
Sustainable Industrial Policy - Building on the Ecodesign Directive - Energy-using Product Group Analysis/2

Lot 5: Machine tools and related machinery

Minutes – 1st Stakeholder Meeting

Venue: **Centre Albert Borschette
Room 3B
rue Froissart, 36
1040 – Bruxelles**

Date: July 12, 2010 (10 a.m. – 5.30 p.m.)

Summary of major statements by Fraunhofer and EC:

- Having a scope wider than proposed by EPTA in the Working Plan Study is intentional. In the beginning, a wide scope covering not only metal working machine tools is intended. Scope will not be narrowed down now, only after further evidence is at hand regarding environmental / market relevancy of certain sectors (such as metal working, plastics working, stone working, wood working, welding etc.)
- The study should identify similarities on the module / functionality level across the huge diversity of machinery. It has to be assessed, whether we can use the experience or information also for other associated or closely linked machinery (results are not predictable yet). When focusing on market data, figures for PRODCOM codes 28.41 and 28.49 need to be checked / reviewed with priority. This is not the final scope, though. If similar modules are used in other machinery, they are still included in the scope of the study.
- Published task 1-3 reports are drafts only, meant to serve as a discussion basis for further data input. Some data did not went through a plausibility check yet and are very questionable. A check needs to be done jointly with stakeholders / additional experts.
- Future reports will see a sub-division of the individual tasks regarding the market segmentation (metal working, wood working etc.), where appropriate
- Information and suggestions from stakeholders on standardisation needs are appreciated. Standards are very important, both as a support to Commission regulations or, alternatively, in relation with voluntary agreements or an unregulated market.

10:00 Welcome, Introduction of Agenda

K. Schischke

Presentation is posted at:

http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/%281%29%20Fraunhofer_Intro.pdf



10:10 Introduction - DG Enterprise and Industry *M. Eifel*

10:20 Status Quo: Self Regulation Initiative (SRI) *F. Geerts / M. Garczynska*

Mrs. Garczynska introduced briefly the background of the proposed SRI and the current status of related activities. The SRI tackles metalworking machine tools only.

Presentation is posted at:

http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/%282%29%20CECIMO-SRI-20100712.pdf

10:35 ISO/TC 39/WG12 Status Report

D. Hagemann

Mr. Hagemann presented the current working status of ISO/TC 39/WG 12, dealing with “Environmental evaluation of machine tools”, i.e. metalworking machine tools. Timeline and correlation with other standards was presented as well as methodological approaches (clustering of functional modules) and the expected sub-structure of the standard.

Presentation is posted at:

http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/%283%29%20Hagemann_Statusreport_ISO_TC39_WG12.pdf

10:50 Presentation Draft Task 1 Report

R. Feitscher / E. Hohwieler

The Task 1 presentation focussed on the scope definition for the Product Group Study, presenting a definition of “machine tools” and explaining the rationale for having covered also “related machinery”. A screening environmental assessment has been presented. The analysis of existing legislation and standards (sub-tasks 1.2 and 1.3) was not subject of the presentation.

Presentation is posted at:

http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/%284%29%20Fraunhofer_Task1.pdf

11:30 Discussion on Task 1

Summary of the discussion: The most controversial points of the discussion where the scope definition, i.e. coverage of other machine tools than only metalworking ones and “related machinery” in general. Several stakeholders requested to clearly define the scope and not to generalise machinery for different materials as technologies, markets, process parameters differ significantly.

Mr. Sehrschön (Fill GmbH): There is a correlation between life cycle costs and maintenance. Energy consumption related maintenance data from the machinery control unit can be provided. Life cycle costs can be reduced up to 10-15% through optimized maintenance. For special purpose machinery – not easy to quantify by which percentage - the energy consumption can be lowered (2-4%?).

Mr. Geerts (CECIMO): As stated, metal forming machinery seems to be of inferior interest. A more clearly identifiable percentage regarding the relevancy (environmental impacts) of metal working machine tools compared to all others will be appreciated. Do we have three major groups of machinery? Are there different chapters for different groups?

Mr. Hohwieler (Fraunhofer IPK): From the report no conclusion can be drawn yet, whether metal working machine tools are less relevant than others. Also the modules of related machinery are covered by the scope, meaning there is no clear distinction in only three major groups.

Ms. Garczynska (CECIMO): There is the risk that a wide range of products might hamper feasibility to go into details. The presented approach to define the scope is understandable, but covers in the end too many different technologies.

Mr. Hohwieler (Fraunhofer IPK): External requirement, to cover a broad range of products. It will be analyzed throughout the study, if different types of machinery require different improvement measures.

