



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 26 June 2007

Report on the public consultation on the

**COMMISSION STAFF WORKING DOCUMENT**

**on units of measurement (Directive 80/181/EEC)**

## TABLE OF CONTENTS

1.	Introduction .....	2
2.	Contributions to the public consultation .....	3
2.	Extension of the international SI-system .....	4
3.	Multiple indication of SI units .....	4
4.	So-called Arbitrary units (U) .....	4
5.	Ratios (not expressed in units) .....	5
6.	Non-SI Units required by International Treaties in transport .....	5
7.	Non-SI Units used in Traditional industries and in new markets .....	5
8.	Date of Supplementary indications in non-SI units .....	8
9.	Scope of the directive.....	11
10.	Reasons to maintain the Directive.....	13
11.	Impact assessment.....	13
12.	Further work.....	15

### 1. INTRODUCTION

The use of units of measurement is regulated in the European Union by means of COUNCIL DIRECTIVE 80/181/EEC of 20 December 1979 on the approximation of the laws of the Member States relating to units of measurement and on the repeal of Directive 71/354/EEC<sup>1</sup>. Over time the directive has been updated a number of times, most recently by Directive 99/103/EEC<sup>2</sup>.

Starting on 22 December 2006 a public consultation was held until 1 March 2007. The public consultation document highlighted 10 issues, the reactions to which will subsequently be discussed in this document. Stakeholders were also invited to bring up any other issues that they consider relevant.

Information on the public consultation has been disseminated via the Your Voice in Europe site which is public and well known among professional organisations. Also there was an Enterprise e-mail alert that was distributed at the start of the consultation as well as an e-mail alert to all those who had expressed their interest on this issue to the services in the past.

All reactions have been published on the website of DG Enterprise and Industry, except those which were submitted as confidential. The individual contributions of firms were not published given that this could lead to breach of confidentiality, whilst their viewpoints were fully reflected by the industry federations.

---

<sup>1</sup> OJ No L 39, 15.02.1980, p. 40

<sup>2</sup> OJ No L 34, 09.02.2000, p. 17

This report will firstly examine the reactions that have been received. Secondly it will present the conclusions to be drawn with due regard to the Commission's priority for simplification and better regulation.

This document has been prepared by the Commission services for consultation purposes. It does not in any way prejudge, or constitute the announcement of, any position on the part of the Commission concerning the issues covered.

## **2. CONTRIBUTIONS TO THE PUBLIC CONSULTATION**

Contributions were received from 204 stakeholders, 4 of which were requested to be treated as confidential. All but one gave a view on metric-only or extending supplementary indications. In this summary the views on this point are enumerated.

Contributions were received from the following types of respondents:

**Public:** 37 members of the public reacted, of whom 5 from USA, 1 from Germany and the rest from the UK. The majority, 27, were in favour of metric-only, whilst 11 want to maintain supplementary indications. A main reason of the private individuals to favour metric-only is the confusion on the shop floor: prices referring to only prices per pounds/pints instead of prices per kilo/litre. Some have sent photos and they reason that competing products and offers in advertisements are difficult to compare due to the difficulties in implementation of the directive in the UK.

**Teachers:** 8 persons reacted in their capacity as a teacher or lecturer, 6 from UK and 2 from USA. All, but one, were in favour of metric-only. The teachers point out that schooling in the UK has been only in metric for the past 30 years. Over half the population therefore do not have any idea what imperial measures mean.

**Non governmental organisations:** 2 Non-governmental organisations from the UK reacted, one very much in favour and the other very much against metric-only.

**Retailers:** 3 retailers reacted, all from the UK and all in favour of continuing use of imperial measures or leaving the choice of unit to the retailer.

**Industry Federations:** 76 industry federations reacted (of which 23 Europe-wide federations, 24 UK, 13 US and 6 French) and 56 individual firms (41 European and 15 USA). Without exception, contributors from industry were in favour of extending supplementary indications for another 10 years or indefinitely, pointing to the current federal law in the US which does not allow metric-only labelling and therefore any obligation limiting labelling to metric-only in the EU would require relabelling of all trans-Atlantic trade.

