

FINAL REPORT

SME Test Study on possible policy options for reviewing the Noise Directive + Impact Assessment Study on possible policy options (concerning conformity assessment procedures) for reviewing the Noise Directive

**European Commission – DG ENTR
Specific Contract N° SI2.ACPROCE026233900 under Framework
Contract n° ENTR/04/093 Lot 5**

Project number – 11/005091 | Version A | 26-10-2009



CLIENT

**European Commission
DG Enterprise and industry
B – 1049 Brussels**

Small & medium Sized Enterprise (SME) Test Study on possible policy options for reviewing the Noise Directive + Impact Assessment Study on possible policy options (concerning conformity assessment procedures) for reviewing the Noise Directive



STUDY

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Revision				
Version	Date	Remarks		
A				
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Verification				
Department	Function	Name	Signature	Date
Client's approval				
Department	Function	Name	Signature	Date

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LIST OF ABBREVIATIONS

CAP	Conformity assessment procedure
CECE	Committee for European Construction Equipment
CEMA	European Committee of associations of manufacturers of Agricultural Machinery
CEMR	Council of European Municipalities and Regions
CETIM	Centre technique des industries mécaniques
CISMA	Syndicat des équipements pour Construction Infrastructures Sidérurgie et Manutention
COPA-COGECA	Committee of Professional Agricultural Organisations - General Confederation of Agricultural Cooperatives
EBTP	European Business Test Panel
ECOS	European Environmental Citizens' Organisation for Standardisation
EGMF	European Garden Machinery industry Federation
ELCA	European Landscape Contractors Association
ESHW	European Agency for Safety and Health at Work

EU-Nited	European Engineering Industries Association
Euromot	European Association of Internal Combustion Engine Manufacturers
FEM	European Federation of Materials Handling
FIEC	European Construction Industry Federation
IA	Impact Assessment
ISMA	International Snowmobile Manufacturers Association
kW	kilo Watt
NLF	New Legislative Framework
NOMEVAL	Noise of machinery – Evaluation of Directive 2000/14/EC
ORGALIME	European Engineering Industries Association representing the interests of the Mechanical, Electrical, Electronic, Metalworking & Metal Articles Industries
Pneurop	European Committee of Manufacturers of Compressors, Vacuum Pumps, Pneumatic Tools and Air & Condensate Treatment Equipment
R&D	Research and development
SMEs	Small and medium-sized enterprises
TNO	Nederlandse organisatie voor Toegepast Natuurwetenschappelijk Onderzoek (Dutch organisation for applied scientific research)
UEAPME	European Association of Craft, Small and Medium Enterprises
VDMA	German Engineering Federation
WG7	European Commission's Working Group on Outdoor Equipment

EXECUTIVE SUMMARY

The objectives of the current project are twofold.

First, to carry out a detailed assessment of the specific impacts on SMEs of some specified policy options related to the revision of the Noise Directive. Second, to carry out an Impact Assessment Study on policy options concerning the replacement of the conformity assessment procedure (CAP) of the existing Annex VI of the Noise Directive by module A2 of Decision 768/2008/EC or module B of Decision 768/2008/EC in combination with module C of Decision 768/2008/EC.

SME TEST

Despite the important efforts undertaken by the project team, less than 15 individual companies have been identified unequivocally as SMEs and have contributed actively to the study. There are several possible explanations to the large difference with previous estimates of the number of SMEs:

- The discrepancy between the Commission's definition of SMEs and the public perception of what an SME is.
- SMEs feel that their specific interests are not always well represented by the sector federations. Therefore, we have also used alternative communication channels (the UEAPME and samples of business directories) but this has resulted in very limited response rates as well.
- For SMEs, the burden of responding actively to the questionnaire is often too high compared to the (perceived) benefits of doing so. This is certainly the case for professional end users.

However, we advise against using a less restrictive definition of SMEs in future work. Indeed, relaxing the definition implies ignoring two essential problems of SMEs that are solved with mergers and acquisitions (high fixed costs and difficult access to capital). Moreover, a change of the scope of the definition could lead to confusion on the side of the industry.

Allowing longer response times could lead to a slightly higher response rate, but only insofar as this is compatible with the constraints faced by the contractor. Drafting a questionnaire in several languages (or allowing SMEs to answer in their mother tongue), would have huge implications in terms of translation budget and in execution time. Finally, there are limits to how far we can go in simplifying the questionnaires without missing the whole point of the study.

The most important policy conclusions are:

- Even if all companies would face the cost disadvantages of SMEs, the outcome of the cost-benefit analysis of Nomeval and the MCA of the IA study would not be affected fundamentally, except *maybe* in the case of aerial access platforms.
- The most important disadvantage faced by SMEs is the high share of fixed costs (including those related to regulatory compliance) compared to variable costs.
- In total, employment in SMEs affected by the Directive does not exceed a few thousand units at the European level. The information gathered during this study does not suggest that a significant proportion of these jobs are actually

threatened. In most cases, the SMEs affected by the Directive are located in regions with lower than average structural unemployment.

- Some SMEs have also reported difficult access to capital markets and weak negotiating position vis-à-vis suppliers and industrial clients as a problem. However, these problems are not caused by the Noise Directive, and the solutions for these problems lie in different policy areas (financial markets policy and competition policy).
- In the case of snowmobiles, the only SMEs affected are dealers and the professional end users. The actual impact depends crucially on how snowmobile producers will react to noise limits.
- Spreading the introduction of more stringent noise emission limits over time would help SMEs overcoming the bottlenecks in their R&D capacities.

With respect to the CAP, the most robust findings are that:

- As far as the environmental effects are concerned, the actual choice of the CAP is of secondary importance, and market surveillance is the real key.
- The New Legislative Framework is not well known.

There is not a clear consensus on the cost implications of the Modules. Actually, even the net costs and benefits of the *current* Annexes to the Directive are not well known. Despite higher initial costs, Module B+C can be the least costly CAP for products with a long economic lifecycle.

Taking into account the wide range and the heterogeneity of the equipment types covered by the Directive on the one hand and the limited concrete information on costs and benefits that have been provided by the stakeholders on the other hand, a robust and meaningful estimate of the costs and benefits of the different options cannot be given.

The most important issues with Module A2 are:

- Some companies that currently use Annex VI could switch to Annex VIII.
- The independence of accredited “in house bodies”.
- The practical implementation of the requirement to hold “random samples”.

The most important additional issues with Module B+C are:

- The representativity of specimen for subsequent production ;
- The compatibility of CE type examination with the concept of guaranteed sound power level;
- The absence of follow-up of the manufacturing process by the notified bodies when Module C is applied.

Some stakeholders argue that the implication of notified bodies is disproportionate to the risks implied by non-compliance with the Noise Directive, and think that Module A would be sufficient *if combined with effective market surveillance*. At the opposite side of the spectrum, one authority has expressed the opinion that, if CE type examination would be applied, further involvement of the notified body in the manufacturing process is essential. Their preferred option would then be Module B+C2.

DOCUMENT DE SYNTHÈSE

L'objectif du projet actuel est double.

D'abord procéder à une évaluation détaillée de l'impact spécifique sur les PME de certaines options politiques spécifiques liées à la révision de la Directive en matière de Bruit. En second lieu, l'objectif consiste à réaliser une étude d'évaluation de l'impact qu'exerceront les options politiques concernant le remplacement de la procédure d'évaluation de conformité (CAP ou *Conformity Assessment Procedure*) de l'Annexe VI existante de la Directive en matière de Bruit par le module A2 de la Décision 768/2008/CE ou par le module B de la Décision 768/2008/CE en combinaison du module C de la Décision 768/2008/CE.

EXAMEN DES PME

Malgré les efforts importants entrepris par l'équipe chargée du projet, moins de 15 sociétés individuelles ont pu être identifiées sans la moindre équivoque comme étant des PME et ont contribué activement à cette étude. Il existe plusieurs explications possibles justifiant la large différence par rapport à des estimations antérieures du nombre de PME :

- La différence entre la définition que donne la Commission d'une PME et la perception publique de ce qu'est une PME.
- Les PME ont l'impression que leurs intérêts spécifiques ne sont pas toujours correctement défendus par les fédérations sectorielles. C'est la raison pour laquelle nous avons toujours utilisé des canaux de communication alternatifs (l'UEAPME et différents exemples puisés dans les répertoires des sources d'information sur les entreprises), mais cette démarche s'est également traduite par un taux de réponse minimal.
- Pour une PME, la charge que représente la démarche de répondre activement aux questionnaires est souvent trop élevée en comparaison des avantages qu'elle procure (ou aux avantages tels qu'ils sont perçus). Ceci est certainement le cas pour les utilisateurs finals professionnels.

Nous sommes cependant opposés à l'utilisation d'une définition moins restrictive des PME dans le cadre des futurs travaux. Le fait d'assouplir la définition implique en effet l'ignorance de deux problèmes essentiels des PME qui sont résolus par le biais de fusions et d'acquisitions (les coûts fixes élevés et les difficultés d'accès au capital). Une modification de la portée de la définition pourrait en outre déboucher sur une confusion du côté de l'industrie.

Le fait d'accorder un délai de réponse plus long pourrait amplifier très légèrement le taux de réponse, mais uniquement dans la mesure où ce prolongement serait compatible avec les contraintes auxquelles doit faire face le contractant. Le choix d'établir un questionnaire en plusieurs langues (afin de permettre aux PME de répondre dans leur langue maternelle ou véhiculaire) aurait des répercussions considérables en termes de budget de traduction et de délai d'exécution. Il y a finalement aussi la question de savoir jusqu'où nous pouvons aller dans la simplification des questionnaires sans compromettre l'objet même de l'étude.

Les conclusions politiques les plus importantes sont les suivantes :

- Même si toutes les sociétés devaient être confrontées aux désavantages des PME en termes de coûts, le résultat de l'analyse des coûts et bénéfices de

l'étude Nomeval et le facteur MCA de l'étude IA ne seraient pas affectés fondamentalement, sauf *peut-être* dans le cas de plates-formes d'accès aériennes.

- Le plus important désavantage auquel sont confrontées les PME est la part élevée des coûts fixes (y compris les coûts liés à la conformation aux réglementations) en comparaison des coûts variables.
- Au total, l'emploi dans les PME affectées par la Directive n'excède pas quelques milliers d'unités au niveau européen. Les informations collectées dans le cadre de cette étude ne suggèrent pas qu'une part significative de ces emplois soit menacée à ce jour. Dans la plupart des cas, les PME affectées par la Directive sont établies dans des régions où le chômage structurel est inférieur à la moyenne.
- En guise de problèmes, certaines PME ont également signalé la difficulté d'accéder au marché des capitaux et la faiblesse de leur position de négociation vis-à-vis des fournisseurs et des clients industriels. Ces problèmes ne sont cependant pas le fait de la Directive en matière de Bruit et les solutions à ces problèmes se situent dans différents secteurs politiques (politique en matière de marchés financiers et politique en matière de concurrence).
- Dans le cas des motoneiges, les seules PME affectées sont les distributeurs et les utilisateurs finals professionnels. L'impact proprement dit dépendra fondamentalement de la réaction que les producteurs de motoneiges réserveront aux limitations du bruit.
- L'étalement dans le temps de l'introduction de limites plus contraignantes en matière de bruit aiderait les PME à surmonter les goulots d'étranglement qui se manifesteraient au niveau de leur capacité de recherche et de développement.

En ce qui concerne la procédure d'évaluation de conformité, les conclusions les plus fondamentales sont les suivantes :

- En ce qui concerne les effets environnementaux, le choix proprement dit de la procédure d'évaluation de conformité est d'une importance secondaire, la véritable clé étant la surveillance du marché.
- Le nouveau cadre législatif n'est pas bien connu.

Il n'y a aucun consensus clair en ce qui concerne les implications des modules en termes de coûts. A ce jour, même le coût net et les avantages liés aux annexes *actuelles* de la Directive sont méconnus. Malgré un coût initial supérieur, la combinaison des modules B et C peut s'avérer la procédure d'évaluation de conformité la moins coûteuse pour des produits offrant un long cycle de vie économique.

En prenant en compte la vaste gamme et l'hétérogénéité des types d'équipements couverts par la Directive d'une part et les informations concrètes limitées concernant les coûts et bénéfices qu'ont fournies les parties intéressées d'autre part, il s'avère impossible de fournir une estimation correcte et significative des coûts et bénéfices des différentes options.

Dans le cadre du module A2, les principales questions importantes sont les suivantes :

- Le fait que certaines sociétés qui utilisent actuellement l'Annexe VI pourraient passer à l'Annexe VIII.
- L'indépendance des « organes internes » accrédités.
- L'implémentation pratique de l'exigence de disposer « d'échantillons aléatoires ».

Les questions importantes complémentaires concernant le module B+C sont les suivantes :

- La représentativité des échantillons dans le cadre de la production subséquente;
- La compatibilité entre la labellisation CE et le concept de niveau sonore garanti;
- L'absence de suivi du processus de fabrication par les organismes notifiés en cas d'application du module C.

Certaines parties intéressées argumentent que l'implication des organismes notifiés est disproportionnée aux risques de non-conformité à la Directive en matière de Bruit et estiment que le module A serait suffisant à *condition d'être combiné avec une surveillance effective du marché*. A l'opposé du spectre, un organisme public a exprimé l'opinion qu'en cas d'application de l'examen de conformité au label CE, une implication plus poussée de l'organisme notifié dans le processus de fabrication est essentielle. Sa solution préférentielle serait donc le module B+C2.

ZUSAMMENFASSUNG

Das vorliegende Projekt verfolgt ein zweifaches Ziel.

Erstens die Durchführung einer detaillierten Beurteilung der spezifischen Auswirkungen einiger spezifizierten politischen Optionen auf KMU in Bezug auf die Überarbeitung der Lärmrichtlinie, und zweitens die Ausführung einer Studie zur Folgenabschätzung im Hinblick auf politische Optionen bezüglich des Ersatzes des Konformitätsbewertungsverfahrens (CAP) der bestehenden Anlage VI der Lärmrichtlinie durch Modul A2 des Beschlusses 768/2008/EG oder Modul B des Beschlusses 768/2008/EC in Kombination mit Modul C des Beschlusses 768/2008/EC.

KMU- TEST

Trotz der erheblichen Anstrengungen, die vom Projektteam unternommen wurden, wurden weniger als 15 Einzelfirmen eindeutig als KMU identifiziert und haben aktiv zur Studie beigetragen. Es gibt mehrere mögliche Erklärungen für die große Differenz mit früheren Schätzungen der Anzahl von KMUs:

- Die Diskrepanz zwischen der Definition von KMUs der Europäischen Kommission und der öffentlichen Wahrnehmung dessen, was ein KMU ist.
- KMUs spüren, dass ihre spezifischen Interessen nicht immer gut von Sektorverbänden vertreten werden. Daher haben wir auch alternative Kommunikationskanäle verwendet (die UEAPME und Stichproben aus Unternehmensverzeichnissen), aber dies hat ebenfalls zu sehr eingeschränkten Antwortquoten geführt.
- Für KMUs ist die Belastung der aktiven Beantwortung des Fragebogens häufig zu hoch im Vergleich zu den (wahrgenommenen) Vorteilen dieser Handlung. Dies ist sicherlich bei professionellen Endverbrauchern der Fall.

Allerdings raten wir von einer Anwendung einer weniger restriktiven Definition von KMUs in der zukünftigen Arbeit ab. In der Tat ignoriert eine Lockerung der Definition zwei wesentliche Probleme von KMUs, die mit Fusionen und Übernahmen gelöst werden (hohe Fixkosten und schwieriger Kapitalzugang). Darüber hinaus könnte eine Änderung des Anwendungsbereichs der Definition zu Verwirrung seitens der Industrie führen.

Die Einräumung längerer Reaktionszeiten könnte zu einer etwas höheren Antwortquote führen, aber nur insofern dies mit den Einschränkungen vereinbar ist, mit denen der Auftragnehmer konfrontiert wird. Der Entwurf eines Fragebogens in mehreren Sprachen (oder die Einräumung der Möglichkeit, dass KMUs in ihrer Muttersprache antworten) würde enorme Auswirkungen im Hinblick auf das Übersetzungsbudgets und Ausführungszeit haben. Schließlich gibt es Grenzen, wie weit wir bei der Vereinfachung des Fragebogens gehen können, ohne die gesamte Wirkung der Studie zu verfehlen.

Die wichtigsten Schlussfolgerungen der Richtlinie sind:

- Sogar wenn alle Unternehmen allen Kostennachteilen von KMUs unterliegen würden, würde das Ergebnis der Kosten-/Nutzenanalyse von Nomeval und der MCA- oder IA-Studie nicht grundlegend beeinflusst werden, außer *möglicherweise* im Fall von Plattformen mit oberirdischem Zugang.
- Der wesentlichste Nachteil, mit dem KMUs konfrontiert werden, ist der hohe Anteil an Fixkosten (einschließlich derjenigen in Bezug auf gesetzliche Konformität) im Vergleich zu variablen Kosten.

- Insgesamt umfasst die Beschäftigung in KMUs, die von der Richtlinie betroffen sind, nur wenige tausende Einheiten auf europäischer Ebene. Die während dieser Studie gesammelten Informationen deuten nicht darauf hin, dass ein wesentlicher Anteil dieser Arbeitsplätze tatsächlich gefährdet ist. In den meisten Fällen befinden sich die von der Richtlinie betroffenen KMUs in Regionen mit einer strukturellen Arbeitslosigkeit, die geringer ist als durchschnittlich.
- Einige KMUs haben auch einen schweren Zugang zu Kapitalmärkten und eine schwache Verhandlungsposition gegenüber Lieferanten und industriellen Kunden als Problem genannt. Allerdings werden diese Probleme nicht von der Lärmrichtlinie verursacht, und die Lösungen für diese Probleme liegen in verschiedenen politischen Bereichen (Finanzmarktpolitik und Wettbewerbspolitik).
- Im Fall von Schneemobilen sind die einzigen KMUs, die betroffen sind, Händler und die professionellen Endverbraucher. Die tatsächlichen Auswirkungen hängen entscheidend davon ab, wie Schneemobil-Hersteller auf Lärmgrenzen reagieren werden.
- Die zeitliche Streuung der Einführung strengerer Lärmemissionsgrenzen würde KMUs helfen, die Engpässe bei ihren F&E-Kapazitäten zu bewältigen.

Im Hinblick auf CAP lauten die stichhaltigsten Erkenntnisse, dass:

- Sofern die Umweltauswirkungen betroffen sind, die tatsächliche Auswahl von CAP von sekundärer Bedeutung ist, und dass Marktüberwachung der echte Schlüssel ist.
- Die neuen gesetzlichen Rahmenbedingungen nicht gut bekannt sind.

