools for working metal, other than punching or notching and combined punching and shearing; hydraulic presses	Shredders/balers for metals; hydraulic
49	S/H	8472.90	ex Other office machines	Paper shredders
50	S/H	8474.10	ex Sorting, screening, separating or washing machines	Machines of a kind for use in screening and washing coal
51	ORS	8474.10	ex Sorting, screening, separating or washing machines	Waste foundry sand reclamation equipment
52	ORS	8474.32	ex Machines for mixing mineral substances with bitumen	Asphalt recycle equipment
53	WWM	8479.82	ex Mixing, kneading, crushing, grinding, screening, sifting, homogenizing emulsifying or stirring machines	Agitator for wastewater treatment
54	ORS	8479.82	ex Mixing, kneading, crushing, grinding, screening, sifting, homogenizing emulsifying or stirring machines	Other than kneading machinery
55	S/H	8479.89	ex Machines and mechanical appliances having individual functions, not elsewhere specified or included in this chapter, other	Radioactive waste press
56	WWM	8479.89	ex Machines and mechanical appliances having individual functions, not elsewhere specified or included in this chapter, other	Trash compactors
57	PWT	8479.90	ex Parts of Machines and mechanical appliances having individual functions, not elsewhere specified or included in this chapter, other	Parts of trash compactors
58	REP	8502.31	Generating sets, electric, wind-powered	
59	S/H	8505.90	ex Electro-magnets; other, including parts	Electromagnet
60	S/H	8514.10	ex Industrial or Laboratory Furnaces and Ovens; electric, resistance heated	Waste incinerators or other waste treatment apparatus
61	S/H	8514.20	ex Industrial or Laboratory Furnaces and Ovens; electric, induction or dielectric	Waste incinerators or other waste treatment apparatus
62	S/H	8514.30	ex Industrial or Laboratory Furnaces and Ovens, electric, other	Waste incinerators or other waste treatment apparatus
63	S/H	8514.90	ex Parts of industrial or laboratory electric furnaces and ovens or other laboratory induction or dielectric heating equipment	Parts of Waste incinerators

<b>Environ. activity<sup>1</sup></b>	<b>HS No.</b>	<b>ex<sup>2</sup></b>	<b>HS 6-digit description</b>	<b>Additional product specification</b>	
64	REP	8541.40	ex	Photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light emitting diodes	Solar cells
65	WWM	8543.89	ex	Electrical machines and apparatus, having individual functions, not specified or included elsewhere in this chapter; other	Ozone production system
66	R/C	8907.10	ex	Inflatable rafts	Inflatable oil spill recovery barges
67	R/C	8907.90	ex	Other floating structures	Pollution protection booms
68	M/A	9015.40		Photogrammetrical surveying instruments and appliances	
69	M/A	9015.80		Other surveying, hydrographic, oceanographic, hydrological, meteorological or geophysical instruments and appliances, excluding compasses	
70	M/A	9015.90	ex	Parts and accessories of surveying, hydrological, meteorological, or geophysical instruments and appliances, excluding compasses	Photogrammetric instruments; parts and accessories for articles of subheading 9015.40
71	M/A	9022.29		Apparatus based on the use of X-rays or of alpha, beta or gamma radiations for other than medical, surgical, dental or veterinary uses	
72	M/A	9022.90	ex	Apparatus based on the use of X-rays or of alpha, beta or gamma radiations for other than medical, surgical, dental or veterinary uses	Parts and accessories for goods of subheading 9022.29
73	M/A	9025.11		Thermometers and pyrometers, not combined with other instruments: liquid-filled, for direct reading	
74	M/A	9025.19		Thermometers and pyrometers, not combined with other instruments: other than liquid-filled, for direct reading	
75	M/A	9025.80		Hydrometers and similar floating instruments, thermometers pyrometers, barometers, hygrometers, and psychrometers, recording or not, and any combination of these instruments	
76	M/A	9025.90		Parts and Accessories for Hydrometers and similar floating instruments, thermometers pyrometers, barometers, hygrometers, and psychrometers, recording or not, and any combination of these instruments	

Environ. activity <sup>1</sup>	HS No.	ex <sup>2</sup>	HS 6-digit description	Additional product specification
77	9026.10		Instruments and apparatus for measuring or checking the flow or level of liquid	
78	9026.20		Instruments and apparatus for measuring or checking pressure	
79	9026.80		Other instruments and apparatus	
80	9026.90		Parts and accessories for articles of subheading 9026	
81	9027.10		Gas or smoke analysis apparatus	
82	9027.20		Chromatographs and electrophoresis instruments	
83	9027.30		Spectrometers, Spectrophotometers and Spectrographs Using Optical Radiations (Ultraviolet, Visible, Infrared)	
84	9027.40		Exposure Meters	
85	9027.50		Other instruments and apparatus using optical radiations (UV, visible, IR)	
86	9027.80		Other instruments and apparatus for physical or chemical analysis	
87	9027.90		Microtomes; parts and accessories	
88	9028.10		Gas Meters	
89	9028.20		Liquid Meters	
90	9028.30		Electricity Meters	
91	9028.90		Parts and accessories for articles of subheading 9028	
92	9030.10		Instruments and apparatus for measuring or detecting ionising radiations	
93	9030.20		Cathode-ray Oscilloscopes and Cathode-ray Oscillographs	
94	9030.31		Multimeters	
95	9030.39		Other instruments and apparatus, for measuring or checking voltage, current, resistance or power, without a recording device	

	<b>Environ. activity<sup>1</sup></b>	<b>HS No.</b>	<b>ex<sup>2</sup></b>	<b>HS 6-digit description</b>	<b>Additional product specification</b>
96	M/A	9030.83		Other instruments and apparatus for measuring or checking electrical quantities, with a recording device	
97	M/A	9030.89		Other Instruments and Apparatus for Measuring or Checking Electrical Quantities	
98	M/A	9030.90	ex	Parts and accessories (for nominated articles of subheading 9030)	
99	M/A	9031.10		Machines for Balancing Mechanical Parts	
100	M/A	9031.20		Test Benches	
101	M/A	9031.30		Profile Projectors	
102	M/A	9031.80		Other Measuring or Checking Instruments, Appliances and Machines, not elsewhere specified in this chapter	
103	M/A	9031.90	ex	Parts and accessories (for nominated articles of subheading 9031)	
104	M/A	9032.10		Thermostats	
105	M/A	9032.20		Manostats	
106	M/A	9032.81		Hydraulic and Pneumatic Instruments and Apparatus	
107	M/A	9032.89		Automatic Regulating or Controlling Instruments, other	
108	M/A	9032.90		Parts and accessories	
109	M/A	9033.00		Parts and Accessories (Not Specified or Included Elsewhere in this Chapter) for Machines, Appliances, Instruments or Apparatus of Ch. 90	

**Table endnotes:**

1. Abbreviations:

APC = Air Pollution Control  
H/E = Heat/Energy Management  
M/A= Monitoring/Analysis  
N/V = Noise/vibration abatement  
ORS = Other Recycling Systems  
PWT = Potable Water Treatment  
R/C = Remediation/cleanup  
S/H = Solid/Hazardous Waste  
WWM = Waste Water Management

2. An “ex” in the column indicates that only the “ex-heading” product (described in the last column) is being nominated.

*Source:* World Trade Organization, “List of Environmental Goods — Paragraph 31 (iii) — Note by the Secretariat”, Document no. TN/TE/W/18  
20 November 2002, Geneva.