**International Organisations:** 1 international organisation reacted.

**Authorities:** 17 Authorities reacted, of which 7 Member States, the USA and 10 regional authorities. All Member States favour of extending supplementary indications.

In the following chapters, details of answers on the 10 questions posed by the Commission services will be discussed, as well as other issues brought up such as the imposition of a date for the Article 1b exceptions for the UK and Ireland and size indications of clothing and shoes, further exemptions and the possibility of a return to the pre-2000 situation as regards goods sold loose and in bulk in the UK.

On all these additional points, the views on extending supplementary indications reflected the divisions of opinion mentioned above.

## **2. EXTENSION OF THE INTERNATIONAL SI-SYSTEM**

Metric units are defined in the SI-system, the International System of Units (abbreviated as "SI" from the French). They allow expressing quantities in an undisputed way. It began with the Metre Convention in 1866 and has since become a fully encompassing system of coherent weights and measures. All industrialised countries have adhered to the agreements constituting the SI system and under the WTO-TBT agreement are required to base their laws on the SI-units.

From the side of the Treaty Organisation it was explained that the Conférence Générale des Poids et Mesures (CGPM), i.e. the governing body of the International Bureau of Weights and Measures (BIPM), has by means of a resolution in 1999 added the unit "katal" to the International System of Units .

Those concerned all agree in their reactions to add katal into the Directive.

In Annex 1 of Directive 80/181/EEC the "katal" should be mentioned adjacent to the mention of "mole per second".

## **3. MULTIPLE INDICATION OF SI UNITS**

Respondents agreed that there may be a need to indicate various SI units on a label but that it is too complicated to fix any general rules. Where needed, sector specific directives can indicate priorities, but there is no natural order of priority. There is, however, a trend to leave indications to market parties as this increases flexibility and allows innovation.

If needed, the priorities in the case of the use of multiple SI-indications can be determined by sector specific directives other than Directive 80/181/EEC.

## **4. SO-CALLED ARBITRARY UNITS (U)**

Arbitrary Units are established by other international organisations, such as WHO, in order to define new elements. Very often such an arbitrary unit defines the concentration of a reference material, for example a concentration of a measured protein complex. These arbitrary units, indicated as "U", are widely used in many disciplines and some are even described in legislation, for example In-Vitro Diagnostics Directive 98/79/EC and Commission Decision 2002/364/EC.

Stakeholders, who use arbitrary units, notably in health care, agree that such units need not be in the scope of the directive, which according to its Article 1 concerns legal units of measurement.

Arbitrary units are not legal units and need not be included in Directive 80/181/EEC.

## **5. RATIOS (NOT EXPRESSED IN UNITS)**

Stakeholders agree that ratios using SI units, for example concentrations expressed as kg/l, mol/l or kat/l. are covered by Compound Units under point 5 of Chapter 1 of the Annex of Directive 80/181.

In the case where ratios using one or more non-SI, which would currently be considered to be supplementary indications, respondents argue that they continue being authorised after 2009.

Ratio's containing non-SI units in Directive 80/181/EEC should continue to be allowed as supplementary indications after 2009.

## **6. NON-SI UNITS REQUIRED BY INTERNATIONAL TREATIES IN TRANSPORT**

Stakeholders indicated that the use of non-SI units remains of great importance for the safety of air, sea and rail transport. For example in the case of airplanes, flight levels are indicated in feet, longitudinal distances in nautical miles and air speeds in knots. Change to accommodate metrical measurement would certainly require newly certified equipment, changes to maps and manuals and retraining staff. As 40% of international aviation is between the US and the EU, a change could be expected to represent significant costs.

The directive's scope should continue to exempt the units of measurement used in air, sea and rail transport, which have been laid down in international conventions or other agreements binding the Community or Member States (Article 2b).