Es gibt keinen klaren Konsens über die finanziellen Auswirkungen der Module. Tatsächlich sind nicht einmal die Nettokosten und Vorteile der *aktuellen* Anlagen der Richtlinie gut bekannt. Trotz höherer anfänglicher Kosten können Modul B+C die am wenigsten kostspieligen CAP für Produkte mit einem langen wirtschaftlichen Lebenszyklus sein.

Unter Berücksichtigung des breiten Anwendungsbereichs und der Heterogenität der von der Richtlinie gedeckten Ausstattungstypen einerseits und der eingeschränkten konkreten Informationen über Kosten und Vorteile, die von den Beteiligten zur Verfügung gestellt werden andererseits, kann eine stichhaltige und aussagekräftige Schätzung der Kosten und Vorteile der verschiedenen Optionen nicht vorgenommen werden.

Die wichtigsten Probleme mit Modul A2 sind:

- Einige Unternehmen, die derzeit Anlage VI nutzen, könnten zu Anlage VIII wechseln.
- Die Unabhängigkeit akkreditierter „interner Gremien“.
- Die praktische Umsetzung der Anforderung, „zufällige Stichproben“ zu führen.

Die wichtigsten zusätzlichen Probleme bei Modul B+C sind:

- Die Repräsentativität von Mustern für die nachfolgende Produktion.
- Die Konformität einer CE-Prüfung mit dem Konzept garantierter Schalleistungspegel.
- Die Abwesenheit von Folgemaßnahmen des Produktionsprozess durch die benannten Körperschaften, wenn Modul C angewendet wird.

Einige Interessensvertreter argumentieren, dass die Auswirkung benannter Körperschaften nicht im Verhältnis zu den Risiken steht, die durch eine Nichtkonformität

mit der Lärmrichtlinie impliziert werden, und denken, dass Modul A ausreichend sein würde, *wenn es mit effektiver Marktüberwachung kombiniert wird*. An der anderen Seite des Spektrums hat eine Behörde die Meinung ausgedrückt, dass bei einer Anwendung einer CE-Prüfung die weitere Einbeziehung der benannten Körperschaft am Produktionsprozess entscheidend ist. Ihre vorrangige Option wäre dann Modul B+C2.

EXTENDED SUMMARY

INTRODUCTION

The objectives of the current project are twofold.

First, to carry out a detailed assessment of the specific impacts on SMEs of some specified policy options related to the revision of Directive 2000/14/EC as amended (hereinafter the “Noise Directive”). Second, to carry out an Impact Assessment Study on policy options concerning the replacement of the conformity assessment procedure (CAP) of the existing Annex VI of the Noise Directive by:

- module A2 of Decision 768/2008/EC or
- module B of Decision 768/2008/EC in combination with module C of Decision 768/2008/EC.

BACKGROUND

Directive 2000/14/EC as amended (hereinafter “Noise Directive”) aims to harmonise the laws of the Member States relating to noise emission standards, conformity assessment procedures, technical documentation and collection of data concerning the noise emissions in the environment of equipment for use outdoors.

A detailed impact assessment study (hereinafter the “IA study”) has recently been undertaken, addressing the technical, social, environmental and economical aspects of the following scenarios for reviewing the Noise Directive:

- Scenario 1: ‘do-nothing-option’ – retain of the status quo, no change of the Directive
- Scenario 2: as suggested by the Nomeval study
- Scenario 3: as suggested by WG7 (Industry, Member States, Notified Bodies...)

There are not always three options for each individual type of equipment. In case of snowmobiles there are four options: (1) do-nothing-option, (2) scenario TNO-NOMEVAL, (3) scenario WG7, (4) scenario developed by the snowmobile manufacturing industry.

The Commission has now requested ARCADIS to complement this IA study with, on the one hand, a dedicated SME test, and on the other hand, an impact assessment concerning possible changes to the procedures for conformity assessment.

THE SME TEST

Approach

The results of the IA study have been reviewed to identify any issues that may be relevant to SMEs and that need further deepening.

Based upon the results of the IA study, there is no indication that other SMEs than manufacturers and professional end users are affected significantly by the Noise Directive. Therefore, in our proposal, we had proposed that the focus of the study would be on these categories. Other SMEs would only be considered insofar as the project team would come across new information that indicates that the options may have a significant impact on them.

We have contacted on the one hand sector associations and on the other hand the European Association of Craft, Small and Medium-sized Enterprises (UEAPME).

We have drafted a limited list of questions that addresses how SMEs are specifically affected by each policy option. These questionnaires have an open format rather than the detailed closed format used for the purposes of the IA study. The questionnaires have served mainly as a guidance document for further direct contacts.

Our intention was to organise round table discussions with selected stakeholders. Experience with the IA study had shown that this is the most effective means to elicit a maximum of information. We also proposed to approach the SMEs via in-depth telephone interviews and mail exchange.

We had taken several steps in parallel in order to reach SMEs that are not affiliated to sectorial associations, such as using the Enterprise Europe Network, the Noise Database, industry directories, suggestions by industry experts...

The results of the consultation have been used to determine the specific impacts on SMEs.

Although the questionnaires have been sent out immediately after the signature of the contract, and although there has been a steady follow up, the general response rate has been very low. Our invitation to organise round table meetings has also met a very low positive response rate.

The low response rate has allowed us to invest significant time in in-depth discussions with individual respondents. Actually, the main bottleneck for these case studies turned out to be the limited resources that individual companies could make available to respond to our requests for further clarification.

In general, the information we have received was too sketchy and incomplete to conduct a comprehensive cost-benefit analysis.

Instead, we have used the following pragmatic approach to summarize the impacts:

- We have verified whether there were any indications that compliance costs would be higher for SMEs than for large enterprises, and in particular whether the compliance costs estimated in the Nomeval and IA study are realistic.
- We have then verified whether the outcome of the cost-benefit analysis of Nomeval and the multi-criteria analysis of the IA study would change if the compliance costs reported by the SMEs would be applicable to all companies subject to the Directive.
- We have also taken a worst-case perspective by looking at the maximum number of jobs at stake, and by verifying the average unemployment of the region where the affected firms are based.

The specific impact of the current recession on SMEs is ambiguous, and this impact will have to be verified on a case by case basis.

The final objective of this study is to identify measures to avoid a disproportionate burden falling upon SMEs. Examples of possible measures could be:

- Exemptions from (some aspects of) the Directive, but respecting the emission limits laid down in the Directive.
- Longer transition periods
- Direct or indirect financial support (insofar as this is compatible with competition and trade law)
- Information provision by public authorities

Considering a general simplification of the Directive falls outside the scope of this study.

Eurostat data on SMEs

According to Eurostat, SMEs represented 99.8 % of all EU-27 enterprises in the non-financial business economy in 2006, employing two thirds of the workforce (67.4 %) and generating 57.7 % of total value added.

However, the Eurostat breakdown of size classes only takes into account employment levels – it does not use the criteria related to turnover or balance sheet total. The criteria concerning partner and linked enterprises are not taken into account either.

Moreover, the three digit NACE level is a level of aggregation that is too high for the purposes of this study.

Cluster I: Cleaning equipment

As far as Cluster I is concerned, no specific impacts on SMEs have been identified.

Cluster II: Construction equipment

In the case of construction equipment, the impacts on SMEs are concentrated on the end users' side. In the absence of any concrete data from the sector, it is not possible to estimate these impacts quantitatively.

On the manufacturers' side, we have identified 2 SMEs involved in the manufacturing of joint cutters, compaction machines and hydraulic hammers. Their common concerns are the high share of fixed costs (which is confirmed by the consolidation movement that is taking place in the sector) and the competition from East Asia. As the demand for their products is essentially derived from the activity in the construction sector, they have been disproportionately hard hit by the financial crisis. In some countries, demand in the construction sector may remain lacklustre for years.

These companies have provided no concrete alternative estimates of costs that would lead to a change of the estimates made in previous work.

Together, these 2 SMEs represent a workforce of less than 350 people. Average regional unemployment rates (at the NUTS3 level) over the last 10 years in the regions where these SMEs are based, varied between 6.41 and 12.72%, compared to 8.27% at the EU27 level.

Both the Nomeval report and the IA study had concluded that there were significant environmental impacts linked to these equipment types.

Cluster III: Gardening equipment

Professional end users

The landscape gardening industry in Europe is composed of 74,000 companies with approximately 350,000 employees. However, the share of machine costs within the total cost structure varies from 8% in Germany and The Netherlands to 28% in Poland.

No response has been received to date from other end users such as municipal services, farmers or forestry workers.

Equipment manufacturers

In total, 5 SMEs producing gardening equipment have provided us with information. Their *total* workforce lies in the range of 500-750 people.

Market characteristics

This market is generally a replacement market and has gone through a significant consolidation phase in the last twenty years.

This tendency is easily explained by the high fixed costs faced by individual product lines in this sector.

The SMEs produce mainly for the commercial market, which differs substantially from the consumer market. Most SMEs are thus niche players, with specialised knowledge of specific client needs. Because they produce in small series, they can also be flexible in meeting the demands of their clients.

This market segment also exhibits a high level of vertical integration.

The relative importance of fixed costs

All SMEs have indicated high fixed costs linked to R&D, marketing, testing and conformity assessment, understanding the implications of regulations etc. One manufacturer has provided us with figures on fixed and variable costs. These figures also show that, in order to reach the relative increase in costs estimated in the IA study (5 to 6%), their annual sales would need to increase tenfold. The increase in variable costs lies around 5%, which is in line with the estimates of the IA study, and clearly shows the existence of increasing returns to scale.

An important concern of the SMEs is the limited resources they have for R&D activities. In some SMEs, the whole product range consists of products that could face more stringent noise emission limits, or that would be moved from Article 13 to Article 12. Within the time frame allowed and taking into account limited development capacities, it would not be possible for them to find solutions for the whole product range. Moreover, these companies would also have to modify the Conformity Assessment Procedure they are currently subject to (Annex V – Internal Control of Production) to a (more costly) procedure that involves a notified body.

Environmental impacts

The SMEs claim that the proposed noise limits cannot be achieved without sacrificing power and that professional users are already complaining about decreased performance.

Our respondents have also argued that less performing products will take longer to finalise their work, and the time of operation is also an important factor of nuisance. To the best of our knowledge, no scientific work has been performed yet on the trade-off (in terms of impacts on the environment) between sound power levels and time of operation. Using the Environmental Impact Indicator developed for Nomeval, we have calculated that a decrease of the *guaranteed* sound power level by 1dB(A) does not affect the *rated* power level if the number of minutes of operation per year increase by less than 23% compared to the current situation.

The SMEs also argue that professional use of equipment causes less environmental damages than private use because it operates less during weekends and in the evening. The consulted SMEs have also pointed out that professional users themselves are subject to safety regulations anyway. However, the Environmental Impact Indicator used in Nomeval and the IA study already takes into account effective operating hours differentiated according to the “typical surrounding” and includes a correction term for evening or night use.

The respondents have also argued that if manufacturers could reduce noise without affecting performance, the end users would be willing to buy such equipment. However, as the person making the purchasing decision is not always the person who will operate the equipment in practice, it cannot be assumed that the purchasing decision will fully incorporate the effects on the welfare of the end user.

The increased cost of compliant products could also lead older products to remain longer on the market. These old products tend to be less performing from an environmental point of view. However, the net effect is not clear.

It has also been suggested that some manufacturers will stop the production of some product ranges of lawnmowers, and will move to lawnmowers with longer cutting width, leading to an effective *increase* in environmental noise. However, as only one respondent has reported such a possible reaction, we are not sure whether this will be a relevant issue in practice.

Conclusion

Garden equipment is definitely a cluster where SMEs clearly do face specific difficulties compared to larger enterprises, the most important being:

- the limited resources available when the whole product range has to comply within a short timeframe with more stringent emission limits or is moved from Article 13 to Article 12
- important increasing returns to scale

The market response to increasing returns to scale and to bottlenecks in R&D consists in mergers and acquisitions, which allow to spread fixed costs over larger production runs.

On the one hand, as the respondents have indicated that they *lack* R&D capacity, it is not clear that mergers or acquisitions should lead to any net job losses at the *European* (or national) level. On the other hand, if R&D would be concentrated geographically (for instance, in one central laboratory), this could lead to job displacements. *If* current R&D activities take place in geographically isolated areas with high structural unemployment, this could lead to a welfare loss for the staff that is currently involved in R&D activities - we are referring here to a few dozens of jobs. Average regional unemployment rates (at the NUTS3 level) over the last 10 years in the regions where these SMEs are based varied between 2.56% and 6.71%, compared to 8.27% at the EU27 level.

If the bottleneck for SMEs is their R&D capacity, a solution would be not to move 9 garden equipment types simultaneously from Article 13 to 12, but to proceed with phases where subgroups of gardening equipment would be transferred to Article 12.

Even if the unit cost increase of lawnmowers would be 14% instead of 5 to 6%, the global benefits of Scenario II as calculated would still vastly outweigh the costs.

Cluster IV: Loading and lifting equipment

Aerial access platforms

For this equipment type, a maximum of 125 jobs are at stake in just one SME. This SME is located in a region (NUTS3) where average employment in the last 10 years has remained below the 4%.

Keeping the Directive as it is, would imply foregoing environmental benefits that, according to Nomeval, are at least 4 times as large as compliance costs, taking the cost figures reported by the SME as representative. There are 2 reasons why this conclusion may no longer be valid, but these are pointing in opposing directions:

- If there is increasing demand for platforms that are powered by electrical engines (which are not covered by the Directive), the economic cost of compliance may be even smaller.
- Aerial access platforms may be used less often in urban areas than assumed in Nomeval.

Fork lifts

We have identified one SME manufacturing explosion proof lift trucks. Noneval had not paid any specific attention to this product category. Evaluating whether this category would indeed need specific noise limits would require a technical evaluation that falls outside the scope of this study, and we will no longer consider this specific issue here.

Noneval had calculated a total environmental benefit of 1 817 million EUR for 36a lift trucks and of 2 724 million EUR for 36b lift trucks; compliance costs had been estimated at 71 million EUR and 318 million EUR, respectively. In the IA study, compliance costs had been calculated at a deeper level of detail and with more recent data, and had been estimated at a total of 348.32 million EUR (under scenario II) and 254 million EUR (under scenario III) for all fork lift categories. For 36a and 36b fork lifts, the Environmental Impact Indicator calculated in the IA study decreased by 2.54 “weighed” dB under both scenarios.

The information received during the SME test has not provided us with elements that would lead to a revision of these figures.

At most a few hundred jobs could be at stake in this market segment. These SMEs are located in regions (NUTS3) with average unemployment levels in the last 10 years between 3 and 10%.

Whilst the recent surge in second hand fork lifts obviously has a negative impact on the manufacturer, it leads to lower prices for the customer, and is a reflection of a general adjustment of the market - this situation is likely to persist for several years in some member states.

Cluster V: Power generators and cooling equipment

As far as Cluster V is concerned, no specific impacts on SMEs have been identified.

Cluster VI: Pumping and suction equipment

As far as Cluster VI is concerned, no specific impacts on SMEs have been identified.

Cluster VII: snowmobiles and snowgroomers

For snowgroomers, neither scenario II nor scenario III foresee any changes compared to the baseline. Therefore, they fall outside the scope of the current study.

There are no SMEs amongst the manufacturers of snowmobiles. All SMEs in this sector are professional end users (mostly in the tourist industry or reindeer farmers) or dealers. The dealers represent an employment of 2000 jobs (assumed proportional to sales), and the tourism industry of 9000 jobs (proportional to stock in use).

The estimates of the impact on employment in SMEs vary between a few hundred to a few thousand units, depending on the actual scenario for compliance costs. Whilst this is a small impact at the EU27, total employment in Lapland in 2004 was 69,629 units and unemployment reached 16.7% (as to an average of 10.6% country-wide). The snowmobile industry estimates that similar employment figures apply to Eastern and Central Finland.

Cluster VIII: Waste collection, processing and recycling

We have identified no SMEs that are relevant for this study.

SME test: conclusion

The number of SMEs identified in the course of the study

Despite the very important efforts undertaken by the project team, less than 15 individual companies have been identified unequivocally as SMEs and have contributed actively by responding to the questionnaire (or by participating in round table meetings). There are several explanations to the large difference with previous estimates.

Discrepancy between EC definition and public perception

The EC definition is actually very restrictive, and is not well known. When it is asked informally to estimate the number of SMEs in a given sector, the natural tendency is to look at the figures related to employment, turnover and balance sheet total, and to overlook the criteria related to linked and partner enterprises.

Low SME membership of sector federations

As an alternative explanation, it has been suggested that SMEs feel that their specific interests are not always well represented by the sector federations. Therefore, we have also used the UEAPME as an alternative communication channels, but this has not resulted in any response.

Finally, we have also, where possible, used alternative sources of information (such as business directories) to identify SMEs *directly*. Whenever information in the public domain suggested that these companies could fulfil the criteria, they have been contacted individually. Again, the results have been very meagre.

Cost of providing inputs to studies

With the exception of the landscaping industry, the response rate from end users has been close to zero, although we are very confident that they are essentially composed of very small enterprises. The responses received indicated that the inputs that were requested were felt to be too technical, and individual companies did not see sufficient benefits from responding to the questionnaires, compared to the cost involved in answering them. In the case of end users, it is clear that a substantial amount of effort is required to understand the indirect effects of changes that are sometimes barely understood by those who will have to implement the technical solutions.

It is possible that, even amongst the manufacturers of equipment, the burden of responding actively to the questionnaire is simply too high compared to the (perceived) benefits of doing so.

Lessons learned for future work

We advise against using a less restrictive definition of SMEs in future work.

- Relaxing the definition would mean that we would ignore the two essential problems of SMEs that are solved when they integrate in a larger group (high fixed costs and difficult access to capital).
- A change of the scope of the definition could lead to confusion on the side of the industry.

The second approach would consist in sticking to the current definition, but to make life easier to the respondents. However:

- While allowing longer response times could maybe lead to a slightly higher response rate, the time that was allowed for responding to the questionnaires

was the maximum time that was feasible within the constraints of our contract with the Commission.

- Drafting a questionnaire in several languages (or allowing SMEs to answer in their mother tongue) could maybe decrease the barriers for some SMEs. However, the implications in terms of translation budget and in execution time could be huge. Limiting the number of languages could be an option but raises the question where to put the boundary between the languages that are included in the study and those that are not.
- It is highly doubtful that further simplifications of the questionnaires would lead to a higher response rate. The questions that are tackled in an Impact Assessment Study are complex, and that there are limits to how far we can go in simplifying complex issues without missing the whole point of the study.

Policy conclusions

There are essentially two possible approaches to the low response rate:

- The first possibility is to assume that the responses that we have received are indeed representative. This leads to the conclusion that at most 10 to 20 European manufacturers of equipment subject to the Noise Directive are actually SMEs.
- The second possibility is to assume that the companies that have actually responded are only a small subsample of the complete population of SMEs, but that those who have responded are the only ones for which the stakes are sufficiently high to justify an active participation in the study.