Annex Tables 3 and 4 respectively list the tariff nominations contained in the EVSL proposal for chemicals (supported by the United States, Singapore, Australia, and Hong Kong, China), and these were specified for the APEC Leader's Meeting in November 1997 (reproduced in Dee *et al.*, 1998). The tariff nominations were put forward as HS (harmonised system) codes common to the customs tariff schedules of each country. Two-digit nominations mean that the entire chapter has been proposed; four-digit nominations relate to specific sub-chapters.

**Annex Table 3. APEC's EVSL proposal for chemicals: product list**

HS code	Item description (exclusions)
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare earth metals, of radioactive elements or of isotopes
29	Organic chemicals (but excluding HS code 2905 43, mannitol, and 44, D-glucitol (sorbitol))
30	Pharmaceutical products
31	Fertilisers
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations (but excluding HS code 3301: essential oils, including concretes and absolutes; resinoids; oleoresins; extracts obtained by enfleurage of maceration; other terpenic and aqueous solutions)
34	Soap, organic surface active agents, washing preparations, lubricating preparations, waxes
3506	Prepared glues and other adhesives, put up for retail sale, not exceeding a net weight of 1 kg
3507	Enzymes; prepared enzymes not elsewhere specified or included
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations
37	Photographic or cinematographic goods
38	Miscellaneous chemical products (but excluding HS code 3809.10, finishing agents with a basis of amylaceous substances; and HS code 3823.23, sorbitol other than that of subheading 2095.44)
39	Plastics and articles thereof

**Annex Table 4. APEC's EVSL for chemicals: flexibility proposals by the sectoral co-ordinator**

Target	
End tariff rates	CTHA harmonised rates (i.e., 0% to 6.5%)
End dates for implementation	By 2001 for rates below or equal to 10%; by 2004 for other rates
Minimum conformity	80% of tariff lines to reach CHTA rates (0% to 6.5%) by 2004
Flexibility	<p>45. For the remaining 20% of tariff lines:</p> <p>46. • 15% to CHTA rates by 2006</p> <p>47. • 5% (not exceeding 10% of imports) to CHTA rates by 2008</p> <p>• Applied tariff rates of 20% or more to be reduced to 10% by 2004</p>

**Annex Table 5. Comparison of products covered under APEC's EVSL initiative for environmental goods and the OECD's illustrative list of environmental goods**

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
<b>A. POLLUTION MANAGEMENT</b>				
<b>1 Air pollution control</b>				
	X	8404.10	Auxiliary plant for use with boilers of heading No. 8402 or 8403 (for example, economizers, super-heaters, soot removers, gas recoverers)	
	X (ex)	8405.10	Producer gas or water gas generators, with or without their purifier; acetylene gas generators and similar water process gas generator, with or without their purifiers	Include only those with purifiers.
<i>1.1 Air-handling equipment</i>				
	X	X	8414.10	Vacuum pumps
	X		8414.30	Compressors of a kind used in refrigerating equipment
	X		8414.40	Air compressors mounted on a wheeled chassis for towing
		X	8414.59	Fans (and blowers) other than table, floor, window, ceiling or roof fans with a self contained electric motor of an output not exceeding 125W
	X	X	8414.80	Other air or gas compressors or hoods
	X		8414.90	Parts for air or gas compressors, fans or hoods
<i>1.2 Catalytic converters</i>				
	X	X	8421.39	Filtering or purifying machinery and apparatus for gases
	X	X	8421.99	Parts for filtering or purifying machinery
<i>1.3 Chemical recovery systems</i>				
	X		2521.00	Limestone flux
	X		2522.20	Slaked (hydrated) lime
	X		2816.10	Magnesium hydroxide and peroxide
	X			Activated earths
	X	X	8421.39 *	Filtering or purifying machinery and apparatus for gases
	X	X	8421.99 *	Parts for filtering or purifying machinery
<i>1.4 Dust collectors</i>				
	X	X	8421.39 *†	Filtering or purifying machinery and apparatus for gases
	X	X	8421.99 *†	Parts for filtering or purifying machinery
<i>1.5 Separators/precipitators</i>				

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
X		7019.90	Other glass fibre products	
X	X	8419.60	Machinery for liquefying air or other gases	
X		8419.89	Other machinery for treatment of materials by change of temperature	
X	X	8421.99 *†	Parts for filtering or purifying machinery	
<i>1.6 Incinerators, scrubbers</i>				
X	X (ex)	8417.80	Other furnaces, ovens, incinerators, non-electric waste incinerators	
X	X	8421.39 *†	Filtering or Purifying Machinery and Apparatus For Gases; other	
X	X	8421.99 *†	Parts of filtering or purifying machinery and apparatus for liquids or gases	
X	X (ex)	8514.10	Industrial or laboratory electric resistance furnaces	Waste incinerators or other waste treatment apparatus
X	X (ex)	8514.20	Industrial or laboratory induction or dielectric furnaces	Waste incinerators or other waste treatment apparatus
X	X (ex)	8514.30	Other industrial or laboratory electric furnaces and ovens	Waste incinerators or other waste treatment apparatus
X	X (ex)	8514.90	Parts, industrial or laboratory electric furnaces	Parts of waste incinerators
<i>1.7 Odour control equipment</i>				
X		8424.90	Parts for sprayers for powders or liquids	
<b>2 Wastewater management</b>				
<i>2.1 Aeration systems</i>				
X		8414.30 *	Compressors of a kind used in refrigerating equipment	
X		8414.40 *	Air compressors mounted on a wheeled chassis for towing	
X	X	8414.80 *†	Other air or gas compressors or hoods	
X		8414.90 *	Parts for air or gas compressors, fans or hoods	
	X (ex) <sup>3</sup>	8543.89 †	Electrical machines and apparatus, having individual functions, not specified or included elsewhere in this chapter; other	Ozone production system
<i>2.2 Chemical recovery systems</i>				
X		2521.00 *	Limestone flux	
X		2522.20 *	Slaked (hydrated) lime	
X		2801.10	Chlorine	
X		2814.10	Anhydrous ammonia	
X		2815.11	Sodium hydroxide solid	
X		2815.12	Sodium hydroxide in aqueous solution	
X		2816.10 *	Magnesium hydroxide and peroxide	
X		*	Activated earths	