One respondent mentioned that international treaties in the areas of oil and gas exploration and gas transport should also be exempted from the scope. Member States did not, however, consider it necessary to change Article 2b in this respect.

The exemption in Article 2b in Directive 80/181/EEC should be maintained as it is.

## **7. NON-SI UNITS USED IN TRADITIONAL INDUSTRIES AND IN NEW MARKETS**

Stakeholders gave many examples of instances in which non-SI units are used in industry and which they say often are the most currently used indication of measurement. This list reproduces views given and is meant to be illustrative without the Commission services taking responsibility for the information presented.

- a) The detergents industry pointed to the requirement in [Regulation 907/2006/EC](#) to indicate the recommended dosage appropriate for a standard washing machine load depending on water hardness levels and the possibility it has to include a measuring cup (scoop) in the package. It also needs to label packages for many different markets.
- b) In firearms non-SI measurements are used for the size of boreholes (bore) and cartridges (grain). The SI unit equivalents are approximate while the non SI indications are exact.
- c) Bicycle frames and parts are indicated in non-SI units.

- d) Tyre gauges are indicated in non-SI units and tyre pressure gauges use both SI and non-SI units and the EU is bound by the agreements in UN-ECE.
- e) For manometers and tyre pressure gauges non-SI psi is used next to SI bar and mPa.
- f) Valves are in Non-SI NPS and SI DN.
- g) Letter type setting is done in points which are non-SI units.
- h) Thermal dissipation in air conditioning is expressed in BTU/hr or Kcal/hr, both non-SI. Sometimes 'BTU' without the '/hr' is used. It replaces SI unit kW/hr.
- i) Electrical generators are often referred to in Horsepower (HP) in the USA and in kW in the EU. Wiring is often in the AWG (American Wire Gauge) sizing system and without an extension of the derogation such components would become illegal.
- j) Screw torques and valves may be indicated in non-SI units: lb-in (pound –inches) as opposed to SI Nm (Newton-meters). US torque wrenches would be prohibited in the EU.
- k) Barrels of oil are the quantity used on international oil markets. The oil and gas industry uses Nm<sup>3</sup> (Normal metre cubed) as a unit for amount of substance.
- l) Shoe sizes: US shoe size 9 relates to a foot length of 10.5 inches while the equivalent European size is 42 and represents a foot length of 26.6 cm.
- m) Clothes and garment sizes are often also in non-SI units. An ad-hoc working group of CEN, the European Standardisation Organisation, supported by European Federations is preparing a new coding system consisting of an alphanumeric code based on body measurement expressed in centimetres.
- n) Computing uses binary indications, often rounded to decimal such as the Kilo in Kilobytes which actually indicates 1024 Bytes rather than 1000 bytes.
- o) Printer speed is indicated by page per minute (PPm)
- p) US computer network cables exclusively use 'Ohm per foot'.
- q) Billing for phoning and cable usage is done in non-SI bits per second or Giga-bytes
- r) The diameter of computer and television screens is often indicated (also) in inches. Their brightness and that of digital cameras is expressed in pixels per square unit of measurement, even if pixels as such are not defined.
- s) Turbo-electric equipment uses the gallon, but specifically the US gallon, which differs from the old UK imperial gallon, which is no longer used.
- t) In health care, non-SI mercury millimetre "mmHg" is for blood pressure rather than SI-Kilopascal; the "cc/min" measures flow rates and is SI, but the proper SI would be litres per second; measurement of radioactivity is in Curie (Ci), mainly for big sources, but the correct SI unit would be Becquerel (Bq); for exposure to radiation, rad and rem

are used, but the proper SI units would be the Gray (Gy) and Sievert (Sv)<sup>3</sup>; monitoring is in pO<sub>2</sub> for oxygen saturation and pCO<sub>2</sub> for carbon saturation. Within the medical devices industry many measures are non-metric: Charrière gauge, Needle gauge, wire diameter and the notation used to designate size of sutures and ligatures.