However, under both assumptions, the conclusions remain the same:

- Even if all companies would face the cost disadvantages of SMEs, the outcome of the cost-benefit analysis of Nomeval would not be affected fundamentally, except *maybe* in the case of aerial access platforms.
- The most important disadvantage faced by SMEs is the high share of fixed costs (including those related to regulatory compliance) compared to variable costs. In a market economy, one would expect this to lead to mergers and acquisitions, which would allow to spread these fixed costs over higher production volumes. Actually, several sectors affected by the Directive have undergone an important consolidation phase in the recent past.
- In total, employment in SMEs affected by the Directive does not exceed a few thousand units at the European level. However, the information gathered during this study does not suggest that a significant proportion of these jobs are actually threatened. If mergers and acquisitions would indeed take place, some overhead jobs may indeed be cut. In most cases, the SMEs affected by the Directive are located in regions with lower than average structural unemployment, although there are some notable exceptions.
- In a few cases, SMEs have also reported difficult access to capital markets and weak negotiating position vis-à-vis suppliers and industrial clients as a problem. However, these problems are not caused by the Noise Directive, and the solutions for these problems lie in different policy areas (financial markets policy and competition policy).

- In the case of snowmobiles, the only SMEs affected are dealers and the professional end users. The actual impact depends crucially on how snowmobile producers will react to noise limits.
- Spreading the introduction of more stringent noise emission limits over time would help SMEs overcoming the bottlenecks in their R&D capacities.

THE IA RELATED TO THE CONFORMITY ASSESSMENT PROCEDURE

The Noise Directive is based upon the principles and concepts of the “New Approach”. The “New Approach” Directives set out requirements for conformity assessment. The different types of conformity assessment procedures have initially been identified by Decision 93/465/EC and were set out by in the form of “modules”. As part of the “New Legislative Framework”, Decision 768/2008/EC on a common framework for the marketing of products has repealed and replaced Decision 93/465/EC.

Individual directives have not always stuck to the text of the decision, and some have slightly modified these standard procedures. This is for instance the case with Annex VI of the Noise Directive. Aligning the conformity assessment procedures with those foreseen in Decision 768/2008/EC could also be part of the revision of the Noise Directive.

The Commission envisages the replacement of the CAP defined in Annex VI to the Noise Directive (“Internal control of production with assessment of technical documentation and periodical checking”) (“**option cap0**”) by one of the two following alternatives:

- **Module A2** of Decision 768/2008/EC (“Internal production control plus supervised product checks at random interval”) (“**option cap1**”)
- Or **Module B** of Decision 768/2008/EC (“EC-type examination”) in combination with module C of Decision 768/2008/EC (Conformity to type based on internal production control”). (“**option cap 2**”)

The other Annexes to the Noise Directive are outside the scope of the current study.

Moreover, the text of Decision 768/2008/EC and the proposed alternative modules are taken as given.

Finally, the scope of this study covers all enterprises, not just SMEs – the “SME test” and the “IA CAP” are two different research questions, even if they have been run in parallel.

Approach

As a first step in the project, we have analysed the New Legislative Framework. Moreover, in order to identify the most relevant questions to tackle during the study, we have consulted the Commission’s Impact Assessment related to Decision 768/2008/EC (SEC(2007)173).

The most important groups of stakeholders are the manufacturers, the notified bodies and the national contact points in the member states. We have also consulted the European Environmental Citizens Organisation for Standardisation (ECOS), a consortium of Environmental NGOs, but have not obtained a response.

A questionnaire has been drafted that addresses the relevant impacts. A balance has been struck between the comprehensiveness of the questionnaire and its user-friendliness for the respondents.

We have used open-ended questions, depending on the specific impact that is being investigated.

The questionnaires have been sent out immediately after the inception meeting with the Commission services.

The project team had proposed to single out representative group of stakeholders that would be willing and able to cooperate on this study. The project team would organise round table discussions with those selected stakeholders. If meetings in Brussels would prove difficult for some specific manufactures and notified bodies, or if considered useful, we had proposed to organise additional in-depth telephone interviews and mail exchange.

By mid-July, we had received the following feedback:

- market surveillance authorities: 11 questionnaire + 2 telephone interviews
- notified bodies: 4 questionnaires + 2 telephone interviews
- industry: 3 questionnaires

The low response rate may be due to the following factors:

- Generally speaking, the New Legislative Framework is not well known, and stakeholders do not know themselves how changes in the CAP will affect their business.
- Some stakeholders had understood that the IA related to the CAP was part of the SME test. This misunderstanding has been corrected.
- Some enterprises use other CAP than Annex VI.

On 10 July, EUnited, CECE and CEMA have informed us that, before tackling the questionnaire related to the CAP of the Noise Directive, they would have liked to receive more information related to the New Legislative Framework in general. Similar requests have been received from some notified bodies.

After the first consultation round, it was not clear how representative the answers were. ARCADIS has therefore proposed to cross-check some statements by using the following alternative approach: we have drafted provisional conclusions (based upon the first round) and allowing all contacted stakeholders to comment on each point. The majority of the stakeholders did still not answer our repeated inquiries and it is assumed that they are taking a neutral position towards the provisional conclusions.

Current practices

According to Article 14 of the Noise Directive, equipment referred to in Article 13 has to be subjected to the internal control of production procedure referred to in Annex V before placing on the market or putting into service. Equipment referred to in Article 12 is subject to one of the CAP described in Annex VI, VII or VIII to the Directive before placing on the market or putting into service. Annex VII ("unit verification") is normally used for products with very low series volumes.

With respect to the current use of Annex VI, there are two possibilities in the *production* phase.

- The manufacturer carries out noise measurements in company laboratories under the surveillance of the NB: this is usually used by large companies. The costs vary widely but only limited concrete information has been provided to us concerning the magnitude.
- The laboratory of the NB carries out noise measurements. This procedure is usually used by small companies.

If a manufacturer chooses Annex VIII, he must operate an approved quality assurance system for design, manufacture and final product inspection and testing. He is subject to surveillance under the responsibility of the notified body.

It is not really clear what currently determines the choice between Annex VI and Annex VIII in the Noise Directive. Practices vary from country to country, and from industry to industry. The size of the company is an important factor, but does not determine everything.

We have also received one detailed estimate of the cost breakdown for Annex VI:

- 600€ for the examination of the technical documentation.
- 300€ per year for the production conformity checks if only the internal audits have to be evaluated.
- Tests by the NB in both cases could be between 800 and 1000 € based on the equipment type and for each piece of equipment to be tested.
- Costs for internal testing by the manufacturer are between 1000 and 2000€ for new certification (at least 5 machines) and 400 to 600 € for each production control.
- Travel can be estimated at 500€ per certification.

The orders of magnitude of these estimates have been confirmed by other stakeholders, but large differences exist between equipment types (up to 20 000€ for examination of technical documentation) and member states (mainly due to difference in the cost of labour).

The market position of notified bodies

Some concerns have been raised with respect to the independence of notified bodies. However, NB also have some market power (specialist knowledge), certainly in relation to SMEs. The actual level of competition varies from country to country.

Other possible points of concern are the limited experience of some notified bodies and substantial differences in national practices with respect to the application of the criteria for notification. Most industry stakeholders however did not raise any specific concerns on differences in national practices.

It is not clear yet how the application of the NLF will affect these problems in practice – it is noteworthy that all these problems referred to in this section are in line with the problems raised in SEC(2007)173.

Effects of possible changes to module A2 of Decision 768/2008/EC

Compared to the current Annex VI to the Directive, the most important changes in module A2 are:

- Module A2 only leaves room for product checks (“variant 1” of Annex VI has not been withheld in Module A2)
- The product checks can be carried out either by a notified body or by an accredited in-house body.

The majority of the notified bodies expect that once the Directive has been adapted to the NLF, large companies who currently use the first variant of Annex VI, will switch to Module H of Decision 768/2008/EC. However, Module H is the most expensive, as it requires a complete test laboratory.

The possibility to use an accredited in-house body turns out to be a relatively contentious matter.

An important difficulty in assessing the consequences of the possible replacement of Annex VI is the possibility that the national surveillance authorities will all have different interpretations of the new requirements.

Several market surveillance authorities and notified bodies argue that the accreditation should be harmonised and performed according to (the) international standards. One of the objectives of the NLF is precisely to coordinate a system of peer review between national accreditation bodies. Only experience can show how this will work in practice.

At least one notified body thinks that the autonomy of in-house bodies cannot be guaranteed and that they should be excluded from the Noise Directive. The legal basis for this exclusion could lie in Article 4.5.c of Decision 768/2008/EC. The majority of notified bodies however believes that the accredited in-house bodies can not and should not be excluded from the Noise Directive.

On the industry side, EGMF has reported that the possibility of using an in-house accredited body might be difficult, as the barriers to entry might be very high. The use of in-house bodies would be out of the question for SMEs.

Problems could also occur with respect to the requirement to hold supervised product checks at random intervals, the most important of which are:

- It is not clear how "random samples" should be determined in the case of very small series.
- Can product checks really be held at random intervals?
- Should product checks be announced in advance?
- One surveillance authority has pointed out that the term "random" may have different interpretations between notified bodies and the random period would need to be set.
- Because the term "random" has not been defined, notified bodies could increase the frequency of product checks just to generate business. One stakeholder has expressed doubts as to whether notified bodies would really be able to hold truly random checks with their clients.

Just one stakeholder has expressed a concern that Module A2 would lead to a significant increase in the risk of non-compliant products being put on the market if in-house conformity assessment bodies would be allowed.

Effects of possible changes to module B+C of Decision 768/2008/EC

Several notified bodies and surveillance authorities have expressed concerns that the application of Module B+C would be a step backwards compared to what is currently done in Directive 2000/14/EC.

"CE type" examination assumes that the first sample is representative, but at least 2 notified bodies doubt that the sample taken is always representative for subsequent production, even in the absence of deliberate fraud. Taking into account production variability, statistical inference based upon a specimen that is not chosen at random would not be valid.

It is also not clear whether Module B is compatible with the concept of the guaranteed sound power level as defined in the Directive.

Moreover, with Module C, no follow up of the manufacturing process by the notified body would take place. However, the responsibility for compliance remains with the manufacturer.

Another notified body thinks that the presence of a notified body in an early stage of product development prevents noncompliant products from being put into production, and this avoids the subsequent cost of removing discrepancies. This view is not shared by most other stakeholders.

One authority has suggested that the application of Module B+C would lead to significant increases in costs compared to the current situation. In case a specimen (representative of the production envisaged) would be examined, the estimate is that certification costs would double compared to the current situation (which only implies an assessment of the technical documentation and periodical checking). Costs would quadruple in case the second variant would be chosen (assessment of the adequacy of the technical design of the product plus examination of specimens). Costs would remain unchanged if the assessment would take place through examination of the technical documentation. We have not obtained any alternative estimates of these figures.

Comparison of costs

The consultation with stakeholders has not lead to a clear cut conclusion with respect to how a change in the CAP would impact on the probability of compliance. However, it has indicated that this effect can be expected to be small and to depend largely on side-conditions (such as market surveillance) that do not depend on the CAP.

Therefore, we will not consider here the environmental cost of non-compliance.

However, it is useful to have a look at the impact on the costs for the manufacturers.

We assume that, in the case of Module A2, the costs of new certification are x EUR and the recurring annual costs are y EUR. Based upon the cost estimates received, we assume for illustrative purposes that $1.66 \cdot y < x < 5 \cdot y$.

In order to ensure compatibility with Nomeval, we assume a discount rate of 3%.

We compare now the lifetime costs under three different assumptions concerning the lifetime of an individual equipment type. We assume that the costs linked to the CAP are incurred at the beginning of the year.

With 10 years lifetime, discounted lifetime costs linked to Module A2 are:

$$x + \sum_{n=0}^9 \frac{y}{(1+0.03)^n}, \text{ or } x + y \cdot 8.79.$$

If Module B+C would be chosen, there are three possibilities.

- In case only a specimen is examined, Module B+C is the least costly if $2x < x + y \cdot 8.79$, or thus if $x < y \cdot 8.79$.
- In case an assessment would take place of the adequacy of the technical design of the product plus examination of specimens, Module B+C is the least costly if $4x < x + y \cdot 8.79$, or thus if $x < y \cdot 2.93$.
- If only an assessment of the technical documentation takes place, Module B+C is obviously the least costly solution.

We have repeated this exercise for expected lifetimes of 5 and 2 years respectively. We summarize the result of our cost comparison in the table below, where the inequalities are the conditions for Module B+C to be the least costly procedure. If the cell is coloured red, this means that the condition does not seem compatible with the orders of magnitude for x and y that the stakeholder consultation has suggested. Orange means that the condition is unlikely to be fulfilled in practice.

Table 1: Life cycle costs of Module A2 versus Module B+C

EC type examination used	Examination of specimen	Assessment of the adequacy of the technical design of the product plus examination of specimens	Examination of technical documentation
Cost of module B+C	2.x	4.x	x
10 years lifetime	$x < y \cdot 8.79$	$x < y \cdot 2.93$	always
5 years lifetime	$x + y \cdot 4.72$	$x < y \cdot 1.57$	always
2 years lifetime	$x < y \cdot 1.97$	$x < y \cdot 0.65$	always

We can thus conclude that for some equipment types, it is possible that the life cycle costs of Module B+C are lower than the life cycle costs of Module A2.

Conclusion

The most important recurring answers are that:

- **As far as the environmental effects are concerned, the actual choice of the CAP is of secondary importance, and market surveillance is the real key.** One notified body has pointed out for instance that most fake products have never been checked by a notified body and come from the black market. Some stakeholders have argued however that the stringency and transparency of the CAP are important as a necessary condition for satisfactory product quality put on the market and are a pre-requisite of efficient market surveillance. In their view, relying only on market surveillance just means that the problem is transferred to another party, with possibly less technical expertise and a limited budget.
- **The New Legislative Framework is not well known** and several stakeholders involved (industry, notified bodies, public authorities) admitted that they do not have a clear idea of what changes in the CAP may imply in practical terms. From some sides, there is a clear demand for more extensive information.
- The vast majority of surveillance authorities admit that they have no view on what the CAP imply for the industry and the notified bodies in terms of costs.

There is **not a clear consensus on the cost implications**. Actually, even the net costs and benefits of the *current* Annexes to the Directive are not well known. Some indicative estimates of costs have been provided, but costs and benefits vary according to the technical characteristics of the equipment types, according to the country¹ and according to the business practices in individual business sectors.

¹ For instance, Annex IX sets minimum criteria to be taken into account by Member States for the notification of bodies. Some member states can be expected to require much more than these minimum criteria.

Table 1 compares the life cycle costs of Module A2 and Module B+C under different assumptions with respect to the economic life time of an equipment type. In general, we think that, taking into account:

- The wide range and the heterogeneity of the equipment types covered by the Directive on the one hand;
- The limited concrete information on costs and benefits that have been provided by the stakeholders on the other hand,

a robust and meaningful estimate of the costs and benefits of the different options cannot be given.

The most important additional issues with Module A2 are:

- As Module A2 only leaves room for product checks, some companies that currently use Annex VI could switch to Annex VIII.
- The possible use of accredited “in house body” raises questions concerning their independence.
- It is not clear how the requirement to hold “random samples” could be implemented in practice.

The most important additional issues with Module B+C are:

- Whether it can be assumed that the specimen are indeed representative with subsequent production ;
- Whether CE type examination is compatible with the concept of guaranteed sound power level, which is central to the Noise Directive;
- The absence of follow-up of the manufacturing process by the notified bodies when Module C is applied.

Several stakeholders have proposed to consider other Modules than A2 and B+C. To be more specific:

- Some stakeholders argue that the implication of notified bodies is disproportionate to the risks implied by non-compliance with the Noise Directive. These stakeholders think that Module A (“internal production control”) would be sufficient *if combined with effective market surveillance*.
- At the opposite side of the spectrum, one authority has expressed the opinion that, if CE type examination would be applied, further involvement of the notified body in the manufacturing process is essential. Their preferred option would then be Module B+C2 (EC-type examination followed by “conformity to type based on internal production control plus supervised product checks at random interval”).

The impacts are summarized in the table below.

Category	Module A2	Module B + C
Functioning of the internal market	A better alignment with the New Legal Framework could lead to be a better functioning of the internal market, but there are no elements indicating that the change	A better alignment with the New Legal Framework could lead to be a better functioning of the internal market, but there are no elements indicating that the change

	compared to the current situation will be very large.	compared to the current situation will be very large.
Competitiveness, trade and investment flows	The impact of the Noise Directive on international trade depends more on the effectiveness of market surveillance than on the choice of the CAP.	The impact of the Noise Directive on international trade depends more on the effectiveness of market surveillance than on the choice of the CAP.
Operating costs and costs of business	Because Module A2 leaves fewer options than the current Annex VI, some firms may want to move to the use of Annex VIII. This move to full quality assurance will lead to an increase in operating costs. For other firms, no significant change is expected compared to Annex VI	Under Module B+C, the burdens will be concentrated in the evaluation of the specimen. The net effect compared to Module A2 will be product dependent and no option comes unambiguously out as the preferred one for all equipment types.
Administrative burden to companies/SME's	Because Module A2 leaves fewer options than the current Annex VI, some firms may want to move to the use of Annex VIII. This move to full quality assurance will lead to an increase in administrative burdens. For other firms, no significant change is expected compared to Annex VI. The uncertainties surrounding the concept of "random checks" can lead to an increase in transaction costs between manufacturers and notified bodies. Generally speaking, the administrative complexity of the CAP increases when aligning the Directive with the NLF.	Under Module B+C, the burdens will be concentrated in the evaluation of the specimen. The net effect compared to Module A2 will be product dependent and no option comes unambiguously out as the preferred one for all equipment types. Generally speaking, the administrative complexity of the CAP increases when aligning the Directive with the NLF.
Property rights	There are no elements indicating that this option will affect property rights.	There are no elements indicating that this option will affect property rights.
Innovation and technological development	There are no elements indicating that this option will affect innovation and technological development.	There are no elements indicating that this option will affect innovation and technological development.
Consumer and households	There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on	There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on

	side-conditions such as the effectiveness of market surveillance. Therefore, the impact on consumers and households can be expected to be close to zero.	side-conditions such as the effectiveness of market surveillance. Therefore, the impact on consumers and households can be expected to be close to zero. There are some elements indicating that compliance will be slightly lower than under Module A2, but with good market surveillance, this difference should be negligible.
Specific regions, sectors or workers	There are no elements indicating that this option will affect specific regions, sectors or workers.	There are no elements indicating that this option will affect specific regions, sectors or workers.
Third countries and international relations	The impact of the Noise Directive on international trade depends more on the effectiveness of market surveillance than on the choice of the CAP.	The impact of the Noise Directive on international trade depends more on the effectiveness of market surveillance than on the choice of the CAP.
Impact on public authorities, including administrative costs	If the option to use accredited in house conformity assessment bodies would be maintained, then this will add work to the accreditation authorities.	The use of Module B+C may call for higher market surveillance efforts, to compensate for the fact that the notified bodies are not involved in Module C.
Impact on macroeconomic environment	The amounts at stake here can safely be assumed to negligible at the macroeconomic level.	The amounts at stake here can safely be assumed to negligible at the macroeconomic level.
Employment and labour markets	There are no elements indicating that this option will affect employment and the labour market.	There are no elements indicating that this option will affect employment and the labour market.
Standards and rights related to job quality	There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on side-conditions such as the effectiveness of market surveillance. Therefore, the impact on job quality can be expected to be close to zero.	There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on side-conditions such as the effectiveness of market surveillance. Therefore, the impact on job quality can be expected to be close to zero. There are some elements indicating that compliance will be slightly lower than under Module A2, but with good market surveillance, this difference should be negligible.