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
X		2818.30	Aluminium hydroxide	
X		2820.10	Manganese dioxide	
X		2820.90	Manganese oxides (other)	
X		2824.10	Lead monoxide	
X		2832.10	Sodium sulphites	
X		2832.20	Other sulphites	
X		2835.10	Phosphinates and phosphonates	
X		2835.21	Phosphates of triammonium	
X		2835.22	Phosphates of monosodium or disodium	
X		2835.23	Phosphates of trisodium	
X		2835.24	Phosphates of potassium	
X		2835.25	Calcium hydrogenorthophosphate	
X		2835.26	Other phosphates of calcium	
X		2835.29	Other phosphates (excl. polyphosphates)	
X		3802.10	Activated carbon	
X	X	8421.21	Water filtering or purifying machinery and apparatus	
X	X	8421.29	Other machinery for purifying liquids	
X	X	8421.99	Parts for filtering or purifying machinery	

2.3 *Biological recovery systems*

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
<i>2.4 Gravity sedimentation systems</i>				
	X		Flocculating agents	
<i>2.5 Oil/water separation systems</i>				
X	X	8421.19	Other centrifuges	
X	X	8421.21 *†	Water filtering or purifying machinery and apparatus	
X	X	8421.29 *†	Other machinery for purifying liquids	
X	X	8421.91	Parts of centrifuges	
X	X	8421.99 *	Parts for filtering or purifying machinery	
<i>2.6 Screens/strainers</i>				
X	X (ex)	3926.90	Other articles of plastics and articles of other materials of headings 3901 to 3914; other	(1) Bio-film medium that consists of woven fabric sheets that facilitate the growth of bio-organisms .
			Other articles of plastics and articles of other materials of headings 3901 to 3914; other	(2) Rotating biological contactor consisting of stacks of large (HDPE) plates that facilitate the growth of bio-organisms.
	X (ex)	5603.14	Non-wovens, whether or not impregnated, coated, covered or laminated: of manmade filaments; weighing more than 150 g/m2	Fabric of polyethylene, polypropylene, or nylon for filtering wastewater.
X	X	8421.21 *†	Filtering or purifying machinery and apparatus for liquids: for filtering or purifying water	
X	X	8421.29 *†	Filtering or Purifying Machinery and Apparatus For Liquids; other	
X	X	8421.99 *†	Parts for filtering or purifying machinery	
<i>2.7 Sewage treatment</i>				
	X		Flocculating agents	
	X	5801.90	Woven pile & chenille fabrics of other textile materials	
	X (ex)	5911.90	Textile products and articles, for technical uses, specified in note 7 to this chapter; other	Environmental protection cloth
	X	7309.00	Tanks, vats, etc. > 300 litres	
	X	7310.10	Tanks, drums, etc. >50 litres <300 litres	
	X	7310.21	Cans < 50 litres, closed by soldering or crimping	
	X	7310.29	Other cans < 50 litres	

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
X		8410.00	Hydraulic turbines 00	
X	X	8410.11	Hydraulic turbines 11	
X	X	8410.12	Hydraulic turbines 12	
X	X	8410.13	Hydraulic turbines 13	
X	X	8410.90	Parts for hydraulic turbines	
X	X	8417.80 *	Incinerators, non-electric	
X		8423.81	Weighing machines capacity <30 kg	
X		8423.82	Weighing machines capacity >30 kg <500 kg	
X		8423.89	Weighing machines	
X		8424.90 *	Parts for sprayers for powders or liquids	
	X (ex)	8428.33	Other continuous-action elevators and conveyors, for goods or materials; other, belt type	Belt-type above ground conveyor used to transfer solids or slurries between plants
	X (ex)	8479.82	Mixing, kneading, crushing, grinding, screening, sifting, homogenizing emulsifying or stirring machines	Agitator for wastewater treatment
X	X (ex)	8514.10 *†	Industrial/lab electric resistance furnaces	Waste incinerators or other waste treatment apparatus
X	X (ex)	8514.20 *†	Industrial/lab induction, dielectric furnaces	Waste incinerators or other waste treatment apparatus
X	X (ex)	8514.30 *†	Industrial/lab electric furnaces & ovens, n.e.c.	Waste incinerators or other waste treatment apparatus
X	X (ex)	8514.90 *†	Parts, industrial/lab electric furnaces	Parts of waste incinerators

## 2.8 Water pollution control, wastewater reuse equipment

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
<b>2.9 Water handling goods and equipment</b>				
X		7325.10	Articles of cast iron	
X		8413.20	Root-control equipment	
X		8413.50	Positive displacement pumps, hand operated [centrifugal pumps]	
X	X (ex)	8413.60	Pumps for liquids, whether or not fitted with a measuring device; other rotary positive displacement pumps	Submersible mixer pump to circulate water in wastewater treatment process; sewage pumps, screw type
X	X (ex)	8413.70	Pumps for liquids, whether or not fitted with a measuring device; other centrifugal pumps	Centrifugal pumps lined to prevent corrosion; centrifugal sewage pumps
X		8413.81	Other pumps	
X		8481.10	Valves, pressure reducing	
X		8481.30	Valves, check	
X		8481.40	Valves, safety	
X		8481.80	Other taps, cocks, valves, etc.	
X	X	9026.10	Instruments for measuring the flow or level of liquids	
X	X	9026.20	Instruments for measuring or checking pressure	
<b>3 Solid waste management</b>				
<b>3.1 Hazardous waste storage and treatment equipment</b>				
X		6810.99	Other articles of cement, concrete	
X		7806.00	Other articles of lead	
X		8516.29	Other electric space heating and soil heating apparatus	
X		9013.20	Lasers	
X			Vitrification equipment	
<b>3.2 Waste collection equipment</b>				
X		3924.90	Household & toilet articles of plastic	
X		9603.10	Brooms, hand	
X		9603.50	Brushes as parts of machines, appliances	
X		9603.90	Mechanical floor sweepers	
X			Trash bin liners (plastic)	
<b>3.3 Waste disposal equipment</b>				
X		3920.20	Polypropylene sheeting, etc.	