- u) In piping the standards are the ½, ¾ and 1 inch diameter in domestic water piping. These sizes are mentioned in EN 10226 and ISO 7. Pipe threads are defined by ISO 7 and/or ISO 65 and these are incompatible with USA NPT (National Pipe Thread). It seems however that the UK plumbing uses metric units and has special connectors by which to connect imperial plumbing with the new metric plumbing.
- v) “kcal” is the non-SI variant of “kJ”, kilo joule, and both indications are prescribed by Article 6 of Directive 90/496/EEC on nutrition labelling for foodstuffs. There apparently is no exact relationship between “kcal” and “kJ”.
- w) Thermal insulation of duvets and textiles is measured in “tog”
- x) “pH” is a measure of the activity of hydrogen ions (H<sup>+</sup>) in a solution and, therefore, its acidity or alkalinity has no SI equivalent and is used in health care and in valves, pumps and compressors for the chemical industry. On the other hand, “pH” in the SI-system means pico-Henry, or 10<sup>-12</sup> henry with the “henry” being defined as the SI-unit for inductance.
- y) Cosmetics in the US require non-metric labelling, but, according to an industry federation, the US fluid ounce is larger than its imperial namesake, so there is no real misleading of UK consumers.
- z) The US gallon equals 3.78L and is used for water coolers. It is less than the imperial gallon of 4.54L.
- aa) Toilets use ‘gallons per flush’ or litres per flush’.
- bb) Ophthalmologic surgery instruments where “G” represents the gauge to reflect solid and/or hollow lumens and tubes
- cc) In publishing lettering type fonts are sized in non-SI “pica” and “point”.
- dd) On maps altitudes and depths are often both in metres and in feet
- ee) In gas and heating in Austria the unit “Zoll” (inch) is often used as a supplementary indication.
- ff) Corrugated packaging industry uses SI-based “flatbed die cutting” and non-SI based “rotary die cutting” to make competing packaging products.
- gg) Industry sizes for Paper A0, A1, A2, A3, A4 etc are a national and while not SI the area of A0 is equal to one square meter.

---

<sup>3</sup>	Name	Symbol	Value
	Curie	Ci	3,7x10 <sup>10</sup> Bq
	rad	rad	0.01 Gy
	rem	rem	0.01 Sv

hh) Oven heats are often indicated in numbers which differ per country or culture. Such indications may also be in SI-degrees Celsius or non-SI degrees Fahrenheit.

The above-mentioned examples illustrate the many instances in which non-SI units are used. No complaints were received about such use nor were examples given of actual difficulties experienced when marketing products in non-SI units on the EU market. Restricting the use of non-SI units could create extra risks which could go against essential requirements stipulating that the benefits to a patient must outweigh the risks in the IVD Directive 98/79/EC. Furthermore, 'Kcal' is prescribed by the nutritional labelling Directive 90/496/EEC and prohibiting it would require a change to that directive. It was confirmed by Member States that the application of the current directive does not present difficulties of interpretation in practice and does not give rise for introducing new limitations. There is, therefore, no need at this moment to exclude sectors from the scope of the directive.

Whilst there are many examples of non-SI units currently being in use, stakeholders did not mention specific examples of difficulties and authorities confirmed that there are currently no difficulties in the application of Directive 80/181/EEC and there is no need to reduce its scope.

## **8. DATE OF SUPPLEMENTARY INDICATIONS IN NON-SI UNITS**

The use of supplementary indications in non-SI units are authorised by Article 3.1 of the Directive. There is no definition of what constitutes such an indication, other than that it is not in the SI-system. The exception is therefore the broadest possible and allows to cover a host of indications as mentioned in the points above.