Ms. Schöler (VDMA): Surprised, why the scope is so wide. EPTA study applied? Association did not expect the scope – three weeks of analyzing your study from our side is not enough. For you, in twenty months the study is not doable. Please keep that in mind.

Mr. Eifel (EC): Commission is behind a wide scope, in order to identify relevant related technologies with improvement potential in a resource-effective way. The EPTA study did not decide the policies of the Commission – such studies provide the Commission with the necessary information for devising policy. Having a scope wider than proposed by EPTA is intentional. The number of product types and their complexity makes a different view necessary – the approach has to consider modules, like CECIMO in their voluntary agreement initiative. What we see are a lot of common aspects for modules which are applicable on the related products. The outcome of study in terms of defining policy options for relevant products is not predictable yet – now we rather focus on which functions/modules and which products should be considered in the study: What are the environmental impacts of the machines? How wide a scope is reasonable, given that a too narrow scope in the first place that is later extended, would risk creating problems for stakeholders not involved throughout the process – rather the other way around.

Mr. Würz (VDW): Products included are not structured and not easy to overlook. Stay focused on the methodology. First 20 selling products: Please check if products satisfy the definition. Way type unit heads – only sub systems of bigger systems, as well as non-NC equipment (grinding benches → manual working involved). Please recheck products concerning definition. Recheck ecological assessment – some results look a bit arbitrary. Cross check with external experts – this may lead to different results. Modular approach: Take in consideration a second kind of modularization – more functional, less physical.

Mr. Sehrschön (Fill GmbH): Agree with Mr. Würz that the function of machine tools as a whole should be considered.

Mr. Schischke (Fraunhofer IZM): System considerations will be taken into account.

Mr. Licher (VDMA): I understand the intention of a broad scope. However, I see machine tools as metal working machinery. Wood working is a totally different branch: different market, different users, different user requirements, different ecological impact. Main ecological impact in woodworking lies in the exhaust, which is not common with metal working. Other colleagues are not happy about widening the scope. Glass cutting, meat cutting machines are no machine tools.



Mr. Hohwieler (Fraunhofer IPK): Material is not important due to our definition. Environmental impact is not directly linked to the material.

Mr. Licher (VDMA): Exhaust systems are separate systems. Not part of the machine itself, which also reflects the user's point of view. From the ecological point of view, most improvements can be done here.

Mr. Würz (VDW): Can understand unified approach deriving from the EU's intention. But it's a proven fact, that different types of technologies are treated separately in science and industry. Other requirement, different technical solutions, different basis: we cannot ignore that completely.

Mr. Hagemann (VDW): What is the market relevance of covered products?

Mr. Schischke (Fraunhofer IZM): Already shown in terms of sold volume, value. What it means economically will be subject to part 2.

Mr. Hagemann (VDW): Observe how the market is structured. Industry has got a different understanding of machine tools than stated in the report. Take into account the differences regarding market requirements.

Mr. Schischke (Fraunhofer IZM): Customer groups are totally different. Later in task 3, user requirements will be reflected. Currently, no clear distinction can be made. It is difficult at all to get precise user statements concerning relevancy of energy consumption. Obviously, larger companies ask for energy consumption data. Input from the stakeholders' side will be appreciated.

Mr. Eifel (EC): Recalled that the basis for the study is the ecodesign directive, which covers small and big business as well as household products – generally, all products are involved. Our Procedure: What in absolute terms are the impacts? → What are the improvement potentials? → Which improvements can be made without reducing functionality and increasing the price? Right now, the outcome has to remain open.

Mr. Kühmann (EUROMAP): Surprise throughout plastics & rubber machine industry, that the scope now covers plastic and rubber machinery as well. First of all, we disagree to treat machine tools and rubber machines alike. Second, the procedure was surprising. The stakeholders were not informed in time. It was a coincidence, that we came to know about it. If you want to take the industry along, it is important to get them involved. Our machines covers raw, semi finished, and finished products processing. This machinery for processing, post processing cannot be compared with machine tools (wood, metal working).

Mr. Schischke (EU): Mr. Licher, what are your experiences concerning user requirements?

Mr. Licher (VDMA): Innovation regarding energy efficiency is driven by large customers. Swedwood (manufacturer for Ikea), e.g., have energy efficiency requirements for their suppliers. They have to adapt to energy efficiency in order to work together. Accordingly, policy of large compa-

nies has an impact on smaller ones. Industry is already working on efficiency. Market mechanisms work.