List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
	X (ex)	8462.91	Machine tools for working metal, other than punching or notching and combined punching and shearing; hydraulic presses	Shredders/balers for metals; hydraulic
	X (ex)	8472.90	Other office machines	Paper shredders
X	X (ex) <sup>3</sup>	8479.89	Compactors	
	X (ex) <sup>3</sup>	8479.89	Machines and mechanical appliances having individual functions, not elsewhere specified or included in this chapter, other	Trash compactors
	X (ex) <sup>4</sup>	8479.90	Parts of Machines and mechanical appliances having individual functions, not elsewhere specified or included in this chapter, other	Parts of trash compactors
X			Refuse-disposal vehicles	
<i>3.4 Waste handling equipment</i>				
<i>3.5 Waste separation equipment</i>				
	X (ex)	8474.10	Sorting, screening, separating or washing machines	Machines of a kind for use in screening and washing coal
	X (ex)	8505.90	Electro-magnets; other, including parts	Electromagnet
X			Magnetic separators	
<i>3.6 Recycling equipment</i>				
X	X	8422.20	Machinery for cleaning or drying bottles or other containers	
	X (ex)	8474.10 †	Sorting, screening, separating or washing machines	Waste foundry sand reclamation equipment
	X (ex)	8474.32	Machines for mixing mineral substances with bitumen	Asphalt recycle equipment
X		8474.39	Other mixing or kneading machines for earth, stone, sand, etc.	
X	X (ex)	8479.82	Mixing, kneading, crushing, grinding, screening, sifting, homogenizing emulsifying or stirring machines	Other than kneading machinery
X	X (ex)	8479.89 †	Machines and mechanical appliances having individual functions, not elsewhere specified or included in this chapter, other	Radioactive waste press
X		*	Magnetic separators	
X			Tire -shredding machinery	
<i>3.7 Incineration equipment</i>				
	X (ex) <sup>5</sup>	6902.10	Refractory bricks, blocks, tiles and similar refractory ceramic constructional goods, other than those of siliceous fossil meals or similar siliceous earths; containing by weight, singly or together, more than 50% of the elements Mg, Ca or Cr, expressed a	Industrial incineration

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
	X (ex) <sup>5</sup>	6902.20	Refractory bricks, blocks, tiles and similar refractory ceramic constructional goods, other than those of siliceous fossil meals or similar siliceous earths; containing by weight more than 50% of alumina (Al <sub>2</sub> O <sub>3</sub> ), of silica (SiO <sub>2</sub> ) or of a mixture or compound	Industrial incineration
	X (ex) <sup>5</sup>	6902.90	Refractory bricks, blocks, tiles and similar refractory ceramic constructional goods, other than those of siliceous fossil meals or similar siliceous earths; other	Industrial incineration
X	X (ex)	8417.80 *†	Industrial or laboratory furnaces and ovens, including incinerators, non-electric; other than bakery ovens and furnaces for treatment of ores	Waste Incinerators
X	X (ex)	8417.90	Parts of Industrial or Laboratory Furnaces and Ovens, Including Incinerators, Non-electric	Parts of waste incinerators
X	X (ex)	8514.10 *†	Industrial or Laboratory Furnaces and Ovens; electric, resistance heated	Waste incinerators or other waste treatment apparatus
X	X (ex)	8514.20 *†	Industrial or Laboratory Furnaces and Ovens; electric, induction or dielectric	Waste incinerators or other waste treatment apparatus
X	X (ex)	8514.30 *†	Industrial or Laboratory Furnaces and Ovens, electric, other	Waste incinerators or other waste treatment apparatus
X	X (ex)	8514.90 *†	Parts of industrial or laboratory electric furnaces and ovens or other laboratory induction or dielectric heating equipment	Parts of waste incinerators
<b>4 Remediation and cleanup</b>				
<i>4.1 Absorbents</i>				
	X (ex)	2302.10	Bran, sharps and other residues, whether or not in the form of pellets, derived from the sifting, milling or other working of corn	Booms or socks consisting of ground corn cobs contained in a textile covering
<i>4.2 Cleanup</i>				
	X	8516.29	Other electric space heating and soil heating apparatus	
	X	9013.20 *	Lasers	
	X		Vitrification equipment	

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
<b>4.3 Water treatment equipment</b>				
	X		Surface active chemicals (not finished detergents)	
	X	X (ex) 8543.89 †	Other electrical machines and apparatus with one function	Ozone production system
		X (ex) 8907.10	Inflatable rafts	Inflatable oil spill recovery barges
		X (ex) 8907.90	Other floating structures	Pollution protection booms
	X		Oil spillage cleanup equipment	
<b>5 Noise and vibration abatement</b>				
<b>5.1 Mufflers/silencers</b>				
	X	X (ex) 8409.91	Parts suitable for use solely or principally with the engines of heading No. 8407 or 8408; suitable for use solely or principally with spark-ignition internal combustion piston engines.	Industrial mufflers
	X	8409.99	Parts for diesel or semi-diesel engines	
	X	8708.92	Silencers and exhaust pipes, motor vehicles	
<b>5.2 Noise deadening material</b>				
<b>5.3 Vibration control systems</b>				
<b>5.4 Highway barriers</b>				
<b>6 Environmental monitoring, analysis and assessment</b>				
<b>6.1 Measuring and monitoring equipment</b>				
	X (ex)	6903.10	Other refractory ceramic goods (for example, retorts, crucibles, muffles, nozzles, plugs, supports, cupels, tubes, pipes, sheaths and rods), other than those of siliceous fossil meal or of similar siliceous earths; Containing by weight more than 50 % of graphite or other carbon or of a mixture of these products	Laboratory refractory equipment
	X (ex)	6903.20	Other refractory ceramic goods (for example, retorts, crucibles, muffles, nozzles, plugs, supports, cupels, tubes, pipes, sheaths and rods), other than those of siliceous fossil meal or of similar siliceous earths; Containing by weight more than 50 % of alumina (Al <sub>2</sub> O <sub>3</sub> ) or of a mixture or compound of alumina and of silica (SiO <sub>2</sub> )	Laboratory refractory equipment

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
	X (ex)	6903.90	Other refractory ceramic goods (for example, retorts, crucibles, muffles, nozzles, plugs, supports, cupels, tubes, pipes, sheaths and rods), other than those of siliceous fossil meal or of similar siliceous earths; other	Laboratory refractory equipment
	X (ex)	6909.19	Ceramic wares for laboratory, chemical or other technical uses; other	Laboratory equipment
	X	7017.10	Laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated; of fused quartz or other fused silica	
	X	7017.20	Laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated; of other glass having a linear coefficient of expansion not exceeding $5 \times 10^{-6}$ per Kelvin within a temperature range of 0 °C to 300 °C	
	X	7017.90	Laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated; other	
	X	8414.10	Vacuum pumps	
	X	8414.80	Air or vacuum pumps, air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, whether or not fitted with filters; other	
	X	8419.40	Distilling or rectifying plant	
	X	8419.60	Machinery for liquefying air or other gases	
	X	8421.19	Centrifuges, including centrifugal dryers, other than cream separators and clothes-dryers	
	X (ex)	8421.91	Parts of Centrifuges, Including Centrifugal Dryers	Centrifuges, Accessories & Parts; except clothes dryers and clothes dryer furniture
	X	9015.40	Photogrammetrical surveying instruments and appliances	
	X	9015.80	Other surveying, hydrographic, oceanographic, hydrological, meteorological or geophysical instruments and appliances, excluding compasses	
	X (ex)	9015.90	Parts and accessories of surveying, hydrological, meteorological, or geophysical instruments and appliances, excluding compasses	Photogrammetric instruments; parts and accessories for articles of subheading 9015.40
	X	9022.29	Apparatus based on the use of X-rays or of alpha, beta or gamma radiations for other than medical, surgical, dental or veterinary uses	
	X (ex)	9022.90	Apparatus based on the use of X-rays or of alpha, beta or gamma radiations for other than medical, surgical, dental or veterinary uses	Parts and accessories for goods of subheading 9022.29
X	X	9025.11	Thermometers and pyrometers, not combined with other instruments: liquid-filled, for direct reading	