The USA Federal Fair packaging and Labelling Act (15 U.S.C. §§§ 1451-1461) and the regulations promulgated there under require dual labelling for most consumer products. Health products regulated by the FDA are still currently only allowed in non-SI units, but there is currently a proposal to allow SI units next to non-SI indications, but this would still not allow metric-only labelled products to be marketed in the USA. Save for a few exceptions, US federal law does not allow metric only labelling. This represents a costly non-tariff barrier to exports from the EU.

During the last decade there has been a gradual change with all but three US states allowing metric-only labelling next to dual labelling. NASA has also indicated that it will in future use metric units for all operations on the lunar surface when it returns to the moon, which will bring the metric system into wider use by hundreds of aerospace manufacturers and suppliers. This may be expected to give a huge boost to aerospace industries changing to metric and metrics may well become the standard in which innovation is developed.

There may be legal requirements in other markets than the USA. For fruit and vegetables it is reported by the federation Freshfel that also Japan and Canada may require indications in non-SI, notably in pounds (lb).

Respondents from industry unanimously confirmed the necessity to extend the use of supplementary markings. Many have asked for an indefinite extension. Requiring metric-only would lead to very large costs from having to split production lines and making products in metrics for the EU market and in non-metrics for the US market. Next to that there would be additional costs from having to use different labels and documentation, retraining workers and



maintaining increased stocks. Finally, bespoke production runs could become shorter leading to higher prices per item. Some of these operations would have negative environmental consequences such as more scrap, more print runs, more cleaning of presses.

**Table 1** Transatlantic trade and estimates of costs of requiring metric metric-only labelling in the EU from 2010

Sector	TA trade	production	labels	stocks	Total costs	Source
Electrical Equipment	\$10bn					NEMA
Cosmetics			\$10.000 per label		\$80 mln for a large company	CTFA
Manufacturing					\$30 mln for a large company	NAM
High tech	\$100bn turnover in EU; 500,000 employees	Disable °F indication = 4 engineering months = \$60.000	8 working days per manual = \$3500	Extra stocks per product = \$10.000 one-off; \$1000 per year	Per firm: \$25-50mln one-off and \$4 mln per year	AeA
Chocolate/ confectionary	\$705 mln					NCA-CMA
Plastics	\$13bn	Metric moulds				SPI
Engineering	€63 bn (EU exp)				€125 mln (0.02 – 0.2% of turnover)	Orgalime
Machinery and Transport					€150 mln – €1.5bh (0.02-0.2% of turnover)	Business Europe
Engineering			£1000-£5000 per manual		5% extra costs perpetually	GAMBICA
Meat	85-90% of US meat exp to EU				\$12mln	USMEF
Medical devices (IVD)	€9bn (EU market)		€700 per prod line		€14 mln	EDMA
Toys					0.2% of turnover	Medium company

Art materials			\$250-\$10.000 per item		\$500.000	Medium company
Gas appliances			2.5 man days per manual		£100.000	Medium company
Manufacturing			\$2000 per item		\$30 mln	Large company
Electro-mechanical					€30 – 60 mln	Large company
Electro-mechanical					0.5% TO one off and 0.25% TO annually	Medium company
Small business					Any new investment requires 3 times that amount in turnover to cover cost	FSB

It would seem that enforcing metric-only labelling in the EU from 2010 onwards would lead to considerable costs amounting to 0.02% of turnover for large firms and up to 0.2% of turnover for small firms. Mechanically it could lead to more employment, but it is expected that other employment will be lost in those cases where firms cannot cope with rising costs. With total EU exports to the USA amounting to €315bn, costs of the change between 0.02% and 0.2% could amount to between €63 million and €630 million for European industry.

There do not, however, seem to be any additional costs caused by extending the use of supplementary indications, because there will be no change to the current situation.

Member States would seem to be close to unanimity for extending the period.

It would seem that the recital extending the use of supplementary indications in Directive 99/103/EEC is still valid:

Certain third countries do not accept on to their market products marked exclusively in the legal units established by Directive 80/181/EEC; companies exporting their products to these countries will be disadvantaged if supplementary indications are disallowed after 31 December 1999; supplementary indications in non-legal units should therefore be authorised for a further period.