<p>Social inclusion and protection of particular groups</p>	<p>There are no elements indicating that this option will affect social inclusion.</p>	<p>There are no elements indicating that this option will affect social inclusion.</p>
<p>Public health and safety</p>	<p>There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on side-conditions such as the effectiveness of market surveillance. Therefore, the impact on public health and safety can be expected to be close to zero.</p>	<p>There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on side-conditions such as the effectiveness of market surveillance. Therefore, the impact on public health and safety can be expected to be very small.</p> <p>There are some elements indicating that compliance will be slightly lower than under Module A2, but with good market surveillance, this difference should be negligible.</p>

1 Introduction

The objectives of the current project are twofold.

First, to carry out a detailed assessment of the specific impacts on SMEs of some specified policy options related to the revision of Directive 2000/14/EC as amended (hereinafter the “Noise Directive”). Second, to carry out an Impact Assessment Study on policy options concerning the replacement of the conformity assessment procedure (CAP) of the existing Annex VI of the Noise Directive by:

- module A2 of Decision 768/2008/EC or
- module B of Decision 768/2008/EC in combination with module C of Decision 768/2008/EC.

This final report is structured as follows. In Section 2, we give an overview of the background and our understanding of the project. Section 3 is dedicated to the SME test, and Section 4 contains the impact assessment study related to the revision of the CAP.

2 Background

2.1 The Noise Directive

Directive 2000/14/EC as amended (hereinafter “Noise Directive”) aims to harmonise the laws of the Member States relating to noise emission standards, conformity assessment procedures, technical documentation and collection of data concerning the noise emissions in the environment of equipment for use outdoors.

According to Article 20 of the Noise Directive the Commission shall submit to the European Parliament and the Council a report concerning the Commission’s experience in the implementation and administration of this Directive. In anticipation of this report, a stocktaking study on the experience in the implementation and administration of the Noise Directive, was carried out by TNO in 2007².

In parallel, regular meetings have been organized with stakeholders to review the implementation and administration of the Directive and to discuss the findings of the aforementioned study. In order to take account of diverging opinions voiced by stakeholders, alternative scenarios have been considered by a technical experts group as published in the position paper issued by WG7³:

- | | |
|-------------|--|
| Scenario 1: | ‘do-nothing-option’ – retain of the status quo, no change of the Directive |
| Scenario 2: | as suggested by the stocktaking study |
| Scenario 3: | as suggested by WG7 (Industry, Member States, Notified Bodies...) |

There are not always three options for each individual type of equipment. Consensus was reached on the fact that the three options cover all the options that can be reasonably defined. In case of snowmobiles there are four options: (1) do-nothing-option, (2)

² TNO : Noise of Machinery – Evaluation of Directive 2000/14/EC Study on the experience in the implementation and administration of Directive 2000/14/EC relating to the noise emission in the environment by equipment for use outdoors, FINAL REPORT, 12 December 2007.

http://ec.europa.eu/enterprise/mechan_equipment/noise/pdf/nomeval_rep12-12-07.pdf

³ A position paper from WG7: Contribution to the Commission Report required by Article 20 of Directive 2000/14/EC

scenario TNO-NOMEVAL, (3) scenario WG7, (4) scenario developed by the snowmobile manufacturing industry.

A detailed impact assessment study (hereinafter the “IA study”) has recently been undertaken, addressing the technical, social, environmental and economical aspects of each alternative – for the full report, see

http://ec.europa.eu/enterprise/mechan_equipment/noise/pdf/ias2009_finalreport.pdf

The Commission has now requested ARCADIS to complement this IA study with, on the one hand, a dedicated SME test, and on the other hand, an impact assessment concerning possible changes to the procedures for conformity assessment. We discuss both in turn.

2.2

The SME test

This IA Study complied with the Commission Guidelines and Annexes on Impact Assessment in force at the time (version of 16 March 2006) and contains an analysis of the distributive effects on SMEs. However, the Commission services have judged that this analysis is not sufficient to serve as a basis for successfully running the SME test as specified in the updated Commission’s Impact Assessment Guidelines of 15th of January 2009 with Annexes. These Guidelines require a more extended and detailed assessment of impact related to SMEs.

We give here a brief overview of the “SME test” as it is required in the IA Guidelines.

The Guidelines require to take SME’s into consideration in each of the analytical steps when carrying out an impact assessment.

The following steps are distinguished:

Consultation with SMEs representatives. The guidelines provide examples of possible good practices: round table discussions with stakeholders, test panels of entrepreneurs, specific committees, use of IT tools (on-line consultations, forum)... The Guidelines include also suggestions for consulting SME stakeholders with the support of DG ENTR, such as inviting SMEs representatives to stakeholder hearings, the use of the Enterprise Europe Network and the European Business Test Panel (EBTP).

Preliminary assessment of businesses likely to be affected. The objective of this stage is to establish whether SMEs are among the affected population and to identify the characteristics of the businesses/sector(s) likely to be affected. If the preliminary assessment leads to the conclusion that SMEs are amongst the affected parties, the guidelines require further analysis to be carried out.

Measurement of the impact on SMEs. The distribution of the potential costs and of the benefits of the proposals with respect to the business size, differentiating between micro, small, medium and large enterprises should be analysed qualitatively and, *if possible and proportionate*, quantitatively. Cost and impacts identified for SMEs have to be compared with those of large enterprises.

Assess alternative options and mitigating measures If the abovementioned cost/benefit analysis shows that SMEs are facing a relatively higher burden, the IA Guidelines suggest to consider the use of SME specific measures in order to ensure a level playing field and the respect of the proportionality principle. When the analysis made under the previous section shows that SMEs are disproportionately affected or disadvantaged compared to large companies, the Guidelines require considering using possible mitigating measures. The Guidelines include a non-

exhaustive list of measures to be considered, but clearly state that the choice of specific measures to use will be made on a case by case basis.

2.3 Conformity Assessment Procedures

The Noise Directive is based upon the principles and concepts the “New Approach”. The “New Approach” Directives set out requirements for conformity assessment. The different types of conformity assessment procedures have initially been identified by Decision 93/465/EC and were set out by in the form of “modules”. As part of the “New Legislative Framework”, Decision 768/2008/EC on a common framework for the marketing of products has repealed and replaced Decision 93/465/EC.

As pointed out in SEC(2007)173⁴, individual directives have not always stuck to the text of the decision, and some have slightly modified these standard procedures. This is for instance the case with Annex VI of the Noise Directive. Aligning the conformity assessment procedures with those foreseen in Decision 768/2008/EC could also be part of the revision of the Noise Directive.

The Commission envisages the replacement of the CAP defined in Annex VI to the Noise Directive (“Internal control of production with assessment of technical documentation and periodical checking”) (“**option cap0**”) by one of the two following alternatives:

- **Module A2** of Decision 768/2008/EC (“Internal production control plus supervised product checks at random interval”) (“**option cap1**”)
- Or **Module B** of Decision 768/2008/EC (“EC-type examination”) in combination with module C of Decision 768/2008/EC (Conformity to type based on internal production control”). (“**option cap 2**”)

The other Annexes to the Noise Directive are outside the scope of the current study.

Moreover, the text of Decision 768/2008/EC and the proposed alternative modules are taken as given.

Finally, the scope of this study covers all enterprises, not just SMEs – the “SME test” and the “IA CAP” are two different research questions, even if they run in parallel.

⁴ Accompanying document to the Proposal for a “REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL SETTING OUT THE REQUIREMENTS FOR ACCREDITATION AND MARKET SURVEILLANCE RELATING TO THE MARKETING OF PRODUCTS AND A DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON A COMMON FRAMEWORK FOR THE MARKETING OF PRODUCTS”.

3 The SME test

We first start with a description of the approach we have used for this study (Section 3.1). In Section 3.2 we explain why the Eurostat data on SMEs are not relevant for this specific study, and why we have chosen to stick to the results obtained from the stakeholder consultation instead. In Section 3.3, we discuss the results we have obtained for each cluster used in the IA study. Section 3.4 concludes.

3.1 Approach

3.1.1 Review of the IA study

The results of the IA study have been reviewed to identify any issues that may be relevant to SMEs and that need further deepening. The results of this review are represented in Table 2.

Table 2: Issues related to SMEs identified in the IA study

Cluster	Equipment producers	Equipment users
I Cleaning equipment	SME share of 30-40%; associated cost burdens weighs more heavily on SMEs; potentially severe impacts	
II Construction equipment	There are some medium sized producers of construction equipment that could be affected. Impact is small.	In this sector, SMEs are mostly concerned as purchasers. The percentage increase in capital costs is relatively low.
III Gardening equipment	Many SMEs producing a wide variety of models; potentially severe impacts.	High downward cost pass-through percentages suggest that commercial sectors could be affected, but global effect in labour intensive industry is expected to be low. The retail sector for gardening equipment could be affected.
IV Loading and lifting equipment	There are 14 manufacturers that can be considered to be SMEs; potentially high impact.	
V Power generators and cooling equipment	With the exception of three large players, all producers are SMEs. Niche players sometimes customise parts of products manufactured by major producers.	
VI Pumping and suction equipment	There is insufficient information for a thorough analysis of possible impacts on SMEs. Some	

	impact is likely for suction vehicles.	
VII Snowmobiles and snow groomers	There are no SMEs amongst the manufacturers	Dealers and services connected to the use of snowmobiles (safaris, restaurants etc) are mostly SMEs
VIII Waste collection, processing and recycling	For refuse collection vehicles, the SME share is 40%	Some waste collection and recycling firms are SMEs

3.1.2 Identification of the relevant target group

Based upon the results of the IA study, there is no indication that other SMEs than manufacturers and professional end users are affected significantly by the Noise Directive. Therefore, in our proposal, we had proposed that the focus of the study would be on these categories. Other SMEs would only be considered insofar as the project team would come across new information that indicates that the options may have a significant impact on them.

The following associations have been contacted within one week after the signature of the contract for identifying and contacting SMEs, both for the purposes of this SME test and for the SME test related to the Non Road Mobile Machinery Directive (which is running in parallel to the current study):

- Sector associations: CECE, CEMA, EGMF, EU-Nited, EUROMOT, FEM, ISMA, Pneurop, VDMA
- The European Association of Craft, Small and Medium-sized Enterprises (UEAPME)

Contacts have been made both per phone and per e-mail, in order to clearly explain the scope and the objective of the SME test. In the case of UEAPME, special attention has been paid to explaining the general context of the Noise Directive.

We have also made clear right from the start that we wished to complement the questionnaires (see Section 3.1.3) with round table discussions and in-depth interviews (see Section 3.1.4).

3.1.3 Draft of a questionnaire

The IA Study has already addressed all the economic, environmental, and social issues listed in the 2006 Impact Assessment Guidelines in a detailed questionnaire. This study does not repeat this exercise. We have instead drafted a more limited list of questions that addresses how SMEs are specifically affected by each policy option. A separate questionnaire has been drafted for equipment manufacturers and for professional end users, and is attached as an annex to this report.

These questionnaires have an open format rather than the detailed closed format used for the purposes of the IA study. The questionnaires have served mainly as a guidance document for further direct contacts. The scope of the questionnaire was not primarily to

establish statistical information, but to serve as a tool to obtain information for representative case studies.

Possible issues for SMEs could be:

- Compliance with the Directive requires investment in fixed and sunk expenditures (such as R&D or conformity assessment); these will weigh relatively more upon SMEs. This type of expenditures also includes acquiring the necessary expertise to comply with the Directive.
- SMEs can face difficulties in raising the capital necessary for compliance. This effect will be exacerbated if compliance with the Directive has no value as such for the end user.
- SMEs may have less potential for cost-pass through than large enterprises.

In order to avoid any misunderstandings concerning the target group of the questionnaire, the questionnaire contains the definition of medium-sized, small and micro enterprises.

3.1.4 Consultation with the identified target group

The questionnaires have been sent out after the inception meeting with the Commission services.

The project team has proposed to concentrate on two groups of selected stakeholders:

- First, we have contacted the European industry associations that have been consulted during the IA study: AECC, CECE, CEMA, EGMF, ESO, ISMA, ORGALIME, VDMA and EUROMOT.
- Second, we had proposed to single out a representative group of SMEs that is willing and able to cooperate on this study. The selection of this group would take place in consultation with the European industry associations and with UEAPME. We aimed at 2 SMEs per main cluster used in the IA study.

Our intention was to organise round table discussions with those selected stakeholders. Experience with the IA study had shown that this is the most effective means to elicit a maximum of information. We proposed to organise five half-day round table discussions, focussing on the most relevant clusters. Relevant clusters are those where many SMEs are active as a manufacturer or as a professional user of the equipment.

We also proposed to approach the SMEs via in-depth telephone interviews and mail exchange, as it is difficult to organise meetings with them in Brussels. A round table discussion has been asked with UEAPME.

3.1.5 General development of the consultation process

Table 3 gives an overview of all the contacts that have been made with associations of stakeholders.

Although the questionnaires have been sent out immediately after the signature of the contract, and although there has been a steady follow up, the general response rate has been very low.

An important reason for this low response rate appears to be that, for most sectors covered by the Noise Directive, there are very few (if any) SMEs. One of the reasons why the relative importance of the number of SMEs might have been overestimated in previous work is that the criterion of autonomy in the definition is often overlooked: companies that fulfil all other criteria (headcount and turnover or balance sheet total) can still not be considered SMEs if they are part of a larger group that (on a consolidated

basis) does not meet the criteria. Moreover, some sectors have gone through an important consolidation movement in the recent past. As some companies that have been integrated in a larger group still operate under their previous brand name, this can give the wrong impression that they are still independent.

The only industries that appear to be really dominated by SMEs are professional end users such as landscape contractors, forestry entrepreneurs and building professionals. This creates challenges of its own, because these end users are not familiar with the Directive, have not always a clear view of the impacts on their activities, or do not have the resources to analyse these issues.

Our invitation to organise round table meetings has met a very low positive response rate. We have been able to hold several telephone interviews that turned out to be very informative, but also not as many as we had hoped for. We have also held a fruitful round table meeting with manufacturers of garden equipment. These experiences however confirm that, for this type of project, holding in depth interviews is the way forward, rather than written questionnaires.

As explained above, in parallel with the sector organisations, we had taken several steps in parallel in order to reach SMEs that are not affiliated to sectorial associations:

- We have contacted UEAPME, the European Association of Craft, Small and Medium-sized Enterprises. UEAPME has sent out the questionnaires, but has pointed out that it does not work directly with SMEs, but with its members, which are national horizontal SME organisations. This means that 1) UEAPME cannot send the questionnaires directly to SMEs or invite them directly to attend meetings in Brussels 2) UEAPME does not know whether or not its members have national branch organisations specialised in the sectors concerned by the Noise Directives. Therefore, UEAPME cannot target these SMEs specifically. Because the NRMM and the Noise Directives are very specific, it is not possible for UEAPME to speak in the name of its members on this issue. UEAPME has also expressed concerns with respect to the representativeness of any response because of (1) the language barrier some SMEs face (2) the short deadline. No response has been received from UEAPME.
- Thanks to the kind cooperation of Mr Berck and Németh of DG ENTR, we have launched the questionnaires through the Enterprise Europe Network on 03 June. However, no response has been received from the Network.
- We have taken a sample of more than 80 companies out of the noise database that the Commission is managing according to Article 16(4) of Directive 2000/14/EC. This sample has led to the identification of just 2 SMEs. As already pointed out above, many “small” companies do not fall under the definition of SMEs because they fail to satisfy the criterion of autonomy.

On 28 May, the Commission services have sent us a list of 27 Italian SMEs that they had received from an Italian stakeholder. All these enterprises have been contacted immediately, and some individual responses were received. On 29-30 June, reminders (per e-mail and phone) were sent to all individual companies that had not yet responded. A second batch of reminders was sent per e-mail on 05 August.

On 30 June, CECE has handed over a list of industry directories that could be useful in identifying individual SMEs: www.intermat.fr ; <http://www.bauma.de/> ; www.smopyc.es ; www.lectura.de ; ANMOPYC ; www.khl-group.com . These directories contain several thousands of companies. We have taken a targeted sample of 170 companies in order to identify SMEs that are not members of the sector associations. Based upon publicly

available information, we have concluded that 71 of these companies do not fall within the EC definition of SMEs, and that 13 are not subject to the Noise Directive. All other companies have been contacted individually. Reminders have been sent.

PNEUROP has informed us that, to the best of their knowledge, none of their members is actually an SME. However, they have provided us with a (short) list of manufacturers that they think may be SMEs but that are not members of PNEUROP. These manufacturers have been contacted individually.

On 15 September, CECE has also handed over a list of companies that produce drill rigs. They have all been contacted individually.

In some cases, individual respondents to the questionnaires have also indicated that some of their competitors may well fall within the EC definition of SMEs. These companies have been contacted individually. Reminders have been sent.