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
X	X	9025.19	Thermometers and pyrometers, not combined with other instruments: other than liquid-filled, for direct reading	
X	X	9025.80	Hydrometers and similar floating instruments, thermometers pyrometers, barometers, hygrometers, and psychrometers, recording or not, and any combination of these instruments	
	X	9025.90	Parts and Accessories for Hydrometers and similar floating instruments, thermometers pyrometers, barometers, hygrometers, and psychrometers, recording or not, and any combination of these instruments	
	X	9026.10 †	Instruments and apparatus for measuring or checking the flow or level of liquid	
	X	9026.20 †	Instruments and apparatus for measuring or checking pressure	
X	X	9026.80	Other instruments and apparatus	
X	X	9026.90	Parts and accessories for articles of subheading 9026	
X	X	9027.10	Gas or smoke analysis apparatus	
X	X	9027.20	Chromatographs and electrophoresis instruments	
X	X	9027.30	Spectrometers, Spectrophotometers and Spectrographs Using Optical Radiations (Ultraviolet, Visible, Infrared)	
X	X	9027.40	Exposure Meters [including sound-level meters]	
X	X	9027.50	Other instruments and apparatus using optical radiations (UV, visible, IR)	
X	X	9027.80	Other instruments and apparatus for physical or chemical analysis	
X	X	9027.90	Microtomes; parts and accessories	
	X	9028.10	Gas Meters	
	X	9028.20	Liquid Meters	
	X	9028.30	Electricity Meters	
	X	9028.90	Parts and accessories for articles of subheading 9028	
X	X	9030.10	Instruments and apparatus for measuring or detecting ionising radiations	
	X	9030.20	Cathode-ray Oscilloscopes and Cathode-ray Oscillographs	
	X	9030.31	Multimeters	
	X	9030.39	Other instruments and apparatus, for measuring or checking voltage, current, resistance or power, without a recording device	
	X	9030.83	Other instruments and apparatus for measuring or checking electrical quantities, with a recording device	
	X	9030.89	Other Instruments and Apparatus for Measuring or Checking Electrical Quantities	
	X (ex)	9030.90	Parts and accessories (for nominated articles of subheading 9030)	

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
	X	9031.10	Machines for Balancing Mechanical Parts	
	X	9031.20	Test Benches	
	X	9031.30	Profile Projectors	
X		9031.49	Other optical instruments	
X	X	9031.80	Other Measuring or Checking Instruments, Appliances and Machines, not elsewhere specified in this chapter	
	X (ex)	9031.90	Parts and accessories (for nominated articles of subheading 9031)	
X	X	9032.20	Manostats	
X	X	9032.81	Hydraulic and Pneumatic Instruments and Apparatus	
X	X	9032.89	Automatic Regulating or Controlling Instruments, other	
	X	9032.90	Parts and accessories	
	X	9033.00	Parts and Accessories (Not Specified or Included Elsewhere in this Chapter) for Machines, Appliances, Instruments or Apparatus of Ch. 90	
	X		Auto emissions testers	
<i>6.2 Sampling systems</i>				
<i>6.3 Process and control equipment</i>				
	X	X	9032.10	Thermostats
	X			Electrical process control equipment
	X			On-board monitoring/control
<i>6.4 Data acquisition equipment</i>				
<i>6.5 Other instruments/machines</i>				
<b>B</b>	<b>CLEANER TECHNOLOGIES AND PRODUCTS</b>			
<b>1</b>	<b>Cleaner/resource efficient technologies and processes</b>			
	X			Electrochemical apparatus / plant
	X			Extended cooking (pulp)
	X			Oxygen delignification
	X			Ultrasonic cleaning
	X			Fluidised bed combustion
<b>2</b>	<b>Cleaner/resource efficient products</b>			
	X			CFC substitutes
	X	2847.00 <sup>6</sup>		Hydrogen peroxide
	X			Peat replacements (e.g. bark)
	X			Water-based adhesives

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification	
OECD	APEC <sup>2</sup>				
X		3209.10	Paints and varnishes, in aqueous medium, acrylic or vinyl		
X		3209.90	Other paints and varnishes, in aqueous medium		
X			Double-hulled oil tankers		
X			Low-noise compressors		
<b>C RESOURCES MANAGEMENT GROUP</b>					
<b>1 Indoor air pollution control</b>					
<b>2 Water supply</b>					
2.1 Potable water treatment					
2.2 Water purification systems					
	X	2801.10 *	Chlorine		
	X (ex) <sup>3</sup>	8543.89 †	Electrical machines and apparatus, having individual functions, not specified or included elsewhere in this chapter; other	Ozone production system	
2.3 Potable water supply and distribution					
	X	2201.00	Water, incl. natural or artificial mineral water		
	X	2851.00	Distilled and conductivity water		
	X	3914.00	Ion exchangers (polymer)		
<b>3 Recycled materials</b>					
3.1 Recycled paper					
3.2 Other recycled products					
<b>4 Renewable energy plant</b>					
4.1 Solar energy					
	X	8419.11	Instantaneous gas water heaters		
	X	X (ex)	8419.19	Other instantaneous or storage water heaters, non-electric	Solar Water Heaters
	X	X (ex)	8541.40	Photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light emitting diodes	Solar cells
4.2 Wind energy					
	X		Windmills		
	X		Wind turbines		
	X (ex)	8413.81	Pumps for liquids, whether or not fitted with a measuring device; other pumps	Wind turbine pump	
	X	8502.31	Generating sets, electric, wind-powered		
4.3 Tidal energy					