Mr. Schischke (Fraunhofer IZM): If it is evident, that industry cares about energy efficiency, no further action needs to be taken in this respect.

Mr. Sehrs Schön (Fill GmbH): We want to sell machines at higher prices by reducing life cycle costs. Energy is just a part when talking about potentials for reduction. There is a correlation between good maintenance and high quality.

Mr. Schischke (Fraunhofer IZM): How are your customers reacting?

Mr. Sehrs Schön (Fill GmbH): They want to know the prices on producing specific products on our machinery. Generally it's not the prices; it's the life cycle costs (automotive industry).

Mr. Schischke (Fraunhofer IZM): How about the small enterprises?

Mr. Sehrs Schön (Fill GmbH): Costs per product are relevant.

Mr. Geerts (CECIMO): 30% is automotive. Our customer asks the same aspects up front.

Mr. Sehrs Schön (Fill GmbH): Daimler was among the first ones to require LCC data. VDMA and VDW already provided life cycle costs methods. Daimler invented own assessment. Though, some customers are still interested solely in the price of the machine.

Mr. Eifel (EC): Reduced life cycle costs is a criterion of the Directive, notably when it comes to resource consumption, but there might be aspects (e.g. hazardous substances), which are relevant, but do not bring a lower LCC.

Mr. Kühmann (EUROMAP): Again, why is rubber machinery involved?

Mr. König (Fraunhofer): We don't have restrictions on material. There are a lot of similarities physically. Therefore base cases should be modularized.

Mr. Kühmann (EUROMAP): Implementing standards and measures will be hard to find. There is still uncertainty about the scope.

Mr. Schischke (Fraunhofer IZM): If there are very similar modules, then the scope can be widened to other machinery such as primary shaping (on a modular level). Standardisation is very important in the whole process. Task one provides a rough outline. As standardization is a long procedure, further input is appreciated. If you recognize a need for standardization, let us know.

Mr. Eifel (EU): Gaps in standardisation should be investigated, addressing horizontal aspects as well as specific needs. Currently a horizontal standardisation mandate is under development. There will be an annex, indicating standardisation needs in light of the ongoing preparatory Product Group Studies. Information and suggestions from stakeholders on standardisation needs and reference documents (national, global, etc.) are appreciated. Standards are very important, both as a support to Commission regulations or, alternatively, in relation with voluntary agreements or an unregulated market.



Mr. Kühmann (EUROMAP): Good support from our side is granted. Please try to make it very clear where and what you investigate. Different studies might provide different solutions. Thorough distinction is appreciated.

Mr. Eifel (EC): Summed up that the idea is: study on machine tools → realizing similarities → assessment, whether we can use the experience or information (e.g. presses) also for other associated or closely linked machinery (results are not predictable yet). Study has not gone on for so long yet, therefore room for clarification is given. The study will go on for another 1 ½ years.

13:30 Presentation Draft Task 2 Report

K. Schischke

Mainly the economic data was presented as extracted from EuroStat without further verification yet. Based on PRODCOM, import, export data and lifetime estimations, a stock model was presented, which results in a 160 million units stock at present, which is by orders of magnitude higher, than anticipated for “machine tools” in a stricter sense. Also the presented unit values in Euro (from PRODCOM) indicate, that there is a mismatch of published values and typical prices in the respective segments. The market structure was not a main topic of the presentation, but is explained in the report in detail.

Presentation is posted at:

http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/%285%29%20Fraunhofer_Task2.pdf

14:00 Discussion on Task 2

Summary of the discussion: The most controversial points of the discussion were the PRODCOM data, unit values and the stock model. Several stakeholders asked for a thorough plausibility check of the presented data. Referring to the report the fact was criticised, that conclusions for certain market segments are also applied for others (metal working → wood working).

Mr. Würz (VDW): Wondering about origin of import/export data, as they are not included in PRODCOM.

Mr. Schischke (Fraunhofer IZM): We will recheck nature of data. Import/export data is included in Eurostat, which is considered in the calculation as well. [in the meantime it has been confirmed, that PRODCOM also contains import/export data, but data quality remains questionable]

Mr. Licher (VDMA): (Referring to slide with no. of wood working companies per country) Consumption in no relation to the number of enterprises – better data available.

Mr. Würz (VDW): (Concerning average price of 5,000€). Average purchase price horizontal machining centre: 80,000€. Something is wrong with input data.

Mr. Licher (VDMA): Band saws (for wood working) prices seem to be wrong ... rather around 6.000€.

Mr. Schischke (Fraunhofer IZM): So far, only Eurostat/PRODCOM is considered in the study as a basis for this discussion, better data is appreciated.