One respondent suggested that, as it concerns imports from the United States, that EU and USA recognise each others imports in a reciprocal arrangement. While this would solve the direct trade issue it would add costs to imports coming from third markets to both the EU and USA and would cause a non-tariff technical barrier to exports from these third countries which would be contestable in the WTO-TBT. Therefore the Commission should not follow this suggestion.

Another respondent's suggestion is to permit exemptions if and only if it could be demonstrated that trade would be hindered with countries outside the European Union, would, if at all feasible, add an administrative burden on many companies and should therefore not be considered.

Again another respondent's suggestion was to precisely indicate the non-SI measure, i.e. "US fluid ounce" instead of "fluid ounce". This would again increase costs for producers, because such indications are not required, and probably not even permitted in the USA. A change in law would be needed in the USA.

Whilst there is unanimous support from industry for an indefinite extension of supplementary markings, Member State governments appear hesitant about an indefinite extension given the still large non-tariff trade barriers imposed by the USA to metric-only labelled goods. It is clear therefore that specific action on this point will also be required.

From an intellectual property rights perspective, allowing the use of supplementary indications takes a similar approach to Rule 10 of the Regulations under the Patent Cooperation Treaty (PCT) of the World Intellectual Property Organisation (WIPO), which lays out the rules for physical units<sup>4</sup>. The PCT requires metric units to be used but allows other units if accompanied by metric units. As it does not permit national authorities to impose more stringent formalities requirements than those under the PCT, indefinitely allowing supplementary indications would avoid a clear inconsistency between the PCT and European legislation.

There would seem to be sound economic arguments for indefinitely extending the date for the use of supplementary indications in Article 3 in Directive 80/181/EEC. However, the continued existence of non-tariff barriers against metric-only labelled goods in the USA represents a difficulty and will need to continue to be addressed bilaterally in the Commission's ongoing contacts on regulatory cooperation with the US authorities.

## **9. SCOPE OF THE DIRECTIVE**

From the side of private persons there were many differing views on the current application of the directive, notably in the United Kingdom. Many are concerned by the non-use of metric units, notably in offers and as the base for unit pricing. The result can lead to unclarity and to potential confusion. Consumers complain that they cannot always compare the price of products in shops easily and that this may be to the advantage of traders and at the expense of shoppers. A number of photos were sent by individuals underlining the lack of market surveillance. However, as it does not concern cross border trade, there is no incentive for the Commission to pursue the UK authorities on this issue. The Commission considers this to be primarily a matter for the Member State authorities to deal with.

Many also discussed the issue of the 4 exemptions<sup>5</sup> allowed to the UK and Ireland. There were views expressed in favour of indefinitely maintaining such exemptions and also contrary

---

<sup>4</sup> [http://www.wipo.int/pct/en/texts/pdf/pct\\_regs.pdf](http://www.wipo.int/pct/en/texts/pdf/pct_regs.pdf)

<sup>5</sup> Road traffic signs, distance and speed measurement (miles, yards and inches); dispense of draught beer and cider and milk in returnable containers (pint); land registration (acre); transactions in precious metals (troy ounce). Ireland has changed its road traffic signs, distance and speed measurement to metrics on 1 January 2005.

views stressing the scope for errors after 30 years of fully metric education whilst imperial measures are no longer taught at school. It was also pointed out that the exemptions are exclusive, i.e. that it is illegal to sell draught beer in metric units, whilst the exemption for pints of milk is only for returnable bottles but that nearly all pasteurised milk in non-returnable packaging is sold in multiples of pints. While a UK citizen said that mainland lorries regularly collided with low bridges, a UK local authority said statistics did not show more accidents involving foreign drivers. The UK 1997 national rule<sup>6</sup> requiring the height of the truck to be clearly displayed in feet and inches in the drivers cab if the truck has a height of over 4m was not flagged as a problem by non-UK operators.