List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
<i>4.4 Geothermal energy</i>				
<i>4.5 Other</i>				
	X	2207.10	Ethanol	
	X	2905.11	Methanol	
	X		Hydroelectric plant	
	X	8410.11 †	Hydraulic turbines and water wheels of a power not exceeding 1,000 kW	
	X	8410.12 †	Hydraulic turbines and water wheels of a power exceeding 1,000 kW but not exceeding 10,000 kW	
	X	8410.13 †	Hydraulic turbines and water wheels of a power exceeding 10,000 kW	
	X	8410.90 †	Hydraulic turbines and water wheels; parts, including regulators	
<b>5 Heat/energy savings and management</b>				
	X	3815.00	Catalysts	
	X	7008.00	Multiple walled insulating units of glass	
	X	7019.90 *	Other glass fibre products	
	X	8404.20	Condensers for steam or other vapour power units	
	X (ex)	8409.99	Parts suitable for use solely or principally with the engines of heading No. 8407 or 8408; other	Industrial mufflers
X	X	8419.50	Heat exchange units	
X		8419.90	Parts for heat exchange equipment	
X			Heat pumps	
X			District heating plant	
X			Waste heat boilers	
X			Burners: fuel other than oil or gas	
X		8539.31	Fluorescent lamps, hot cathode	
X			Electric cars	
X			Fuel cells	
X	X	9028.10 †	Gas supply, production and calibrating metres	
X	X	9028.20 †	Liquid supply, production and calibrating metres	
X		9032.10 *	Thermostats	
<b>6 Sustainable agriculture and fisheries</b>				
	X (ex) <sup>3</sup>	4601.20	Mats, matting, and screens of vegetable materials	(1) Erosion control matting (biodegradable)



List coverage		HS Code <sup>1/</sup>	Product description	Additional product specification
OECD	APEC <sup>2</sup>			
	X (ex) <sup>3</sup>	8436.80	Other agricultural, horticultural, forestry, poultry-keeping or bee-keeping machinery	(2) Ecologically safe ground covers (biodegradable) Hot-water weed killing system
<b>7</b>			<b>Sustainable forestry</b>	
<b>8</b>			<b>Natural risk management</b>	
8.1			<i>Satellite imaging</i>	
8.2			<i>Seismic instruments</i>	
<b>9</b>			<b>Eco-tourism</b>	
<b>10</b>			<b>Other</b>	

*Table endnotes:*

1. A single asterisk (\*) indicates that the HS code appears previously in the OECD list; a cross (†) indicates that the HS code appears previously in the APEC list.
2. An “ex” in the column indicates that only the “ex-heading” product (described in the last column) is being nominated.
3. Classified under “Waste Water Management” in the APEC list.
4. Classified under “Potable Water Treatment” in the APEC list.
5. Classified under “Monitoring/Analysis” in the APEC list.
6. Originally listed as 2801.10 in the OECD list.

*Source:* Annex Tables 1 and 2 above.

**Annex Table 6. Product coverage of list proposed by Japan in its 20 November 2002 submission to the WTO**

Category, HS code	Product description	Add. product specification
<b>1. Pollution Management</b>		
<i>1.1 Air Pollution Control</i>		
2521.00	Limestone flux; limestone and other calcareous stone, of a kind used for the manufacture of lime or cement	
7019.90	Glass fibres other than slivers, rovings, yarn, chopped strands, webs, mats, thin sheets, mattresses, boards and similar non-woven products	ex Separators, Precipitators
8404.10	Auxiliary plant for use with boilers of heading No. 84.02 or 84.03	
8404.20	Condensers for steam or other vapour power units	
8405.10	Producer gas or water gas generators, with or without their purifiers; acetylene gas generators and similar water process gas generators, with or without their purifiers	ex Include only those with purifiers
8414.10	Vacuum pumps	
8414.30	Compressors of a kind used in refrigerating equipment	
8414.40	Air compressors mounted on a wheeled chassis for towing	
8414.59	Fans other than table, floor, wall, window, ceiling or roof fans, with a self-contained electric motor of an output not exceeding 125 W	
8414.80	Air or Vacuum pumps, air or vacuum compressors and fans; other	
8414.90	Parts of HS headings 8414	
8419.40	Distilling or rectifying plant	
8419.60	Machinery for liquefying air or other gases	
8419.89	Machinery, plant or laboratory equipment, whether or not electrically heated (excluding furnaces, ovens and other equipment of heading 85.14), for the treatment of materials by a process involving a change of temperature such as heating, cooking, roasting, distilling, rectifying, sterilising, pasteurising, steaming, drying, evaporating, vaporising, condensing or cooling, other than machinery or plant of a kind used for domestic purposes; instantaneous or storage water heaters, non-electric.	ex Machinery for treatment of materials by change of temperature
8421.39	Filtering or Purifying Machinery and Apparatus For Gases; other	
8421.99	Parts of Centrifuges, Including Centrifugal Dryers	
8424.90	Parts of Mechanical appliances for projecting, dispersing or spraying liquids or powders; fire extinguishers, whether or not charged; spray guns and similar machines and similar jet projecting machines.	
8509.10	Vacuum cleaners	ex Jet-turn type cleaner

Category, HS code	Product description		Add. product specification
<i>1.2 Waste Water Management</i>			
7325.10	Other cast articles of iron or steel ;Of non-malleable cast iron		
8413.20	Hand pumps, other than those of subheading No. 8413.11 or 8413.19		
8413.50	Other reciprocating positive displacement pumps		
8413.60	Other rotary positive displacement pumps	ex	Submersible mixer pump to circulate water in wastewater treatment process; sewage pumps, screw type
8413.70	Other centrifugal pumps	ex	Centrifugal pumps lined to prevent corrosion; centrifugal sewage pumps
8421.19	Centrifuges, including centrifugal dryers, other than cream separators and clothes-dryers		
8421.21	Filtering or purifying machinery and apparatus for liquids: for filtering or purifying water		
8421.29	Filtering or Purifying Machinery and Apparatus For Liquids; other		
8421.91	Parts of Centrifuges, Including Centrifugal Dryers	ex	Centrifuges, Accessories & Parts; except clothes dryers and clothes dryer furniture
8423.81	Weighing Machinery having a maximum weighing capacity not exceeding 30 kg		
8423.82	Weighing Machinery having a maximum weighing capacity exceeding 30 kg but not exceeding 5000 kg		
8423.89	Other Weighing Machinery		
8428.33	Other lifting, handling, loading or unloading machinery (for example, lifts, escalators, conveyors, teleferics) ;Other	ex	Belt-type above ground conveyor used to transfer solids or slurries between plants
8436.80	Other agricultural, horticultural, forestry, poultry-keeping or bee-keeping machinery, including germination plant fitted with mechanical or thermal equipment; poultry incubators and brooders ;Other	ex	Hot water weed killing system
8479.82	Mixing, kneading, crushing, grinding, screening, sifting, homogenising, emulsifying or stirring machines	ex	Other than kneading machinery
8479.89	Machines and mechanical appliances having indivisual functions, not specified or included elsewhere in this Chapter	ex	Trash compactors
8481.10	Pressure-reducing valves		
8481.30	Check valves		
8481.40	Safety or relief valves		
8481.80	Other valves		
8543.89	Parts of Electrical machines and apparatus, having individual functions, not specified or included elsewhere in this Chapter.	ex	Ozone production system