Mr. Würz (VDW): (Referring to the figure of calculated 160 million machine tools in operation). Our Survey: 28.41 → Decrease of 1.4 to 1 million in Germany; decrease also in Italy observable. 1.3 million metal-working machine tools in Germany and Italy → 65% of the European market. Corresponding data will be provided.

Mr. Schischke (Fraunhofer IZM): Task related PRODCOM data is ought to be used in the first place. Will be replaced as soon as better and more robust data is available.

Mr. Hagemann (VDW): Concerning the PRODCOM data, there were discussions already months ago. Where are the improvements?

Mr. Schischke (Fraunhofer IZM): PRODCOM has to be used in the first place. We've seen these errors before, but the use is still necessary. It is good to check against PRODCOM data, in order to kick-off the discussion and receive better data.

Mr. Licher (VDMA): Conclusions on faulty data as presented cannot be drawn.

Mr. Sehrschön (Fill GmbH): From our side, data can be provided. (Austrian market).

Mr. Hagemann (VDW): What has priority: Scope or market data?

Mr. Schischke (Fraunhofer IZM): No clear priority. Once we have robust market data, only then we can have an educated guess of the relevancy, which we focus on due to the task requirements. The relevancy in return is important to identify the scope.

Mr. Kühmann (EUROMAP): It's important to see where the study is heading. Proposal: Starting with the scope and then proceed to market data. Otherwise the support might be down to zero.

Mr. Schischke (Fraunhofer IZM): For data, suggest to narrow to NACE 28.41 + 28.49, which does not mean a limitation of the scope, but of the core market data requirements on the product level.

Mr. Bretschneider (Siemens): How many machine tools are CNC controlled, as it is a mandatory feature of a machine tool. The stock market data does not fit to that. No conclusions can be drawn from that.

Mr. Würz (VDW): The high degree of automation was one of the main reasons to include machine tools into the study. Why it is not highlighted now?

Ms. Garczynska (CECIMO): We would like to come back to narrowing the scope.

Mr. Schischke (Fraunhofer IZM): We will not come up with a definite scope today. Further screenings are necessary. When focusing on market data, we fix it on 28.41 and 28.49. This is not the final scope, though. If similar modules are used in other machinery, they are still included in the scope of the study.



Mr. Geerts (CECIMO): The figures are totally out of range; therefore a discussion is rather a waste of time. A win-win situation should be aimed at in the first place. PRODCOM data is not appropriate for this task.

Mr. Eifel (EC): The figures originally come from the companies that report them. How to check and improve the information should be looked into together with stakeholders that have reliable figures. Productive solutions should be found in cooperation.

Mr. Würz (VDW): Our researchers use the same PRODCOM data, but they know how to use it because they have market knowledge. Fraunhofer research is lacking a plausibility check.

Mr. Kühmann (EUROMAP): An unambiguous scope is necessary to address the right stakeholders.

Mr. Licher (VDMA): A broader scope requires more efforts on data acquisition. Please narrow the scope.

Mr. Schischke (Fraunhofer IZM): Agreement, plausibility check of PRODCOM data is needed and is intended, but starting point for discussions should be the data "as is", then checking in a transparent process, how improvements / plausibility can be achieved. Methodology from now on: Approaching the different associations. Acquire appropriate data and take it into account. For the time being, the scope remains being metal, wood, plastics, etc. Therefore, it is still the same scope.

Mr. Eifel (EU): On the recurring statements on the scope the fundamental question is to be able to identify the products with the best improvement potential that bring the greatest environmental benefits. Not to miss the big fishes, the scope remains the same.

Ms. Garczynska (CECIMO): If we don't subdivide, the point might be missing.

Mr. Schischke (Fraunhofer IZM): The range of machine tools is already defined by summarizing the PRODCOM classes. Structure can be provided on numerous levels, but needs to match available / estimated market figures & structures.

Mr. Feuerbach (VDMA): An assessment was already done in the EPTA study – no stone working machinery was included, as well as plastics. Why are they involved now?

Mr. Eifel (EC): As stated earlier the EPTA study does not decide what is done in other studies. The working Plan is important in this aspect and it lists machine tools indicating examples of products in a wider sense.

Mr. Feuerbach (VDMA): For the next stakeholder meetings, more time is necessary to evaluate the data.

Mr. Geerts (CECIMO): The title of machine tools is misleading. Different chapters are recommended. Different associations should be involved. The reflection of market reality should be a leading idea when defining the product scope.

Mr. Schischke (Fraunhofer IZM): Distinction regarding major markets (metal working, wood working, welding, others) will be made throughout the report for the next, revised version.