Table 3: List of contacts with associations

Professional association	Sector	First contact	Submission of questionnaire	Follow up contact 1	Follow up contact 2	Follow up contact 3	Follow up contact 4	Follow up contact 5	Follow up contact 6	Live meeting
EUROMOT	Internal combustion engines	05 May	08 May	03 June	17 June					
CECE	Construction equipment	05 May	08 May	03 June	18 June					30 June
CEMA	Agricultural machinery	06 May	08 May	03 June	04 July					
EGMF	Garden equipment	05 May								01 July
FEM	Lifting equipment	06 May	08 May	18 May	03 June	26 June	25 August			Phone interview on 10 July
ISMA	Snowmobiles	05 May	08 May	26 May	03 June					15 May
ORGALIME	Mechanical, Electrical, Electronic, Metalworking & Metal Articles Industries	06 May	08 May							
PNEUROP	Compressors,	14 May	22 June	25 June	09 July					

	vacuum pumps, pneumatic tools and allied equipment									
UEAPME	Small and medium enterprises	06 May	15 June	24 June						
FIEC	Construction industry	18 June	26 June	04 July	04 August	09 August				Phone interview on 10 August
ECOS	European Environmental Citizens' Organisation for Standardisation (NGO)	11 May	11 June							Phone interview on 19 May
ELCA	Landscape contractors	11 May	08 June	24 June	04 July	04 August	14 August	01 September	11 September	
COPE-COGECA	Farmers	12 May	26 May	26 June	30 June	01 September				14 July
EUnited M	Engineering industries	06 May	08 May	03 June	16 June	03 July	04 August			Phone call on 10 July

Eurocities	Local authorities	12 May	04 July	06 August	02 September					
CEMR	Local authorities	12 May	04 July							
ENFE	Forest entrepreneurs	14 July	07 August	01 September						

3.1.6 Analysis of the results of the consultation

The results of the consultation have been used to determine the specific impacts on SMEs.

In our proposal, we had indicated that we expected that most information would be of a qualitative nature because:

- Notwithstanding the possibility to sign confidentiality agreements with the consultants, firms are often reluctant to discuss quantitative issues.
- Firms often do not yet fully understand themselves the compliance costs linked to stricter noise emission limits.
- The accounting systems do not provide systematic information on some of the most crucial issues (such as administrative compliance costs).

These expectations have been confirmed.

Instead of focussing on a quantitative or statistical exercise extrapolating quantitative data over the population, we had proposed to undertake case studies focussing on the problems SMEs encounter and possible mitigating measures. As it turned out that the response to the questionnaires has been very poor, we have indeed been able to invest significant time in in-depth discussions with individual respondents. Actually, the main bottleneck for these case studies turned out to be the limited resources that individual companies could make available to respond to our requests for further clarification.

In general, the information we have received was too sketchy and incomplete to conduct a comprehensive cost-benefit analysis.

Instead, we have used the following pragmatic approach to summarize the impacts:

- We have verified whether there were any indications that compliance costs would be higher for SMEs than for large enterprises, and in particular whether the compliance costs estimated in the Nomeval and IA study are realistic.
- We have then verified whether the outcome of the cost-benefit analysis of Nomeval and the multi-criteria analysis of the IA study⁵ would change if the compliance costs reported by the SMEs would be applicable to all companies subject to the Directive. Of course, the results of this “extreme worst case scenario” need to be interpreted in the light of the actual number of SMEs.
- Compliance costs do not tell the whole story. For instance, they do not consider the consequences of bankruptcies and they do not consider the possibility that firms may merge – in both cases, jobs may be lost in the short run. Although we think that the origins of persistent unemployment must be understood in terms of the functioning of the labour market, we have to acknowledge that lay-offs can lead to significant welfare losses for those affected, particularly in relatively isolated regions with high structural unemployment. Therefore, we have again taken a worst-case perspective by looking at the maximum number of jobs at stake, and by verifying the average⁶ unemployment of the region⁷ where the affected firms are based.

⁵ In the IA study, the monetary value of the environmental benefits of each scenario has not been estimated. Therefore, we report the monetised environmental benefits for scenario II only. The estimates of compliance costs can also differ between Nomeval and the IA study because the IA study has used more recent and detailed data than the Nomeval.

⁶ Taken over the last 10 year (source: Eurostat).

⁷ At the NUTS3 level.

A specific issue that has to be kept in mind throughout this report is the impact of the economic recession, which could not reasonably have been foreseen at the time of the Nomeval report and of which the full impact was not yet clear at the time of the IA study.

The specific impact on SMEs is ambiguous, as reported recently in *The Economist*⁸:

- In Germany, sales by SMEs are expected to contract by 2% this year, while the economy as a whole is expected to shrink by 6%. *The Economist* attributes this in part to the fact that German domestic consumption is holding up, and that SMEs serving the home market are doing relatively well. The situation is different for export-oriented firms, such as machine-tool manufacturers, where sales are expected to drop significantly.
- In a recent survey of SMEs in France, just over half of them expected revenues to either stay flat or increase in 2009.
- SMEs (even with high credit ratings) face an unprecedented shortage of bank credit.
- The greater flexibility of SMEs and their closeness to their customers make them better at managing downturns.
- In Britain, the number of corporate liquidations increased by 56% compared with the same period a year earlier. Most victims were SMEs. However, a recent survey reported that 60% of small businesses were performing as well as or better than last year.
- In France the corporate bankruptcy rate jumped by 21% for the first quarter of 2009, but 70% of the failures were at the very tiniest firms with no employees other than their founders.

Therefore, we cannot draw any general a priori conclusions with respect to the impact of the current economic downturn on the subject of our analysis. This impact will have to be verified on a case by case basis.

3.1.7

Identification of possible alternative options and mitigating measures

The objective of this activity is to identify measures to avoid a disproportionate burden falling upon SMEs.

Examples of possible measures could be⁹:

- Exemptions from (some aspects of) the Directive, but respecting the emission limits laid down in the Directive;
- Longer transition periods;
- Direct or indirect financial support (insofar as this is compatible with competition and trade law);
- Information provision by public authorities.

Considering a general simplification of the Directive falls outside the scope of this study. We have also evaluated the merits of other mitigating measures that have been suggested during the consultation process – these will be discussed on a case by case basis for each individual equipment type.

⁸ The Economist. Small businesses in Europe. Humble but nimble. May 21st 2009

⁹ For more details, see:

http://ec.europa.eu/enterprise/entrepreneurship/docs/tsf_study_toolkit.pdf

3.2 Eurostat data on SMEs

According to Eurostat, SMEs represented 99.8 % of all EU-27 enterprises in the non-financial business economy in 2006, employing two thirds of the workforce (67.4 %) and generating 57.7 % of total value added. However, these figures vary widely from sector to sector.

The latest survey of the Observatory of European SMEs was carried out end of 2006 and early 2007 in the 27 Member States of the European Union (EU), as well as in Norway, Iceland and Turkey, the countries participating in the Multiannual Programme for Enterprise & Entrepreneurship. It included large-scaled enterprises (employing at least 250 persons) in its sample, to allow an identification of the specific performances, behaviour and problems of SMEs. Unfortunately, the level of sectorial disaggregation¹⁰ was too high to be useful for the current study.

We have consulted the Structural business statistics of Eurostat¹¹. At the 1 digit level, we found the following estimates for the sector “manufacturing” for 2006 (EU27):

Table 4: Structural Business Statistics for the manufacturing sector

	Total	Employment between 1 and 19	Employment between 20 and 49	Employment between 50 and 249
Number of enterprises	2 309 5520		130 778	83 548
Number of persons employed	34 412 800		4 088 200	8 639 100

Based upon this information, one would expect that the current study would have identified a high number of SMEs. However, the Eurostat figures can be misleading if one does not look carefully at the definitions used by Eurostat. Actually, *Annual* structural business statistics with a breakdown by size-class are the main source of data for an analysis of SMEs by Eurostat. A limited set of the standard SBS variables (number of enterprises, turnover, persons employed, value added, etc.) is available mostly down to the 3-digit (group) level of the NACE Rev. 1.1 classification, based on criteria that relate to the number of persons employed in each enterprise. Thus, the Eurostat breakdown of size classes only takes into account employment levels – it does not use the criteria related to turnover or balance sheet total. The criteria concerning partner and linked enterprises are not taken into account either¹².

Purely for illustrative purposes, we have identified the sectors (up to the three digit NACE level) that manufacture equipment that is subject to the Noise Directive – this is listed in Table 5. For some equipment types, it is not clear where they should be classified at the 3 digit level. From the description of each sector, it is clear that the level of aggregation at the three digit level is still too high for the purposes of this study. Each sector can be

¹⁰ Manufacturing; construction; wholesale and retail; hotels and restaurants; transport, storage and communication; financial intermediation; real estate, renting and business activities; health and social work; other community, social and personal service.

¹¹ http://epp.eurostat.ec.europa.eu/portal/page/portal/european_business/data/database

¹² Communication from the Eurostat User Support.

expected to include companies that are not involved at all in the production of equipment that is covered by the Noise Directive. Moreover, even for those companies that are indeed affected by the Directive, the Eurostat figures give no indication of the share of their turnover that is covered by the Directive.

Therefore, any Eurostat figures on the number of SMEs have to be used with a lot of care – they should be considered as an upper bound to the number of SMEs according to the EC definition. Unfortunately, there are no additional data available that would allow us to estimate how large the discrepancy is between the definition used by Eurostat and the definition we use in the current study. As the Commission services have clearly stated that the definition of SMEs should not be loosened for the purposes of this study, we have not used the Eurostat data and have limited ourselves to the response received from the industry federations and individual companies instead.

Table 5: NACE codes of manufacturing sectors affected by the Noise Directive

NACE code	Description	Includes	Excludes
28.62	Manufacture of tools	<p>manufacture of knives and cutting blades for machines or for mechanical appliances</p> <p>manufacture of hand tools such as pliers, screwdrivers, etc.</p> <p>manufacture of saws and sawblades, including circular sawblades and chainsaw blades</p> <p>manufacture of interchangeable tools for hand tools, whether or not power operated, or for machine tools: drills, punches, dies, milling cutters</p> <p>manufacture of blacksmiths' tools: forges, anvils, etc.</p> <p>manufacture of vices, clamps</p>	manufacture of power-driven hand tools, see 29.41
29	Manufacture of machinery and equipment n.e.c.		
29.12	Manufacture of pumps and compressors	<p>manufacture of air or vacuum pumps, air or other gas compressors</p> <p>manufacture of pumps for liquids whether or not fitted with a measuring device</p> <p>manufacture of fluid power equipment and pneumatic and wind power engines and motors</p>	manufacture of hydraulic transmission equipment, see 29.14
29.22	Manufacture of lifting and handling equipment;	<p>manufacture of hand-operated or power-driven lifting, handling, loading or unloading machinery:</p> <p style="padding-left: 40px;">pulley tackle and hoists, winches, capstans and jacks</p> <p style="padding-left: 40px;">derricks, cranes, mobile lifting frames, straddle</p>	<p>manufacture of continuous-action elevators and conveyors for underground use, see 29.52</p> <p>manufacture of mechanical shovels, excavators and shovel loaders, see</p>

		<p>carriers, etc.</p> <p>works trucks, whether or not fitted with lifting or handling equipment, whether or not self-propelled, of the type used in factories</p> <p>mechanical manipulators and industrial robots specifically designed for lifting, handling, loading or unloading</p> <p>manufacture of conveyors, teleferics, etc.</p> <p>manufacture of lifts, escalators and moving walkways</p> <p>maintenance of lifts and escalators</p>	<p>29.52</p> <p>manufacture of industrial robots for multiple uses, see 29.56</p> <p>manufacture of floating cranes, railway cranes, crane-lorries, see 34.10, 35.11, 35.20</p> <p>installation of lifts and elevators, see 45.31</p>
29.32	Manufacture of other agricultural and forestry machinery	<p>manufacture of mowers, including lawnmowers</p> <p>manufacture of agricultural self-loading or self-unloading trailers or semi-trailers</p> <p>manufacture of agricultural machinery for soil preparation, planting or fertilizing:</p> <p>ploughs, manure spreaders, seeders, harrows, etc.</p> <p>– manufacture of harvesting or threshing machinery: harvesters, threshers, sorters, etc.</p> <p>manufacture of milking machines</p> <p>manufacture of spraying machinery for agricultural use</p> <p>manufacture of diverse agricultural machinery:</p> <p>poultry-keeping machinery, bee-keeping machinery, equipment for preparing fodder, etc.</p> <p>machines for cleaning, sorting or grading eggs, fruit, seed, grain, etc.</p>	<p>manufacture of agricultural hand tools, see 28.62</p> <p>manufacture of works trucks, see 29.22</p> <p>manufacture of cream separators, see 29.53</p> <p>manufacture of road trailers or semi-trailers, see 34.20</p>
29.41	Manufacture of portable hand held power tools	<p>manufacture of pneumatic or motorized hand tools</p> <p>manufacture of parts of chain saws; parts of pneumatic</p>	

		tools; parts of hand tools, with a non-electric motor manufacture of parts of tools for working in the hand, with electric motor	
29.52	Manufacture of machinery for mining, quarrying and construction	<p>manufacture of continuous-action elevators and conveyors for underground use</p> <p>manufacture of boring, cutting, sinking and tunnelling machinery</p> <p>manufacture of machinery for treating minerals by screening, sorting, separating, etc.</p> <p>manufacture of concrete and mortar mixers</p> <p>manufacture of earth-moving machinery:</p> <ul style="list-style-type: none"> o bulldozers, angle-dozers, graders, scrapers, levellers, mechanical shovels, shovel loaders, etc. <p>manufacture of pile-drivers and pile-extractors, mortar spreaders, bitumen spreaders, concrete surfacing machinery, etc.</p> <p>manufacture of bulldozer and angle-dozer blades</p>	<p>manufacture of lifting and handling equipment, see 29.22</p> <p>manufacture of wheeled tractors, see 29.31, 34.10</p> <p>manufacture of machine tools for working stone, including machines for splitting or clearing stone, see 29.4</p> <p>manufacture of concrete-mixer lorries, see 34.10</p>
31.10	Manufacture of electric motors, generators and transformers	<p>manufacture of AC motors</p> <p>manufacture of AC generators</p> <p>manufacture of universal AC/DC motors</p> <p>manufacture of DC motors or generators</p> <p>manufacture of AC or DC generator sets</p> <p>manufacture of electric rotary or static converters</p> <p>manufacture of electrical transformers</p>	<p>manufacture of vehicle generators and cranking motors, see 31.61</p> <p>manufacture of diode valves, see 32.10</p>

<p>34.10</p>	<p>Manufacture of motor vehicles</p>	<p>manufacture of passenger cars manufacture of commercial vehicles: vans, lorries, over-the-road tractors for semi-trailers, dumpers for off-road use, etc. manufacture of buses, trolley-buses and coaches manufacture of motor vehicle engines manufacture of chassis fitted with engines manufacture of other motor vehicles: snowmobiles, golf carts, amphibious vehicles fire engines, street sweepers, travelling libraries and banks, etc. manufacture of motor cycle engines</p>	<p>manufacture of agricultural and industrial tractors, see 29.31, 29.52 manufacture of electrical parts for motor vehicles, see 31.61 manufacture of bodies for motor vehicles, see 34.20 manufacture of parts and accessories for motor vehicles, see 34.30 maintenance, repair and alteration of motor vehicles, see 50.20"</p>
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3.3 Cluster per cluster analysis

In this section, we present the results of our study. Individual equipment types have been grouped according to the clusters that had been defined in the IA study. For each Cluster or Sub-cluster, this chapter also contains a summary of impacts. A general overview of the conclusions is given in Section 3.4.

3.3.1 Cluster I: Cleaning equipment

In the IA study, the SME share for the sector had been estimated at 30 to 40%.

We have identified one medium sized manufacturer of power sweepers and road sweepers. Power sweepers correspond to approximately 10% of the company’s turnover, and road sweepers to 1%. The respondent claims that, due to the economic crisis, public administrations have decreased their demand for street cleaning services. However, the company has just entered this new market in order to diversify its product range, and cannot provide detailed quantitative figures of the type that we needed.

No other responses have been received. In the absence of specific information from the sectorial federation, the reason for the large discrepancy between the estimates of the IA study and the low response rate for this cluster is not clear. Therefore, we can conclude that, as far as Cluster I is concerned, no specific impacts on SMEs have been identified.

3.3.2 Cluster II: Construction equipment

The demand for construction equipment is derived by the demand from the construction sector, which has been disproportionately hard hit by the financial crisis. This is shown by the following time series from Eurostat, showing a sharp decline in construction production since the end of 2008.

Table 6: Construction production (NACE Rev. 2); Index, 2005=100 (Eurostat)

	2008m10	2008m11	2008m12	2009m01	2009m02	2009m03	2009m04	2009m05	2009m06	2009m07
EU27	99.44	98.51	95.79	96.23	94.62	94.66	95.13	93.33	92.55	91.51
EU15	97.84	97.24	92.76	94.47	92.73	93.10	93.61	92.25	91.13	89.73

3.3.2.1 Manufacturers

The IA study had estimated that, outside the earthmoving equipment sector (which is dominated by large companies and entails the majority of equipment types in this cluster), there are some medium sized producers of construction equipment that could be affected. CECE has confirmed that compaction machines are mainly manufactured by SMEs¹³.

We have received four responses from companies involved in the manufacturing of construction equipment.

The first response came from a company involved in the manufacturing of compaction machines. Based upon publicly available information, we had reason to believe that this company is actually part of a larger group and does therefore not fall under the EC definition of an SME – after verification, this has been confirmed by the company.

¹³ CECE comments on ARCADIS final report, 5 May 2009.

The second response came from a small company involved only in the production of construction winches. A mere 1% of their turnover is currently subject to the Directive (SI and CI powered construction winches). As both the scenario II and III proposed to remove construction winches from the Directive, the information provided in the questionnaire is not relevant for the purposes of the current study.

The third response comes from a company involved in the production of compaction machines (n° 8bc) and hydraulic hammers (n° 28). This company also manufactures several equipment types that do not fall under the Noise Directive – the equipment types that do fall under the Directive correspond to two thirds of its total cost structure.

With a total workforce of approximately 80 people and a consolidated turnover of approximately 40 million EUR, this company falls under the definition of medium-sized enterprise.

The technology and the market for these equipment types are characterised as “mature”. In the last 4 years, the costs of raw materials used in the manufacturing of this equipment have increased by 90%, leading to a total increase of costs of roughly 70%. Under the competitive pressure of East Asian competitors, prices have remained at the same levels, putting an important pressure on profits. Since the start of the financial crisis, turnover has decreased by about 57%. In the recent past, a significant number of SMEs in the sector have been acquired by large companies.

In the case of hydraulic hammers, this respondent claims that the more stringent noise emission limits are not realistic and that it will lead to an increase in non-compliance with manufacturers declaring sound power value that are lower than the actual ones. Although we have not received any other feedback that confirms this information, it should be noted that the IA study had estimated that the cost of hydraulic hammers would increase by 6.30% under Scenario II and III.

Amongst the disadvantages he faces as an SME, the company refers to high fixed costs and the limited resources available for R&D activities. Therefore, it reckons that the figures reported in the IA study underestimate the cost increases for SMEs.

We have requested some additional information related to the general market situation, but this has not been received to date. Due to the absence of concrete figures on the share of fixed costs, it is difficult to evaluate directly the cost disadvantage faced by SMEs (as we have done in the case of gardening equipment – see Section 3.3.3.2). However, the market consolidation that has taken place in the recent past is an indication that there is an advantage to size in this market. The financial difficulties faced by this company seem mostly related to outside forces (decreased demand due the financial crisis, prices of raw material, strong competition), but more stringent noise limits could exacerbate these problems, certainly in the case of competition from noncompliant producers.