Category, HS code	Product description		Add. product specification
<i>1.3 Monitoring/Analysis</i>			
6909.19	Ceramic wares for laboratory, chemical or other technical uses; ceramic troughs, tubs and similar receptacles of a kind used in agriculture; ceramic pots, jars and similar articles of a kind used for the conveyance or packing of goods ;Other	ex	Laboratory equipment
9015.40	Photogrammetrical surveying instruments and appliances		
9015.80	Other surveying, hydrographic, oceanographic, hydrological, meteorological or geophysical instruments and appliances, excluding compasses		
9015.90	Parts and accessories of surveying, hydrological, meteorological, or geophysical instruments and appliances, excluding compasses		
9022.29	Apparatus based on the use of X-rays or of alpha, beta or gamma radiations for other than medical, surgical, dental or veterinary uses		
9022.90	Apparatus based on the use of X-rays or of alpha, beta or gamma radiations for other than medical, surgical, dental or veterinary uses	ex	Parts and accessories for goods of subheading 9022.29
9025.11	Thermometers and pyrometers, not combined with other instruments: liquid-filled, for direct reading		
9025.19	Thermometers and pyrometers, not combined with other instruments: other than liquid-filled, for direct reading		
9025.80	Hydrometers and similar floating instruments, thermometers pyrometers, barometers, hygrometers, and psychrometers, recording or not, and any combination of these instruments		
9025.90	Parts and Accessories for Hydrometers and similar floating instruments, thermometers pyrometers, barometers, hygrometers, and psychrometers, recording or not, and any combination of these instruments		
9026.10	Instruments and apparatus for measuring or checking the flow or level of liquid		
9026.20	Instruments and apparatus for measuring or checking pressure		
9026.80	Other instruments and apparatus		
9026.90	Parts and accessories for articles of subheading 9026		
9027.10	Gas or smoke analysis apparatus		
9027.20	Chromatographs and electrophoresis instruments		
9027.30	Spectrometers, Spectrophotometers and Spectrographs Using Optical Radiations (Ultraviolet, Visible, Infrared)		
9027.40	Exposure Meters		
9027.50	Other instruments and apparatus using optical radiations (UV, visible, IR)		
9027.80	Other instruments and apparatus for physical or chemical analysis		
9027.90	Microtomes; parts and accessories		
9028.10	Gas Meters		
9028.20	Liquid Meters		
9028.30	Electricity Meters		
9028.90	Parts and accessories for articles of subheading 9028		
9030.10	Instruments and apparatus for measuring or detecting ionising radiations		
9030.20	Cathode-ray Oscilloscopes and Cathode-ray Oscillographs		
9030.31	Multimeters		

Category, HS code	Product description	Add. product specification
9030.39	Other instruments and apparatus, for measuring or checking voltage, current, resistance or power, without a recording device	
9030.83	Other instruments and apparatus for measuring or checking electrical quantities, with a recording device	
9030.89	Other Instruments and Apparatus for Measuring or Checking Electrical Quantities	
9030.90	Parts and accessories (for nominated articles of subheading 9030)	
9031.10	Machines for Balancing Mechanical Parts	
9031.20	Test Benches	
9031.30	Profile Projectors	
9031.49	Other Measuring and Checking instruments, appliances and machines, not specified or included elsewhere in this chapter	
9031.80	Other Measuring or Checking Instruments, Appliances and Machines, not elsewhere specified in this chapter	
9031.90	Parts and accessories of Hs headings 9031	
9032.10	Thermostats	
9032.20	Manostats	
9032.81	Hydraulic and Pneumatic Instruments and Apparatus	
9032.89	Automatic Regulating or Controlling Instruments, other	
9032.90	Parts and accessories	
9033.00	Parts and Accessories (Not Specified or Included Elsewhere in this Chapter) for Machines, Appliances, Instruments or Apparatus of Ch. 90	
<i>1.4 Solid Waste Management</i>		
6810.99	Articles of cement, of concrete or of artificial stone, whether or not reinforced ;Other	
7017.10	Laboratory, hygienic or pharmaceutical glassware ;Of fused quartz or other fused silica	
7017.20	Laboratory, hygienic or pharmaceutical glassware ;Of other glass having a linear coefficient of expansion not exceeding $5 \times 10^{-6}$ per Kelvin within a temperature range of 0C to 300C	
7017.90	Laboratory, hygienic or pharmaceutical glassware ;Other	
7806.00	Other articles of lead	
8417.80	Industrial or laboratory furnaces and ovens, including incinerators, non-electric ;Other	ex Waste Incinerators
8417.90	Parts of Industrial or laboratory furnaces and ovens, including incinerators, non-electric	ex Waste Incinerators ;Parts
8462.91	Hydraulic presses	ex Shredders/balers for metals; hydraulic
8464.90	Machine-tools for working stone, ceramics, concrete, asbestos-cement or like mineral materials or for cold working glass; Other	ex Machine-tools for cold working glass
8472.90	Other office machines (for example, hectograph or stencil duplicating machines, addressing machines, automatic banknote dispensers, coin-sorting machines, coin-counting or wrapping machines, pencil-sharpening machines, perforating or stapling machines) ;Other	ex Paper shredders

Category, HS code	Product description		Add. product specification
8474.10	Sorting, screening, separating or washing machines	ex	Machines of a kind for use in screening and washing coal
8474.39	Mixing or kneading machines :	ex	Mixing or kneading machines
8475.29	Machines for manufacturing or hot working glass or grassware :Other		
8479.82	Mixing, kneading, crushing, grinding, screening, sifting, homogenising, emulsifying or stirring machines	ex	Magnetic separator
8479.89	Machines and mechanical appliances having indivisual functions, not specified or included elsewhere in this Chapter; Other	ex	Radioactive waste press
8479.90	Machines and mechanical appliances having indivisual functions, not specified or included elsewhere in this Chapter; Parts	ex	Parts of trash compactor
8480.50	Moulds for glass		
8505.90	Electro-magnets; other, including parts	ex	Electromagnet
8514.10	Industrial or Laboratory Furnaces and Ovens; electric, resistance heated	ex	Waste incinerators or other waste treatment apparatus
8514.20	Industrial or Laboratory Furnaces and Ovens; electric, induction or dielectric	ex	Waste incinerators or other waste treatment apparatus
8514.30	Industrial or Laboratory Furnaces and Ovens, electric, other	ex	Waste incinerators or other waste treatment apparatus
8514.90	Parts of Industrial or Laboratory Furnaces and Ovens		
8516.29	Electric space heating apparatus and electric soil heating apparatus ;Other	ex	Electric space heating and soil heating apparatus
8705.90	Special-purpose motor vehicles, other than those principally designed for the transport of persons or goods (for example, breakdown lorries, crane lorries, fire fighting vehicles, concrete-mixer lorries, road sweeper lorries, spraying lorries, mobile work	ex	Refuse disposal vehicles
9013.20	Lasers, other than laser diodes		
9603.10	Brooms and brushes, consisting of twigs or other vegetable materials bound together, with or without handles		
9603.50	Other brushes constituting parts of machines, appliances or vehicles		
9603.90	Brooms, brushes (including brushes constituting parts of machines, appliances or vehicles), hand-operated mechanical floor sweepers, not motorised, mops and feather dusters; prepared knots and tufts for broom or brush making; paint pads and rollers; squee	ex	Mechanical floor sweepers
<i>1.5 Remediation/cleanup</i>			
8418	Refrigerators, freezers and other refrigerating or freezing equipment, electric or other; heat pumps other than air conditioning machines of heading No. 84.15.	ex	Ion refrigerators able to dispose of germs
8907.10	Inflatable rafts	ex	Inflatable oil-spill recovery barges
8907.90	Other floating structures ;Other	ex	Pollution protection booms
<i>1.6 Noise/Vibration abatement</i>			