15:00 Presentation Draft Task 3 Report J. König

The presentation summarised the current draft status of the assessment of user requirements and the situation of machine tools users as such. Currently there is some data and analysis available for metal working machine tools – which is the focus of the presentation -, but not yet on machinery for working other materials.

Presentation is posted at:

http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/%286%29%20Fraunhofer_Task3.pdf

15:15 Discussion on Task 3

Summary of the discussion: There were opposing statements, whether energy efficiency / life cycle costs matter among users of machine tools or not. Obviously there are some large drivers, such as Swedwood in the wood working sector and the automotive industry in the metal working sector, but this might be different in other sub-sectors.

Mr. Breitschneider (Siemens): Concerning retrofitting: Where is the interconnection between retrofitting of machine tools and user requirements? Second, only a variety of different topics is presented. No actual user requirements included, only manufacturer issues.

Mr. König (Fraunhofer): Study is also on appropriate design → material efficiency. It is of high interest that machine tools provide retrofitting options. Our approach: First ask the manufacturers about the customers' needs.

Mr. Hartjes (Okuma Europe GmbH): Remark: Retrofitting requires renewed CE marking.

Mr. Eifel (EC): In relation to the Machinery Directive, there are different practices in different Member States. In Germany a new CE marking tends to be affixed and the technical file is updated, whilst in France the employer is obliged to keep track of modifications by updating the technical file under application of the protection of workers Directive 89/391/EEC.

Mr. Breitschneider (Siemens): Data also valid for other European countries? (As they derive mostly from German sources)

Mr. König (Fraunhofer): Some US studies are involved as well. At METAV, countries from all other Europe were involved in surveys.

Mr. Griffiths (MTA): In third world countries, recycling activities are very good (e.g. dismantling). Where did you get your information? (referring to p. 18 of the draft task 3 report)

Mr. Schischke (Fraunhofer IZM): High level of reuse / refurbishment in developing / industrialising countries is taken for granted, but sooner or later, machine tools reach end of life (20 years)



later eventually). In almost all these countries, there is no appropriate regulation concerning end of life treatment. You can assume, it is an environmental problem, also concerning liquids and contained electronics. No data available though.

Mr. Hagemann (VDW): In reference to our refurbishment study: Please make a clear distinction of our results and the conclusions you draw. We do not agree with your conclusions.

Mr. Schischke (Fraunhofer IZM): Where do you disagree?

Mr. Hagemann (VDW): Third country exports statements are not true.

Mr. Schischke (Fraunhofer IZM): This conclusion does not refer to the VDW studies, see p. 18, the source is a study for the German Council for Sustainable Development.

Mr. Griffiths (MTA): A sharp product scope is recommended in order to find appropriate refurbishment/retrofitting conclusions.

15:45 Stakeholder Questionnaire / Call for Information

K. Schischke / J. König

The "Call for Information" and "Next Steps" was presented with only one set of slides. A survey is announced, which targets the three groups (1) suppliers of components / modules, (2) manufacturers of machine tools, (3) users of machine tools. [Questionnaires are published in the meantime on the website]. This survey is meant to initiate a technical bilateral exchange with those companies interested to share their approaches for energy efficiency etc. Associations are encouraged to circulate these questionnaires.

Next steps:

Deadline for stakeholder comments regarding draft task 1-3: **August 13** (extension individually, inform Fraunhofer in time!)

Deadline for a first feedback based on the posted questionnaires: **September 17** (other means of information exchange are explicitly welcome)

Draft definition (and assessment) of Base Cases: **September / October / November**

Revision of task 1-3 reports and draft task 4-5 reports to be published in **November/December 2010**

Next Stakeholder Meeting: **December 2010/January 2011**

Presentation is posted at:

http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/%287%29%20Fraunhofer_NextSteps.pdf

Mr. Bretschneider (Siemens): Will the price be subject to the questionnaire?

Mr. Schischke (Fraunhofer IZM): Rather not, the questionnaire will address individual manufacturers and as individual prices are less relevant. Rather discussing the market figures by taking into account input from associations with a broader overview of the market. Please make clear

the level of confidentiality when submitting the questionnaire. This will be observed with due care. If a non-disclosure agreement is needed, please approach us accordingly.

16:15 Next Steps

K. Schischke / M. Eifel

Ms. Garczynska (CECIMO): Next time, providing the reports earlier in order to prepare is recommended.

Mr. Schischke (Fraunhofer IZM): Availability will be improved.

End: 16:37.

Further information:

www.ecomachinetools.eu