The respondent has requested that no additional costs are imposed on the sector, which in concrete terms would mean to keep the Directive as it is.

Finally, the 4th response came from a medium sized company involved in the manufacturing of small construction and compaction machinery (joint cutters (n°30), compaction machines (n° 8bb, 8ca, 8da, 8db) and hydraulic hammers (n°28)), and in the trade and services related to this machinery and equipment. This costs linked to the production of this equipment (6 600 000 EUR) corresponds to 83% of the total costs of the company, and to 90% of their fixed costs. They point to increasing competition from low-cost Chinese products. Although they qualify this equipment as being of “much lower quality”, they also admit that this quality is improving. Their main competitive

disadvantages vis-à-vis large companies are the high fixed costs linked to R&D, marketing and capital, a weaker negotiating position and difficult access to capital markets. Amongst the difficulties they face, they also refer to the short history of private enterprises in their country. The most important advantages are their better understanding of the niche in which they operate and their higher flexibility. They have not provided any suggestions concerning the Directive, except a request to keep it as it is.

3.3.2.2 Professional end users

The IA study had concluded that SMEs are mostly concerned as users of this equipment type, but that the percentage increase of overall capital costs would be low, and that there were no reasons to think that the capital cost for SMEs would be higher than for larger companies.

In order to estimate the impact of the Directive, we have contacted FIEC, the European Construction Industry Federation. On 05 August, FIEC informed us that they had passed on the contents of the SME test to their national member federations. However, they also raised concerns with respect to the technicality of the questions asked, and with respect to the barriers language could create for extremely small enterprises. They pointed out that SMEs have very limited resources, and will not answer a complicated questionnaire if they do not feel there is a direct interest for them. Finally, FIEC raised the question in what sense SMEs are different from other end users that justifies a separate treatment in the Impact Assessment.

We have subsequently redrafted the questionnaires, limiting the questions to the most essential ones (impact of the Noise Directive on the performance of equipment; whether or not there is a demand for quieter equipment from the professional end users' side; effective share of each equipment type within the total cost structure of professional end users).

On 13 August, FIEC informed us that even this simplified version of the questionnaires would not answer the concerns raised by their members and consequently they would not organize a second circulation of the documents.

No response from individual members has been received to date.

3.3.2.3 Conclusion

In the case of construction equipment, the impacts on SMEs are concentrated on the end users' side. In the absence of any concrete data from the sector, it is not possible to estimate these impacts quantitatively.

On the manufacturers' side, we have identified just 2 SMEs involved in the manufacturing of joint cutters, compaction machines and hydraulic hammers. Their common concerns are the high share of fixed costs (which is confirmed by a consolidation movement that is taking place in the sector) and the competition from East Asia. As the demand for their products is essentially derived from the activity in the construction sector, it is not surprising that they have been disproportionately hard hit by the financial crisis. This is a significant new element compared to the Nomeval report, which had repeatedly referred to the growth in the construction sector. However, these problems are not caused by the Noise Directive as such, even if the Directive may have exacerbated them. Moreover, there are growing signs that we have already reached the bottom of the recession.

Nevertheless, in some countries (Spain and Ireland in particular) that are recovering from a housing bust, demand in the construction sector may remain lacklustre for years¹⁴.

As both SMEs have requested that no further changes are made to the Directive, we summarize the most important quantitative findings concerning compaction machines and hydraulic hammers – this gives an indication of the consequences of keeping the Directive as it is as regards joint cutters, compaction machines and hydraulic hammers:

- Together, these 2 SMEs represent a workforce of less than 350 people. We have verified the average regional unemployment rates (at the NUTS3 level) over the last 10 years in the regions where these SMEs are based. These varied between 6.41 and 12.72%, compared to 8.27% at the EU27 level.
- In the IA study, it had been estimated that the aggregate compliance cost for hydraulic hammers would be 3.94 million EUR under both scenario II and III, corresponding to a 6.30% increase. For compaction machines, the total cost increase linked to scenario II has been estimated at 66.63 million EUR, whilst scenario III would lead to a *decrease* in compliance costs. For joint cutters, the total compliance cost has been estimated at 0.32 million EUR (under Scenario II) and 0 (under Scenario III). We have received no concrete alternative estimates.
- As hydraulic hammers and joint cutters currently fall under Article 13, no Environmental Impact has been calculated under Scenario II and III of the IA study. Nomeval had calculated an environmental benefit of 5 734 million EUR for hydraulic hammers and 1270 million EUR in the case of joint cutters.
- In the case of compaction machines, the Environmental Impact Indicator for vibratory rammers (n° 8ca to 8 cc) “improves” by more than 2 “weighed” dB under Scenario II. For vibratory plates (n° 8bb to 8bc) and “walk by vibrating rollers” (n° 8da to 8dc), the Environmental Impact Indicator improved by more than 1 “weighed” dB but less than 2 “weighed” dB under Scenario III. The environmental impact of Scenario III is zero. Nomeval has calculated an environmental benefit of 84 million EUR for vibratory plates. No such benefits have been calculated for vibratory rammers and walk by vibratory rollers, as the Nomeval proposal implied just making the indicative values for stage II compulsory (in the case of vibratory rammers) or imposing mandatory limits that are less stringent than the current indicative limits for stage II (in the case of walk by vibrating rollers).

According to Nomeval, hydraulic hammers and compaction machines (8a and 8b) are amongst the 10 machines types that are considered to be the most frequent cause of complaints and/or producing the most significant environmental impact.

3.3.3

Cluster III: Gardening equipment

3.3.3.1

Professional end users

The professional end user market of gardening equipment is mostly composed of small business: professional gardeners and municipal services.

Both categories of end users have been consulted to obtain a deeper understanding of these issues:

- We have contacted the European Landscape Contractors Association on 11 May. ELCA has sent a response on 15 June. However, the information provided by

¹⁴ See The Economist, “Spain’s growing budget deficit: Taxing times” (Sep 10th 2009) and “The Euro-area economy. First, the good news” (30 July 2009) and The Economist Intelligence Unit ViewsWire “Domestic despair: Ireland’s economy is in free-fall” (Jul 17th 2009).

ELCA was not sufficiently concrete for the purposes of our study. Therefore, ARCADIS has proposed to provide additional guidance for the questionnaire, and to hold a telephone interview instead. ELCA has submitted a new answer on 11 September.

- We have contacted both Eurocities and the Council of European Municipalities and Regions (CEMR) on 12 May. On 07 July, Eurocities has informed us that they would be contacting us to further discuss these issues. Despite reminders on 06 August and 02 September, we have not received any further feedback. On 22 July, the CEMR has informed us that they would not be able to provide input on this issue.

The landscape gardening industry in Europe is composed of 74,000 companies with approximately 350,000 employees. It is dominated by small enterprises. In more than 50% of European companies, there are 10 or less employees. It is only in The Netherlands and the UK that the number of companies with more than 100 employees exceeds 5% of the total. Except in Finland and in Poland, private customers generate the largest turnover – the importance of public customers is declining¹⁵.

The IA study had pointed out that gardening sector is highly labour intensive. One would therefore expect that an increase in the cost of equipment would have a relatively less important impact than in other, more capital intensive, sectors.

ELCA has confirmed that the equipment costs form indeed only a small part of their entire cost structure. However, the share of machine costs within the total cost structure varies from 8% in Germany and The Netherlands to 28% in Poland. ELCA claim that the current labour costs have already reached the limits of the customers' willingness to pay.

For the sake of completeness, we have also considered the possibility that some of the equipment falling within this category is used professionally by farmers and forestry workers. For the impact on end users in the agricultural sector, we have contacted COPA-COCEGA. For the impact on end users in the forestry sector, we have contacted ENFE. A simplified version of the questionnaires has been submitted to their national member associations. No response has been received to date from these sectors.

3.3.3.2 Equipment manufacturers

The consultation with equipment manufacturers has been achieved through two channels. First, one manufacturer has accepted to be interviewed in depth by phone. Second, the European Garden machinery Federation (EGMF) has facilitated the organisation of a round table meeting with some of its members. Both the telephone interview and the round table meeting have been enlightening, and have been complemented with information provided in the answers to the questionnaires and in position papers.

We have also received 2 questionnaires from:

- A medium-sized company - the lawnmowers covered by the Directive correspond to 75% of its total costs.
- A small company involved in the production of electrical lawn mowers. The information provided was too vague to be of any use. Further inquiries by e-mail have not led to substantial clarifications.

¹⁵ ELCA, Structural Survey 2008.

The SME representatives we have talked with are involved in the production of the following product categories (a) lawnmowers (b) brush cutters and chain saws (c) shredders/chippers (d) grass trimmers/grass edge trimmers (e) hedge trimmers (f) lawn trimmers (g) leaf blower (h) leaf collectors (i) scarifiers (j) telescopic pruners.

In total, 5 SMEs producing gardening equipment have provided us with information. Their *total* workforce lies in the range of 500-750 people. 2 companies that have participated in the study turned out not to be SMEs according to the EC definition, because they are part of a larger group.

3.3.3.2.1

Market characteristics

This market is generally a replacement market. In Southern Europe, the market for lawnmowers is actually decreasing due to the dry climate. There is still some growth potential in some new Member States. However, several SMEs reckon that the demand of the new member states is more sensitive to price than to quality.

The specific market for shredders is decreasing throughout Europe. One national sector association has suggested that this may be due to the increase in the number of civic amenity sites where people can bring their green waste, reducing the need for shredders on the one hand and the reduced performance due to Noise reduction on the other hand.

The market for gardening equipment has gone through a significant consolidation phase in the last twenty years.

This tendency is easily explained by the high fixed costs faced by individual product lines in this sector. One SME estimates that development costs¹⁶ correspond to 5% of its turnover – this is higher than the costs linked to advertising.

One manufacturer which has been integrated in a large multinational group but still operates under his old brand name has explained that being part of a larger group allows to share resources related to:

- legal affairs;
- a portion of regulatory affairs (but some products remain specific to the manufacturer);
- (limited) bulk purchases of engines.

The high fixed costs linked to development also explain the long lifetime of individual product types (10 to 20 years, sometimes more).

The larger companies usually do not venture in the small volumes market, but completely dominate the market for residential users¹⁷. SMEs on the contrary, *only* operate in the small volume market - for some product lines, this means that less than 100 units are produced per year.

The SMEs produce mainly for the commercial market, which differs substantially from the consumer market. Indeed, the average annual operating hours of lawnmowers destined at the consumer market are low. Therefore, these lawnmowers have a short lifespan (as expressed in operating hours) and can be mass produced. The lawnmowers produced for commercial users however have much longer operating hours per year, need to be solid and need to be able to operate in a rough terrain. In case of an equipment failure, a rapid supply in spare parts is needed, which requires also a different approach to after-sales

¹⁶ This includes 20% costs linked to testing and development.

¹⁷ One SME has suggested that 80% of the residential market is held by just 3 manufacturing giants.

services. For commercial clients, the quality of the cut and the time needed to finalise the cut (which has an impact on labour costs) is also relatively more important.

We can thus summarize that most SMEs are niche players, with specialised knowledge of specific client needs. Because they produce in small series, they can also be flexible in meeting the demands of their clients.

This market segment also exhibits a high level of vertical integration. In the case of lawnmowers, up to 95% of the parts are designed in house - some SMEs even design the engines in house. In the case of chainsaws, all parts are developed in house. Two SMEs have also pointed out that the upstream market is very concentrated and that, due to the small volumes, SMEs are in a weak bargaining position.

The sector representatives claim that, when confronted with higher prices, municipalities cut down their expenses in landscaping by reducing the frequency of cutting. They reckon there is very limited potential for cost pass through to the clients. Due to the lack of feedback from Eurocities and CEMR, we can neither confirm nor deny this claim.

One manufacturer estimates that sales have gone down by 20% since the start of the financial crisis.

Finally, competition from noncompliant products has also been mentioned as an important problem, but this is of course not specific to SMEs.

3.3.3.2.2

The relative importance of fixed costs

One of the possible disadvantages of being an SME is that the characteristics of the market (technology, regulation, etc) imply that fixed costs are relatively high compared to variable costs. With smaller volumes, these fixed costs impact disproportionately upon SMEs.

Several factors indicated that this is indeed an issue in the case of garden equipment manufacturing. All SMEs have indicated high fixed costs linked to R&D, marketing, testing and conformity assessment, etc.

Understanding the implications of regulations is an important fixed cost for SMEs¹⁸. Although some industry federations already take upon them to follow up regulatory developments for their members, the translation of these regulations into a concrete product design remains something that a company has to do on its own. This implies that the intellectual assets of an SME include the knowledge how to comply with the Directives that affect its products. In one SME, the follow-up of legislation and regulation corresponds to one full-time equivalent.

Due to intellectual property rights, SMEs judge that it is unlikely that innovations by large companies will quickly spread through the sector. Therefore, an important concern of the SMEs is the limited resources they have for R&D activities. In some SMEs, the whole product range consists of products that could face more stringent noise emission limits, or that would be moved from Article 13 to Article 12. Within the time frame allowed and taking into account limited development capacities¹⁹, it would not be possible for them to find solutions for the whole product range. For instance, they claim that developing a new chainsaw can take up to 5 years. The timing of the R&D effort is thus really crucial. Moreover, these companies would also have to modify the Conformity Assessment

¹⁸ Manufacturers of garden equipment are subject to: Directive 2006/42/EC (the Machinery Directive), the NRMM Directive, the Noise Directive, the WEEE Directive, REACH, the Physical Agent Directives, PAH limits...

¹⁹ It has been explained to them that it will take at least 4 more years before the new noise limits will become applicable.

Procedure they are currently subject to (Annex V – Internal Control of Production) to a (more costly) procedure that involves a notified body (see Section 4.2.1 for more details). Moreover, compliance with other regulations also requires R&D efforts.

One manufacturer has informed us that, due to the high cost of noise measuring rooms (0.6 million EUR), they currently undertake all their noise measurements in the open air. This causes some practical challenges, is time intensive and can only be done in favourable weather conditions. More importantly, accuracy in outdoor conditions is lower, and this makes it more difficult to identify small improvements.

Several respondents (not all of them SMEs) have commented on the cost estimated published in the Nomeval study and in the IA study.

One manufacturer has provided us with the following summary of costs (note that the categories do not correspond to the categories of the Directive):

- For products with up to 43cm cutting width, an additional cost of 450 000 EUR, and a price increase of 10 to 21%;
- For self propelled products with 43cm cutting width, an additional R&D cost of 235 000 EUR and a 10 to 14% price increase .

This manufacturer also claims that there are no technical solutions for the 47 and 54 cm product lines (corresponding to grossly half of their turnover), and that these will disappear from the market. This is not consistent with studies quoted in Nomeval (pp 50-51; pp 115-117), which had concluded that for blade noise, optimised blade design is expected to result in reductions up to 3 dB.

One SME has estimated that the development costs of a lawnmower would amount to 510 000 EUR, split up as follows:

- External tests/development: 70 000 EUR
- Internal tests/development: 130 000 EUR
- Tool form/moulds: 300 000 EUR
- Approval including internal costs: 10 000 EUR

It is also estimated that the variable costs per unit would increase by 15 EUR. Assuming an amortisation over 5 years and constant annual sales of 3500 units, this leads to an increase in cost per unit of 43 EUR (or 14% compared to current costs). Gross profits per unit would then decrease by half.

The order of magnitude of the estimated increase in costs is in line with the alternative estimate quoted above.

Interestingly, these figures also show that, in order to reach the relative increase in costs estimated in the IA study (5 to 6%), annual sales of approximately 31 000 units would be needed – this is almost tenfold the current sales. The increase in variable costs lies around 5%, which is in line with the estimates of the IA study, and clearly shows the existence of increasing returns to scale.

3.3.3.2.3

Environmental impacts

The discussion has also highlighted some controversy concerning the environmental impacts.

The SMEs claim that the proposed noise limits cannot be achieved without sacrificing power. One company has referred to a 15 to 20% performance loss due to the 2dB(A)

reduction from stage I to stage II for 32b equipment types. One of the SMEs also provided us with a list of studies on this subject. However, out of the 8 cited studies, 6 were more than 10 years old. The 2 more recent studies (2003 and 2005) are not in the public domain, and we have thus not been able to verify their contents.

Some SMEs also affirm that professional users are already complaining about decreased performance. ELCA has confirmed that lawnmowers with two-stroke engines are more powerful than lawnmowers with quieter lawnmowers with four stroke engines, and affirms that the gardening and landscaping industry needs the high engine speeds of two-stroke engines to obtain the required performance. However, ELCA has admitted that the performance of four stroke engines is improving. ELCA has also confirmed that the increase in weight following from noise protection leads to a decrease in performance of hand held equipment. According to ELCA, it is extremely difficult to assess these differences quantitatively.

Our respondents have also argued that less performing products will take longer to finalise their work, and the time of operation is also an important factor of nuisance. According to the consulted SMEs, the annoyance is linked to the use of the equipment as such, not to the exact noise limit.

To the best of our knowledge, no scientific work has been performed yet on the trade-off (in terms of impacts on the environment) between sound power levels and time of operation. For indicative purposes, we propose to use the Environmental Impact Indicator which had been developed in the Nomeval report and which has also been used in the IA study, in order to answer the following question: *suppose that the new noise limit corresponds to an effective decrease by 1 dB(A), what increase in total time of operation would be needed to neutralise the effects on human exposure and perception of the decrease in noise limits?*

In order to estimate the environmental impact, the Environmental Impact Indicator applies correction terms to the guaranteed sound power level. As explained in Figure 1, one of the corrections takes into account the effective time of use.

Formulas for environmental impact indicator

The rated sound power level averaged over a year is defined as:

$$L_{WA, rated, year eq} = L_{WA, guaranteed} + C_{evening/night} + C_{tonal/imp} + C_{intermittent} + C_{opcon} + 10 \lg \left(\frac{n_{months} n_{days} t_{dayuse}}{364 \cdot 24 \cdot 60} \right)$$

where

- n_{months} number of months per year in use;
- n_{days} number of days per month in use;
- t_{dayuse} minutes per day in use;
- $C_{evening/night}$ adjustment for evening/night use (0 or 5 dB)
- $C_{tonal/imp}$ adjustment for tonal and/or impulsive sound character (0 or 5 dB)
- $C_{intermittent}$ adjustment for sound character due to intermittent use (0, 3 or 6 dB)
- C_{opcon} adjustment for difference in operating condition between normal use and testing conditions (0 or 3 dB).