The UK government has asked for the obligation about determining a date in advance for ending these exemptions to be lifted. No reactions were received on this issue from EU stakeholders other than UK citizens. Unless new arguments about costs of the current exemptions would be brought forward by economic operators outside the UK, there does not seem to be an overriding reason to require the UK and Ireland to fix a date in advance for lifting the exemptions.

The UK government has also indicated that new land-registrations are all done in metric units. In Ireland the acre for land registration was withdrawn end 1998. The Commission services suggest taking out the exemption for UK and Ireland concerning land registration in acres.

Two UK retailers and two NGOs requested to return to the pre-2000 situation regarding the implementation of the directive requiring goods sold loose and in bulk to be sold in metric. It also does not appear that UK authorities would wish to change back to the pre-2000 situation.

Other UK citizens pointed to the obligation in the UK to indicate metric in 4 decimals. This was not flagged as a problem by producers outside of the UK, possibly because they do not produce in non-metric sizes and therefore do not need to apply this rule.

Some respondents have requested to no longer allow Member States to require that measuring instruments bear indications of quantity in a single legal unit of measurement (Article 3.3). They do not give any examples of actual problems and give the impression that the article will in future cause extra costs. This appears, however, to be misleading. The article is being fully applied by all Member States since the inception of the directive and having it does not lead to extra costs. It rather gives benefits, namely the guarantee to consumers that a measuring instrument gives a result in SI units. Getting rid of the article would open up many possibilities to mislead customers by 'juggling with units', which currently cannot occur. There was no support from Member States to scrap Article 3.3 of the Directive.

In the absence of views indicating that cost additions or difficulties emanate from the current exemptions to economic operators from outside the UK, the Commission should have no overriding reason to require the UK or Ireland to fix a date in advance on the lifting of the exemptions.

---

<sup>6</sup> Statutory Instrument 1997 No. 530: The Road Vehicles (Construction and Use) (Amendment) Regulations 1997: <http://www.opsi.gov.uk/si/si1997/19970530.htm>

## 10. REASONS TO MAINTAIN THE DIRECTIVE

One respondent suggested scrapping the directive given that SI units were now widely in use and that the Directive had served its purpose and achieved its aims.

There are, however, in the opinion of the Commission services good reasons to maintain the Directive and these were unanimously supported by Member States.

- The Meter-Convention is a treaty of which all EU Member States are signatories. The *Conférence Générale des Poids et Mesures (CGPM)*, i.e. the governing body of the *International Bureau of Weights and Measures (BIPM)*, is developing the International System of Units (SI). Nevertheless the Member States of the Meter-Convention are not legally bound to exclusively implement the SI system. Other Units of Measurements are allowed.
- To have a comparable common basis for all the measurement done in Europe in the Member States and between Member States it is necessary to have the same legal units as in the other countries.
- If there would be no directive (or regulation) any unit of measurement could be applied. If a Member State would implement solely the SI system on its national territory, the jurisprudence of the European Court of Justice would force it to accept all the other measuring units allowed in any other Member State of the European Union. This would lead to a situation in Europe of the past. The Cassis-de-Dijon jurisprudence would lead in the end to nearly endless possibilities for units of measurements and thus to significant problems for cross-border trade.
- Especially the issue of dual labelling of quantities would be a problem again. If the SI system is no longer the reference system for Europe other units (US fluid ounces) could be used as sole indication. This would lead to a very unclear market situation in Europe.

Another respondent suggested including adding consumer protection as one of the aims of the directive. Currently all Member State authorities understand the directive's aims to include consumer protection. Consumer protection has been considerably reinforced in Treaty changes since the inception of the Directive. Therefore consumer protection should be retaken and explicitly mentioned in Article 2a of the Directive. The same holds for environmental protection where environmental targets are expressed in quantities by law and which should similarly be included.