Category, HS code	Product description		Add. product specification
8409.91	Parts suitable for use solely or principally with the engines of heading No. 84.07 or 84.08	ex	Industrial mufflers
8409.99	Parts suitable for use solely or principally with spark-ignition internal combustion piston engines:	ex	Industrial mufflers
8708.92	Silencers and exhaust pipes		
<b>2. Cleaner Technology and products</b>			
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard	ex	Recycled paper
8415	Air conditioning machines, comprising a motor-driven fan and elements for changing the temperature and humidity, including those machines in which the humidity cannot be separately regulated.	ex	Inverter type air conditioner
8415.90	Parts of Air conditioning machines	ex	Temperature controller
8418	Refrigerators, freezers and other refrigerating or freezing equipment, electric or other; heat pumps other than air conditioning machines of heading No. 84.15.	ex	Non-flon [i.e., no HFC-134a] refrigerator
8418	Refrigerators, freezers and other refrigerating or freezing equipment, electric or other; heat pumps other than air conditioning machines of heading No. 84.15	ex	Inverter type air conditioner
8422.11	Dish washing machines; machinery for cleaning or drying bottles or other containers; machinery for filling, closing, sealing or labelling bottles, cans, boxes, bags or other containers; machinery for capsuling bottles, jars, tubes and similar containers; Householdtype	ex	Ultrasonic dish washing machine
		ex	Dish washing machine capable of saving detergents
		ex	Dish washing machine capable of saving water
8450	Household or laundry-type washing machines, including machines which both wash and dry	ex	Ultrasonic washing machines
		ex	Washing machine capable of saving detergents
		ex	Washing machine capable of saving water
8471.70	Storage units	ex	DVD-ROM
8509.80	Electro-mechanical domestic appliances, with self-contained electric motor.	ex	Gabbage degrader
8516.50	Microwave ovens		Resource efficient type
8516.60	Other ovens ; cookers, cooking plates, boiling rings, grillers and roasters	ex	IH electric cooker
8516.79	Electric instantaneous or storage water heaters and immersion heaters; electric space heating apparatus and soil heating apparatus; electro-thermic hair-dressing apparatus (for example, hair dryers, hair curlers, curling tong heaters) and hand dryers; electric smoothing irons; other electro-thermic appliances of a kind used for domestic purposes; electric heating resistors, other than those of heading 85.45;Other	ex	IH rice cookers
8528.30	Video projectors	ex	LCD Type

Category, HS code	Product description		Add. product specification
8526.91	Radar apparatus, radio navigational aid apparatus and radio remote control apparatus; Radio navigational aid apparatus:	ex	Car navigation system capable of receiving traffic jam information
8528.12	Reception apparatus for television, whether or not incorporating radio -broadcast receivers or sound or video recording or reproducing apparatus ;Color	ex	PDP Type
		ex	LCD Type
8703.22	Motor cars and other motor vehicles principally designed for the transport of persons (other than those of heading No. 87.02), including station wagons and racing cars; Of a cylinder capacity exceeding 1,000 cc but not exceeding 1,500 cc	ex	Hybrid Car
8703.90	Motor cars and other motor vehicles principally designed for the transport of persons (other than those of heading No. 87.02), including station wagons and racing cars; Other	ex	Cars designed for defusing nuisance
8901.20	Tankers	ex	Double-hulled oil tankers
9013.80	Flat panel displays devices (including LCD, Electro Luminescence, Plasma, Vacuum Fluorescence and other technologies) for products falling within this agreement, and parts thereof.		
<b>3. Resource Management</b>			
8410.11	Hydraulic turbines and water wheels of a power not exceeding 1,000 kW		
8410.12	Hydraulic turbines and water wheels of a power exceeding 1,000 kW but not exceeding 10,000 kW		
8410.13	Hydraulic turbines and water wheels of a power exceeding 10,000 kW		
8410.90	Hydraulic turbines and water wheels; parts, including regulators		
8413.81	Pumps for liquids, whether or not fitted with a measuring device; other pumps	ex	Pumps for windmills
8413.81	Pumps for liquids, whether or not fitted with a measuring device; other pumps	ex	Heat Pumps
8414.80	Pumps for airs, whether or not fitted with a measuring device; other pumps	ex	Heat Pumps
8419.19	Instantaneous or storage water heaters, non-electric ;other	ex	Burner; fuel other than oil or gas
		ex	Solar Water Heaters
		ex	Waste heat boilers
8502.31	Electric generating sets and rotary converters ;Wind-powered		
8506.80	Primary cells and primary batteries ;Other	ex	Fuel Cells
8516.10	Liquid pumps	ex	Water heating machine using heating pumps
8541.40	Photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light emitting diodes	ex	Solar electric generators
		ex	Solar panel
		ex	Solar cells



Category, HS code	Product description		Add. product specification
<i>3.2 Heat/Energy savings and management</i>			
7008.00	Multiple-walled insulating units of glass		
8419.50	Heat exchange units		
8419.90	Parts of HS headings 8419	ex	Heat exchange units ;Parts
8539.31	Electric filament or discharge lamps, including sealed beam lamp units and ultra-violet or infra-red lamps; arc-lamps; Fluorescent, hot cathode		
<i>3.3 Other Recycling System</i>			
6309.00	Worn clothing and other worn articles		
6310	Used or new rags, scrap twine, cordage, rope and cables and worn out articles of twine, cordage, rope or cables, of textile materials.		
8422.20	Machinery for cleaning or drying bottles or other containers		
8474.32	Machines for mixing mineral substances with bitumen	ex	Asphalt recycle equipment
8479.82	Mixing, kneading, crushing, grinding, screening, sifting, homogenising, emulsifying or stirring machines	ex	Other than kneading machines

*Source:* Government of Japan, “Market Access for Non-Agricultural Products — Communication from Japan”, WTO document code TN/MA/W/15 & TN/TE/W/17, 20 November 2002, World Trade Organization, Geneva