The environmental impact indicator per equipment and situation type is defined as:

$$EI_{equip, situ} = 10 \lg \left(\frac{364 \cdot \sum_{i=\min}^{i=\max} N_{equip, situ} D_{equip, situ, i} 10^{L_i/10}}{\sum_{equip, situ} (N_{equip, situ} \sum_{i=\min}^{i=\max} D_{situ, i})} \right)$$

Averaged over all situations the EI per equipment type is

$$EI_{equip} = 10 \lg \left(\sum_{situ} 10^{EI_{equip, situ}/10} \right)$$

where

- $N_{equip, situ}$ number of equipment in specific situation, corrected for percentage usage during year (%use);
- L_i sound level class i (5 dB classes);
- $D_{equip, situ, i}$ distribution of inhabitants over sound level class i for each equipment and in each situation.

TNO 2008-09-23

Figure 1: Formulas for the environmental impact indicator (TNO, pers comm)

In what follows, we will only look at the total time of operation per year, expressed in minutes. Therefore, we define $t_{yearuse}$ as $t_{yearuse} = n_{months} \cdot n_{days} \cdot t_{dayuse}$.

In order to find the combinations of $(L_{WA, guaranteed}, t_{yearuse})$ that leave $L_{WA, rated, year eq}$ unaffected, we take the total differential of the equation of the rated sound power level and set it equal to zero:

$$dL_{WA, \text{rated, yearreq}} = \frac{\partial L_{WA, \text{rated, yearreq}}}{\partial L_{WA, \text{guaranteed}}} dL_{WA, \text{guaranteed}} + \frac{\partial L_{WA, \text{rated, yearreq}}}{\partial t_{\text{yearuse}}} dL_{\text{yearuse}} = 0$$

We use

$$\frac{\partial L_{WA, \text{rated, yearreq}}}{\partial L_{WA, \text{guaranteed}}} = 1$$

and

$$\frac{\partial L_{WA, \text{rated, yearreq}}}{\partial t_{\text{yearuse}}} = 10 \frac{1}{\ln 10} \frac{364 \cdot 24 \cdot 60}{t_{\text{yearuse}}} \frac{1}{364 \cdot 24 \cdot 60} \approx \frac{4.34}{t_{\text{yearuse}}}$$

to re-arrange this expression as:

$$\frac{4.34}{t_{\text{yearuse}}} dL_{\text{yearuse}} = -dL_{WA, \text{guaranteed}} \quad \text{or} \quad \frac{dL_{\text{yearuse}}}{dL_{WA, \text{guaranteed}}} = -\frac{t_{\text{yearuse}}}{4.34}$$

Taking a linear approximation, we obtain:

$$\Delta L_{\text{yearuse}} = -0.23 \cdot t_{\text{yearuse}} \cdot \Delta L_{WA, \text{guaranteed}}$$

This means that a decrease of the *guaranteed* sound power level by 1dB(A) does not affect the *rated* power level if the number of minutes of operation per year increase by less than 23% compared to the current situation. A decrease of the guaranteed sound power level by 3dB(A) will not affect the rated power level if the number of minutes of operation per year increase by less than 69% compared to the current situation.

Concerning the environmental impacts, the SMEs also argue that professional use of equipment causes less environmental damages than private use because it operates less during weekends and in the evening. Instead of restricting the noise emissions, restricting operating time in residential areas could have also beneficial environmental effects²⁰. However, Article 17 of the Directive allows the Member States to regulate the use of equipment covered by the Directive in areas which they consider sensitive, including the possibility to regulate the working hours of the equipment. The Environmental Impact Indicator used in Nomeval and the IA study already takes into account effective operating hours differentiated according to the “typical surrounding” and includes a correction term for evening or night use. Therefore, the Environmental Impact Indicator reflects (at least partially) the effects of Article 17.

The consulted SMEs have also pointed out that professional users themselves are subject to safety regulations anyway. However, the Nomeval study already focused to a large extent on the effects on the population exposed to the noise levels, assuming that operators of equipment will take precautionary measures. Therefore, this point has already been taken into account in previous study work.

The respondents have also argued that if manufacturers could reduce noise without affecting performance, the end users would be willing to buy such equipment. The fact that Article 13 equipment tends to become louder could then be an indication that the customer attaches more importance to increases in power. Actually, for some equipment

²⁰ It is not clear how the costs of such restrictions would compare to the cost of tighter noise limits.

types, it is also publicly known how users can increase power by circumventing the noise limits, even at the cost of their own safety. However, as the person making the purchasing decision is not always the person who will operate the equipment in practice, we think it cannot be assumed that the purchasing decision will fully incorporate the effects on the welfare of the end user. The relative bargaining power of the workers vis-à-vis the managers of his company is a crucial factor.

The increased cost of compliant products could also lead older products to remain longer on the market. These old products tend to be less performing from an environmental point of view. We acknowledge that this point is correct in principle – actually, this is a consideration that is true for *all* legislation that only applies to new products and does not impose any requirements on the existing stock. However, the net effect is not clear. The increased costs of new product can indeed lead some users to postpone the purchase of new equipment, but this is only one of the many factors affecting the replacement decision. When faced with increased maintenance costs and fuel consumption, the user will at a certain stage replace his equipment, even if the cost of replacement increases – the technical lifetime will anyway impose an upper limit to what is possible. Moreover, the higher the intensity of use, the more quickly one can expect that replacement will take place. Thus, one would expect that this effect will mainly play a role in the market for non-professional applications.

It has also been suggested that some manufacturers will stop the production of some product ranges of lawnmowers, and will move to lawnmowers with longer cutting width, leading to an effective *increase* in environmental noise. However, as only one respondent has reported such a possible reaction, we are not sure whether this will be a relevant issue in practice.

Finally, the SMEs interviewed claim that some recent increases in the noise levels are due to compliance with the NRMM Directive. We have received no concrete information that would allow to confirm or invalidate this claim.

3.3.3.3

Conclusion

Garden equipment is definitely a cluster where SMEs clearly do face specific difficulties compared to larger enterprises, the most important being:

- the limited resources available when the whole product range has to comply within a short timeframe with more stringent emission limits or is moved from Article 13 to Article 12
- important increasing returns to scale

The next question is then what policy conclusions should be drawn from this. After all, the market response to increasing returns to scale and to bottlenecks in R&D consists in mergers and acquisitions, which allow to spread fixed costs over larger production runs. The consolidation that the sector has undergone in the last two decades suggests that returns to scale have existed in the sector for a while - regulatory compliance may have exacerbated some issues, but is not the primary reason.

The question is then whether further mergers in the sector would lead to any costs to society.

One of the obvious motivations for a merger would be to share common R&D facilities. On the one hand, as the respondents have indicated that they *lack* R&D capacity, it is not clear that mergers or acquisitions should lead to any net job losses at the *European* (or national) level. On the other hand, if R&D would be concentrated geographically (for

instance, in one central laboratory), this could lead to job displacements. *If* current R&D activities take place in geographically isolated areas with high structural unemployment, this could lead to a welfare loss for the staff that is currently involved in R&D activities. Based upon the responses received in this study, we are referring here to a few dozens of jobs. We have verified the average regional unemployment rates (at the NUTS3 level) over the last 10 years in the regions where these SMEs are based. These varied between 2.56% and 6.71%, compared to 8.27% at the EU27 level.

The nature of the problem also lends itself to a clear solution: if the bottleneck for SMEs is their R&D capacity, one needs to find a way to better spread efforts over time. No one has suggested that a more gradual tightening of the noise emission limits for individual equipment would be the appropriate way to proceed. The solution would rather be not to move 9 garden equipment types simultaneously from Article 13 to 12, but to proceed with phases where subgroups of gardening equipment would be transferred to Article 12.

In theory, one could also envisage the use of mechanisms such as the flexibility scheme that currently exists for the NRMM Directive. However, the administration costs linked to such a scheme could be very high, and, taking into account all the problems that are currently reported with respect to market surveillance, it is unlikely that it would work well in practice.

For lawnmowers, the Nomeval study had concluded that the environmental benefits of scenario II lie in the order of magnitude of 8 348 million EUR, compared to total compliance costs of 153 million EUR. In the IA study, the compliance cost of Scenario II was estimated at 224 million EUR, and the compliance cost of Scenario III at 211 million EUR. Even if the unit cost increase of lawnmowers would be 14% instead of 5 to 6%, the global benefits of Scenario II would still vastly outweigh the costs.

Whether the cost to the environment of postponing the introduction of more stringent limits for some equipment types is balanced by the benefits of maintaining the independence of 5 SMEs, is a value judgement.

3.3.4

Cluster IV: Loading and lifting equipment

The IA study had indicated that there are 14 manufacturers of lift trucks with headquarters located in the EU which can be considered as SME according to the limit of 50 million EUR for turnover. Because no information is provided on the other criteria, this figure probably is an exaggeration of the number of SMEs according to the EC definition.

The IA study has also pointed out that lift trucks and aerial access platforms are often used by SMEs, but that the price increase would be limited because they only constitute a small part of their total capital costs.

3.3.4.1

Aerial access platforms

On 05 June, we have received a questionnaire from a manufacturer of aerial access platforms with combustion engine. This questionnaire has been sent to the Commission services for translation and received back on 16 July.

The respondent falls within the category of medium-sized enterprises. Aerial access platforms correspond to 50 % of their turnover.

All users are professionals, and are themselves SMEs (construction companies, gardeners, painters, electricians).

The respondent describes the market as very competitive. Competition comes primarily from the United States and there are no competitors from the Far East. He reckons that there are about 10 competitors in the market, who detain about 80% of the market share.

Despite our explicit request, no information has been provided on the presence of other SMEs in the market.

He expects turnover to fall by 60% due to the financial crisis.

The technology is mature: performance and safety are improved continuously but without substantial changes to the machines. However, due to market demand for platforms with electrical engines, this manufacturer intends to introduce a platform powered by lithium batteries – note that this equipment is not covered by the Directive.

The manufacturer claims that as the machines are used for 70% of the time outside urban areas and as the motor is switched off while working in one position, there are no requests from customers to reduce noise²¹. In the Nomeval report, however, it was assumed that aerial access platforms are used for 100% in “surrounding D: small and large construction sites, characterised by four (sub)urban areas”. Therefore, the Environmental Impact Indicator used in Nomeval may have overestimated the environmental impact.

The company employs 5 people to develop/manage 7 models of aerial access platforms and 50 models of various other machines, all subject to Directive 2000/14/EC. However, these other machines are not subject to any of the scenarios analysed in this study (mini dumpers, mini excavators, tracked wagons).

The manufacturer claims that he has to amortize his fixed costs over very limited quantities of machines per model. Despite an explicit request for clarification, no quantitative information has been provided on the size of a typical production run, but the typical lifetime of their products is 5 to 6 years. He estimates that the certification costs for machines which will be subject to limits for the first time constitute a net cost increase of 1000 EUR per model and constitute a burden on a limited production run.

The high fixed costs linked to the understanding of the regulatory context are also mentioned as a problem.

The motor, which the manufacturer claims to be the main source of noise, is bought in and there is no possibility of influencing its design, development and availability. Contractual power over component prices in general is minimal. The manufacturer also claims that competition is such that it would not be possible to increase the prices of machines in proportion to the increase in costs; only a small percentage could therefore be passed on to the customer.

The respondent also claims that the banking system in his country penalises small and medium-sized undertakings, making access to capital markets more difficult.

Amongst the advantages of being SMEs, the manufacturer points out that he can be more flexible than large enterprises with respect to meeting customer orders. However, he does not enjoy a special position in any specific niche.

The respondent claims that the development of the machine to meet the proposed limit, plus certification costs and the increase in cost relating to the motor cowling, lead to an increase in the cost of the machine of approximately 10% - this is approximately double the price increase we had estimated in the IA study (both for Scenario II and III). He reckons he cannot pass on to the customer more than 2/3% of his costs through a price increase. The final customer will have no further costs in relation to the use of the machine. The overall increase in costs to the respondent's company is estimated at € 800

²¹ In the Nomeval report, it has been reported that the engines are often running unnecessarily at high idle even when the platform is standing still at a work position. Obviously this is an impact that cannot be affected by the manufacturer.

000, which would translate in an annual cost increase of 130 000 to 150 000 EUR per year. This corresponds to 0.65 to 0.75% of the 2008 turnover for this product. Under the impact of the financial crisis, the relative impact of this cost increase could be double.

The company has sufficient means to measure noise and has introduced procedures for autonomous monitoring of production by external consultants (Annex V). The changeover to Article 12 involves an increase in fixed certification costs owing to the cost of the notified bodies. The respondent would like to subject the machines to a conformity assessment procedure pursuant to Annex V even where there are limits. Conformity would then be guaranteed by market surveillance. The respondent claims that the action taken by the notified bodies appears disproportionate to the risk referred to in Directive 2000/14/EC if compared to the procedures in the Machinery Directive. As this suggestion touches upon the second topic of the study (the Conformity Assessment Procedure), we refer to Chapter 4 for a further discussion. However, analysing the application of Annex V to Article 12 equipment is outside the scope of the current study.

Because this equipment type currently falls under Article 13, the IA study has not provided an estimate of the change in the Environmental Impact Indicator. However, Nomeval had estimated that the environmental benefits would lie around 277 million EUR, compared to a compliance cost of 32 million EUR. This implies that, even if all manufacturers would indeed face a compliance cost that is double the compliance cost estimated in the IA study, the benefits would still outweigh the costs by a factor 4.

3.3.4.1.1

Conclusion

For this equipment type, a maximum of 125 jobs are at stake in just one SME (assuming that employment related to each product type is proportional to turnover for this product type). This SME is located in a region (NUTS3) where average employment in the last 10 years has remained below the 4%.

Keeping the Directive as it is, would imply foregoing environmental benefits that, according to Nomeval, are at least 4 times as large as compliance costs, taking the cost figures of the SME as representative. There are 2 reasons why this conclusion may no longer be valid, but these are pointing in opposing directions:

- If there is increasing demand for platforms that are powered by electrical engines (which are not covered by the Directive), the economic cost of compliance may be even smaller.
- Aerial access platforms may be used less often in urban areas than assumed in Nomeval.

3.3.4.2

Fork lifts

As the demand for fork lifts is essentially derived from the needs of the logistical chain, one would expect this sector to be disproportionately affected by swings in the business cycle. This has been confirmed by the individual answers to our questionnaire.

FEM has kindly provided us a copy of the world ranking list of their branch. According to FEM, this is the only known material summarizing the market situation worldwide. The source for this ranking is AGT Verlag.

The list does not mention whether companies are SMEs or not according to the EC definition. However, it does provide figures on total turnover and employment, and allows thus to eliminate those companies that are certainly *not* SMEs.

The list is also limited to the 39 largest companies in the branch – these are the manufacturers with a turnover of at least 10.2 million EUR with motorised materials

handling vehicles during the year under review. The author of the list has no information regarding very small SMEs, which are left out of the global ranking²². Moreover, even in the case of large companies, the availability of information was depending on the willingness of the company to provide it.

For indicative purposes, we report here the data for the companies that *could* fall within the EC definition of SMEs. All these companies are based in the EU. They employ 1 059 people in the production of fork lifts.

Table 7: AGT verlag World ranking²³

Year	powered industrial truck sales (mio Eur)	total corporation sales (mio Eur)	number of employees (corporation)	number of employees (industrial trucks)	manufacturer
2006/07	85	85	190	190	Combilift, Irland
2006/07	56	62	243	211	Svetruck, Schweden
2007	42	42	173	173	Dantruck-Heden, Dänemark
2007	30	33	135	120	OMG, Italien ²⁴
2007	17	20	45	39	Nuevo Detas, Italien
2007	16	16	54	54	Carer, Italien
2007	15	15	65	65	Magaziner, Deutschland
2007	15	15	67	67	Sichelschmidt, Deutschland
2007	14	14	90	90	Miag, Deutschland
2007	13	35	163	50	Dambach, Deutschland

Worldwide, total sales of fork lift trucks by the 39 largest companies equal 23 333 million EUR, 303 million (1%) of which come from the “small” companies listed above.

It is possible that some of these companies are not SMEs because they are part of a larger group. Nevertheless, these figures give an upper bound to the impacts on SMEs.

As FEM has forwarded the SME test to the national associations of UK, Spain, France, Belgium, Netherlands, Germany, Finland, Sweden, Denmark and Italy, all the companies listed above should have received the questionnaires. One company that is not member of FEM has been contacted directly, but no response has been received to date.

We have received 3 responses from producers of fork lifts.

The first company is a medium-sized company, involved in:

- the manufacturing and sales of forklifts in the range 6-9 tonnes
- the service and distribution of material handling equipment (including forklifts) in the range 2 to 3.5 tonnes

About half of its turnover is subject to Article 13 of the Directive.²⁵ In Scenario II of the IA study, it was proposed to move this equipment type to Article 12; in Scenario III, it was proposed to keep it in Article 13.

In its response to the questionnaire, this company informed us that its turnover had decreased by 60 to 70% due to the economic crisis, and that it was struggling to comply with the New Machinery Directive 2006/42/EC and the NRMM Directive. Amongst the

²² Personal communication from Wolfgang Degenhard.

²³ <http://www.dhf-magazine.de>

²⁴ Turnover was calculated by extrapolating Italian figures. No information had been provided by the company itself.

²⁵ Article 13, item 36: lift trucks, combustion-engine driven, counterbalanced.

disadvantages of being an SME it mentioned high fixed costs (in general, and linked to regulatory compliance specifically). It estimates that it spends 40% of its engineering resources on regulatory compliance. However, the respondent reckoned that his company has a better understanding of niche markets and can change directions more quickly, compared to large companies.

The following problems, specific to the Noise Directive, were reported:

- The lack of market surveillance, which also limits the potential to pass costs through to the customers
- The complexity of the Directive, certainly in relation to the other Directives

The respondent suggested waiting for the introduction of more stringent noise limits until after the recession is finished and until it is clear what engines will be supplied by the engines manufacturers to comply with the new emission stages in the NRMM Directives.

The manufacturer has declined our request for detailed quantitative figures on sales, costs, equipment lifetime and R&D efforts. He also answered that he could not provide any estimate of the cost linked to compliance with the emission limits proposed by the Nomeval study.

The second respondent is a small company involved in the development and manufacturing of loading and lifting equipment, including fork lift trucks (both electrically and combustion engine driven). About 10% of its turnover is currently subject to Article 13 of the Directive. In Scenario II of the IA study, it was proposed to move this equipment type to Article 12; in Scenario III, it was proposed to keep it in Article 13. Currently, this manufacturer reaches the limit of 104 dB(A), which he claims to correspond to the demand of the end users.

This equipment corresponds to a very specific niche (explosion proof combustion engine driven fork lift trucks). These products are intended for use in areas where explosive atmosphere can appear²⁶. The ATEX Directive requires the manufacturer to take measures “to prevent the ignition of explosive atmospheres, taking into account the nature of every electrical and non-electrical source of ignition.”