In the light of existing jurisprudence, maintaining the Directive guarantees a clear system of units of measurement which is required for the transparency of the European internal market. 'Consumer protection' and 'environmental protection' could be added in Article 2a of the Directive.

## 11. IMPACT ASSESSMENT

The Commission services consider that the impacts of the various options to adapt Directive 80/181/EC are the following.

1. Indefinitely extend the date for the use of the supplementary indications in Article 3.2 after 2009. No action would mean applying the sun-down clause, which has been extensively costed in chapter 8 above, leading to the conclusion that that enforcing metric-only labelling in the EU from 2010 onwards would lead to considerable costs amounting to 0.02% of turnover for large firms and up to 0.2% of turnover for small firms. Mechanically it potentially could lead to more employment, but it is expected that employment will be lost in those cases where SME firms cannot cope with rising costs, probably leading to a close to zero sum, although this is also uncertain. With total EU exports to the USA amounting to €315bn, costs of the change between 0.02% and 0.2% could amount to between €63 million and €630 million for European industry. Costs of a similar order could be experienced by industries in non-EU countries exporting to both the European and US market. There do not seem to be any additional costs caused by extending the use of supplementary indications, because there will be no change to the current situation.
2. Add consumer protection and environmental protection at the end of Article 2(a). This is a change that does not lead to any change in society given that units of measurement are already being applied for these reasons. What has changed is the Treaty itself since the inception of the directive and it is for this administrative reason that the change should be considered.
3. Delete the obligation of fixing of a date for the end of the exemptions for UK and Ireland in Article 1b. This concerns the use of the pint as indication for milk in returnable bottles and draught beer and cider in both UK and Ireland and the use of indications in non-metrics for road signs and speeds in the UK and the use of the troy ounce on the London bullion market. Currently all of these uses are deeply engrained, having cultural significance, and do not give rise to discomfort which can be considered a major benefit. The Commission is not aware of any costs associated with the continuation of these specific exemptions. On the other hand change would invoke costs. The adapting of road signs in the UK could cost between £80mln to £800mln depending upon the speed with which the change is implemented. The London bullion market would be at a costly disadvantage with its world wide competitors in Zurich and New York where the troy ounce is the unit of measurement – the exchange estimates that it could lead to the loss of the whole market in London. It would seem that costs of change are many with few benefits, whilst there are no costs and only benefits associated to a continuation of the existing exemptions.
4. End the exemption for land registration by taking out the third line in the table in Chapter II of the Annex. This exemption is no longer applied in UK and Ireland and therefore ending it does not bring costs. The only benefit is simplification.
5. Include the katal in table 1.2.3 “SI derived units” in the Annex. This is an update to an existing standard, which is already overdue. Some Member States may already have made the change in national law which means that manufacturers and consumers in these states have a legal base for applying the international standard. In other countries this may not be the case, which implies a legal inequality in the sense that where there is no legal base domestic production is not covered by a legal base whilst imports are. Uncertainty is impossible to estimate and it would seem that the administrative costs are minor to adapt the law. There do not seem to be other impacts on the costs side. The benefits of abiding legally with the international standard are many.

## **12. FURTHER WORK**

The Commission services will proceed to prepare a proposal concentrating to adapt Directive 80/181/EC on the following elements:

1. indefinitely extend the date for the use of the supplementary indications in Article 3.2 after 2009
2. add consumer protection and environmental protection at the end of Article 2(a)
3. delete the obligation to fix a date for the end of the exemptions for UK and Ireland in Article 1b
4. end the exemption for land registration, which is no longer applied in UK and Ireland by taking out the third line in the table in Chapter II of the Annex
5. include the katal in table 1.2.3 “SI derived units” in the Annex.

The Commission services publish this report in line with the Commission policy on better regulation in order to summarise the results of the recent consultation process and their findings. The publication of this report is without prejudice to any subsequent proposal to be adopted by the College.