The respondent is the only SME involved in the actual manufacturing of such fork lifts. The only direct competitor is part of a larger group. However, the company also faces competition from “modifiers”, who convert normal trucks to explosion proof ones. The respondent claims that these “modified” trucks are of inferior quality and that competitors outside the EU do not always comply with European requirements in this field (such as the ATEX Directive).

According to the respondent:

- He currently faces a cost disadvantage of approximately 30% compared to “modifiers” and more stringent noise limits will lead to a further deterioration of its competitive position.
- It is technically more difficult and more expensive to reduce noise emissions for explosion proof equipment than for other lift trucks. The respondent points out that to avoid an ignition source, he has to consider temperature emission limits (temperature balance of the engine, maximum surface temperature which can

²⁶ Directive 94/9/EC on Equipment and Protective systems intended for use in Potentially Explosive Atmospheres (ATEX) defines “explosive atmosphere” as: “Mixture with air, under atmospheric conditions, of flammable substances in the form of gases, vapours, mists or dusts in which, after ignition has occurred, combustion spreads to the entire unburned mixture”.

cause explosions), the danger of producing impact- and rub-sparks and the danger of sparks as a result of electrostatic discharges.

Amongst the cost disadvantages he faces as an SME, he mentions: high fixed costs linked to R&D, regulatory compliance, testing and conformity assessment, and a weaker negotiating position with respect to clients and suppliers. He claims that his main competitive advantage stems from the higher quality and safety levels of his product compared to converted fork lift trucks.

Moreover, this market niche is characterised by a high number of different fork lift types with small series.

Therefore, the respondent claims that the estimated cost increase linked to Scenario II in the IA study (5.3 %) underestimates the cost increase for SMEs producing small series.

He estimates that the reengineering costs²⁷ linked to compliance with Scenario II (which affects just 10% of the company's turnover) would correspond to the annual profits of the total company.

The respondent has suggested to exempt explosion proof products from more stringent noise emission limits that could be imposed on other fork lift trucks.

The third company is a medium sized enterprise, which is also involved in the manufacturing of site dumpers and special vehicles for public services. Fork lifts correspond to approximately 40% of the company's turnover.

The respondent claims that the economic crisis has not only led to an important decrease in the demand for forklift trucks, but also to a significant supply of second hand trucks who had been put on the market before the coming into force of the Noise Directive²⁸.

The manufacturer estimates that the 2009 European market for counterbalanced diesel powered forklifts could be around 55 000 units and that about 4 000 *used* forklifts are on sale in his home country, corresponding to 80% of annual sales. Compared to new forklifts, second hand ones are sold at discounts of up to 70%. In order to put these figures somehow in perspective, it has to be kept in mind that this country has known an important construction boom in this decade, which has turned to a complete bust since the start of the economic crisis.

Amongst other factors that affect prices negatively, the manufacturer also underlines the lack of market surveillance and the absence of any customer demand for decreased noise levels. He reckons that the combined influence of the recession and the increased competition from the Far East leads to price discounts of up to 20-25% of the sales price.

As an SME, this manufacturer indicates he has very little negotiating power in his relations with larger clients, which limits his potential for cost pass through.

Currently, 5% of turnover is assigned to R&D activities. Despite the decrease in sales due to the economic crisis, 2 engineers work on a full time basis on regulatory issues.

As a potential modification to the Noise Directive, the respondent suggests to allow the use of Annex V as a CAP for Article 12 equipment, which would allow to reduce the fixed costs linked to conformity assessment. As this suggestion touches upon the second topic of the study (the Conformity Assessment Procedure), we refer to Chapter 4 for a further discussion. However, analysing the application of Annex V to Article 12 equipment is outside the scope of the current study.

²⁷ Including personnel costs, external engineering services, material and the construction of a prototype.

²⁸ Users normally do not change the machines before 10 years.

The respondent has also informed us that, according to his own estimates, several other SMEs are operating in this market. These companies have been contacted with the request to send back the questionnaires by 14 September 2009. No response has been received.

3.3.4.2.1

Conclusion

The most important new element we have identified here is the specific situation of explosion proof lift trucks. Nomeval had not paid any specific attention to this specific subcategory. Evaluating whether this category would indeed need specific noise limits would require a technical evaluation that falls outside the scope of this study, and we will no longer consider this specific issue here.

Nomeval had calculated a total environmental benefit of 1 817 million EUR for 36a lift trucks and of 2 724 million EUR for 36b lift trucks; compliance costs had been estimated at 71 million EUR and 318 million EUR, respectively. In the IA study, compliance costs had been calculated at a deeper level of detail and with more recent data, and had been estimated at a total of 348.32 million EUR (under scenario II) and 254 million EUR (under scenario III) for all fork lift categories. For 36a and 36b fork lifts, the Environmental Impact Indicator calculated in the IA study decreased by 2.54 “weighed” dB under both scenarios.

The information received during the SME test has not provided us with elements that would lead to a revision of these figures.

At most a few hundred jobs could be at stake in this market segment. These SMEs are located in regions (NUTS3) with average unemployment levels in the last 10 years between 3 and 10%.

Whilst the recent surge in second hand fork lifts obviously has a negative impact on the manufacturer, it leads to lower prices for the customer, and is a reflection of a general adjustment of the market. As already pointed out above (Section 3.3.2), this situation is likely to persist for several years in some member states.

3.3.5

Cluster V: Power generators and cooling equipment

According to the IA study, there are a few medium-size manufacturers and many small niche players operating in this market. These niche players customise parts of products manufactured by major producers. In the absence of any response to our questionnaire, we can neither invalidate nor confirm this point.

3.3.6

Cluster VI: Pumping and suction equipment

PNEUROP has informed us that, to the best of their knowledge, none of their members is actually an SME. However, they have provided us with a list of 5 manufacturers that they think may be SMEs but that are not members of PNEUROP. We have contacted each company on the list individually, but we have obtained no response to date.

3.3.7

Cluster VII: snowmobiles and snowgroomers

Neither scenario II nor scenario III foresee any changes compared to the baseline for snowgroomers. Therefore, they fall outside the scope of the current study.

As regards snowmobiles, the IA study had concluded that no SMEs are involved in their manufacturing. However, most snowmobile dealers, professional users and activities supporting snowmobile tourism are SMEs.

Employment in snowmobile-supporting activities in Europe can further be split up as follows:

- Industry estimates that there are 400 dealers and that each dealer employs in average 4-5 people including sales men and service mechanics - this totals 2000 jobs.
- According to Statistics Finland, employment in accommodation and restaurant business in Finish Lapland corresponds to 4,000 men-years per year²⁹. The snowmobile industry estimates that half of this employment is related to snowmobile use. According to Statistics Finland, employment in programme services, safari business and travel agencies in Lapland corresponds to 598 men-years, which is entirely linked to snowmobiling.
- We have found no independent tourism statistics from Swedish and Norwegian Lapland. The snowmobile industry estimates that employment in Sweden corresponds to 800 men-years, and in Norway to 500 men-years.
- Industry estimates that indirect employment effect is in the same size class. Indirect employment refers to the services which are supplied (campfire food, reindeer riding, husky riding, ice fishing, Lappish culture and song executions etc.) to the travel organizers who are responsible for flights, accommodations and other activities like snowmobile safaris.

Snowmobile safaris require big investments for snowmobiles itself and transportation vehicles, and are operated by large companies while all the indirect activities are operated by small family companies and entrepreneurs.

In order to complement this information, we have asked ISMA to suggest, amongst the clients of their association, SMEs (or associations of SMEs) that could provide significant and representative inputs to the SME studies.

During a meeting on 15 May, ISMA pointed out that language could be an important barrier for professional users of snowmobiles if the questionnaire were to be submitted as such. The following approach was agreed to overcome this:

- ISMA members would send the questionnaire to their dealer network and to the SMEs amongst their suppliers, and would try to obtain at least one in-depth response each.
- ISMA would also send similar questionnaires to professional end users (reindeer owners, holiday resorts) in Finland, Sweden, Norway, France, Italy and Switzerland.
- ISMA members would translate the questionnaire in "practical terms", so that they would be easier to understand for the dealers and professional end users; the contents of these adapted questionnaires would be first verified with ARCADIS, to be sure that they reflect the underlying questions to which we wish to obtain a response

On 02 June, ISMA informed the Commission services (with ARCADIS in copy) that the snowmobile manufacturers had determined they were unable to collaborate further to the SME test relative to the Noise Directive because they did not agree with the conclusions of the IA Study. According to ISMA, both Scenario 2 and 3 would cause the snowmobile

²⁹ <http://www.lapinliitto.fi/julkaisut/matkailutilastollinen%20vuosikirja%202007.pdf>

manufacturers to exit the European market, while the IA study had concluded that production costs would increase by 6.63% (Scenario II) or 4.75% (Scenario III).

Nevertheless, 2 responses were received to questionnaires drafted by ISMA – these questionnaires had not been first verified by ARCADIS. The central questions did not refer to the IA study, but were formulated as follows:

The European commission reviews a number of possible scenarios when considering taking action. The scenarios regarding snowmobiles are as follows:

- (1) Scenario 1: Do nothing option – retain of status quo, no change to directive.**
- (2) Scenario 2: As suggested by some – would cause the cost of a snowmobile to increase dramatically and require technical changes to the product that may make the product not commercially acceptable to be produced and sold in Europe.**
- (3) Scenario 3: Would increase the price of a snowmobile dramatically and would lead the snowmobile manufacturers to exit the market in Europe.**
- (4) Scenario 4: Adoption of the existing Finnish, Canadian and United States standard. This standard is rigid and yet achievable. It would allow the manufacturers to stay in business with a minor increase in cost due to certification and testing expenses. Technical reviews on the above would also be required and minor charges would cause slight increases to the product.**

Figure 2: ISMA version of the questionnaire

One response was provided by a supplier of the snowmobile industry. This company employs approximately 80 people. However, according to the company's website, it is part of a larger group which definitely does not fall with the SME definition.

The second response was provided by a small dealer, selling a large variety of equipment (snowmobiles, snow throwers, boats, outboard engines, ATVs, lawnmowers, chainsaws etc) and providing after sales services. They employ about 10 people, and report that the size of their company is optimal for the region. Their very wide product range is explained by the need to run the business evenly over the year and to have a continuous cash flow – snow related products correspond to 70% of their sales, which is easily understood in the light of the long winters.

This dealer has responded as follows to the questionnaire sent by ISMA:

- Scenario I would have no impact on their business, unless new manufacturers would bring very noisy products to the market.
- Scenario II would have a “major impact” on their business. They point out that demand is very sensitive to price.

- Scenario III would lead them to close their business.
- Scenario IV is their preferred scenario, and would allow them to have the whole product range available. They call for a standard product throughout the world.

Taking into account the wording of the questions as formulated by ISMA, the answers to Scenario II and III are not surprising.

In order to estimate the effects on SMEs, we will therefore consider two possibilities.

In line with the information provided above, we will assume that employment in sales is directly proportional to annual sales and that this currently corresponds to 2000 men-years. If we abstract from employment in Italy and France, a total of 9,000 men-years are employed in tourist activities – these men-years are largely proportional to the **stock** of snowmobiles in use. We shall assume that all tourist and sales activities are undertaken by SMEs.

3.3.7.1 Cost increase according to the IA study

The IA study had concluded that the cost of snowmobiles would increase by 6.63% (in the case of Scenario II) or 4.75% (in the case of Scenario III).

NERA Economic Consulting has estimated that, in the United States, the short-run price elasticity for snowmobiles is -1.05, and the long run elasticity is -4.63³⁰. This means that a one percent price increase for snowmobiles would lead to an immediate reduction of sales by 1.05%, and an eventual reduction of 4.63%³¹.

Let us first have a look at the impacts in the **short run**, assuming full cost pass-through to the customer.

With a short run elasticity of demand of -1.05, sales would thus drop by 6.96% (in the case of Scenario II) or 4.99% (in the case of Scenario III).

With approximate annual sales of 15,000 units³², this implies that demand would immediately drop by 1044 units (in the case of Scenario II) or by 749 units (in the case of Scenario III).

Thus, employment in sales would drop by approximately:

- 140 units in the case of Scenario II
- 100 units in the case of Scenario III.

The next step is then to calculate immediate employment effects in tourist activities, which we assume to vary proportionally to the *stock* of snowmobiles. Based upon registration statistics in the Nordic countries, industry estimates that approximately 9000 snowmobiles are taken out of circulation annually. Although there are some uncertainties

³⁰ NERA was retained by ISMA to analyse three potential sets of overall emission standards for snowmobile engines in the US, to be implemented using an ABT program. The final report was submitted to US EPA and Office of Management and Budget officials (see <http://www.nera.com/>), but is not available on-line. The elasticities that have been estimated in this study have been reported to ARCADIS by ISMA.

³¹ Formally, the price elasticity ϵ is defined as the percentage change in quantity demanded as per the

$$\text{percentage change in price of the same commodity: } \epsilon = \frac{\Delta q / q}{\Delta p / p}.$$

³² See the IA study.

surrounding this number³³, we think its order of magnitude is credible. Thus, even if annual sales drop to 14,000 units (as under scenario II), the effect on the stock of snowmobiles (and thus on employment in the tourist industry) is negligible in the short run.

In the **long run**, things get more complicated.

With a long run elasticity of demand of -4.63, sales would drop by 30.70% in the long run (in the case of scenario II); in the case if scenario III, they would drop by 21.99%. Employment in sales would drop by 614 units (in the case of scenario II) and by 440 units (in the case of scenario III);

This elasticity also implies that, in the long run, annual sales in Europe would drop to approximately 10,350 units (under Scenario II) or 11,700 units (under Scenario III). This is still enough to maintain the stock of snowmobiles at its present level. Therefore, we can still assume that employment in the end user sector will not be affected significantly.

There are however reasons to think that this exaggerates the negative employment effects.

The long run elasticity suggested by NERA is consistent with the relatively high share of snowmobiles used for recreational purposes in the US. About 30% of snowmobiles in Europe are used for utility purposes. We have no separate information on the elasticity of demand in the professional sector in Europe, but demand for this market segment is likely to be much less elastic than the average.

For instance, it can be expected that the demand from border guarders, mountain rescue teams and armies will be relatively insensitive to changes in price. If the manufacturers can apply different prices to different categories of customers, it is likely that, for these market segments, the burden will mainly be carried by the end users and that no significant decrease in sales will take place.

We would thus expect long run elasticity in Europe to be less in absolute value than the NERA estimates.

Moreover, if snowmobile-related leisure activities become more expensive, demand would at least partly switch to other snow-related recreational activities, which could attenuate the employment effects in the catering and hospitality sector.

Finally, the calculations do not take into account that, in the long run, technical innovations can be expected to lead to further price decreases. Therefore, we think that for the socio-economic impacts, we should concentrate on the short term.

3.3.7.2

ISMA scenarios

We will now simulate the labour market impacts, using the ISMA scenarios instead. We wish to emphasize here that the fact that we do consider these scenarios does not imply that we endorse them – the calculations are only undertaken for the sake of completeness.

In case snowmobile producers would no longer serve the European market, the immediate employment impact would be the disappearance of 2000 men-years in sales.

³³ For instance, in Sweden, snowmobiles can be taken temporarily out of circulation (source: personal communication with a snowmobile producer).

In the long run, one would expect the dealers to switch to the marketing of alternative products such as ATVs – therefore, this impact can be expected to decrease with time.

The IA study had reported that there are currently 315,406 registered snowmobiles in the EU. With 9,000 snowmobiles taken out of circulation annually, this implies that the stock decreases with approximately 3% annually. Thus, in the first years, the effect on employment in the tourist sector can be assumed to be limited to a few hundred units. Of course, in the long run, and all other things being kept equal, the impact would be much higher and could affect up to 9 000 jobs.

However, there are several reasons why we can assume that all other things will *not* be kept equal:

- The ISMA scenarios do not contain concrete figures on cost increases – they just affirm that manufacturers will leave the European market. However, an increased concentration of the market will put remaining producers in a position of reduced competition, leaving them the room to increase prices significantly and to remain profitable. Of course, this price increase will have a negative impact on end users, but we do not think it can just be assumed that the market will no longer be served.
- The tourist industry also depends on other activities such as cross-country skiing for which demand may well increase in a less noisy environment.

3.3.7.3

Conclusion

All SMEs in this sector are professional end users or dealers.

The estimates of the impact on employment in SMEs vary between a few hundred to a few thousand units, depending on the actual scenario for compliance costs. Whilst this is a small impact at the EU27, total employment in Lapland in 2004 was 69,629 units and unemployment reached 16.7% (as to an average of 10.6% country-wide)³⁴. The snowmobile industry estimates that similar employment figures apply to Eastern and Central Finland.

3.3.8

Cluster VIII: Waste collection, processing and recycling

The IA study had indicated that for refuse collection vehicles, the SME share is 40%.

EUnited has informed us that they had identified just one company that apparently fulfilled the criteria of the EC definition, but that, after verification, turned out to part of a larger group.

CISMA has identified 1 SME amongst its members who produces landfill compactors. However, neither Scenario II nor Scenario III foresees changes in the Directive that would affect this equipment type.

3.4

SME test: conclusion

3.4.1

The number of SMEs identified in the course of the study

The most striking conclusion of this study is that, despite the very important efforts undertaken by the project team, less than 15 individual companies have been identified unequivocally as SMEs and have contributed actively by responding to the questionnaire (or by participating in round table meetings). This is surprising, taking into account that Nomeval had reported that more than 50% of companies that produce equipment subject

³⁴ <http://www.lapinliitto.fi/julkaisut/tt2006eng.pdf>

to the Directive are SMEs (although it was admitted that some of these companies are owned or part-owned by larger companies or holdings). In the process of the IA study, several sectors have also reported high numbers of SMEs amongst their members.

We think that there are several explanations to this discrepancy, which we will discuss in turn before drawing policy conclusions.

3.4.1.1 Discrepancy between EC definition and public perception

A first important factor is that the EC definition is actually very restrictive, and is not well known. When it is asked informally to estimate the number of SMEs in a given sector, the natural tendency is to look at the figures related to employment, turnover and balance sheet total, and to overlook the criteria related to linked and partner enterprises. In the case of Eurostat data, the criteria are even limited to the number of persons employed.

However, once the EC criteria were stated explicitly the sector organisations have informed us quickly that the number of SMEs amongst their members is extremely limited. This can explain why the response rate was so low, despite the fact that the sector organisations have immediately been involved in the study.

3.4.1.2 Low SME membership of sector federations

As an alternative explanation, it has been suggested that SMEs feel that their specific interests are not always well represented by the sector federations. Therefore, the low response rate may rather be due to the composition of the membership of the sector federations, and not to the number of SMEs as such. In order to deal with this specific issue, we have also used the UEAPME as an alternative communication channels, but this has not resulted in any response.

Finally, we have also, where possible, used alternative sources of information (such as business directories) to identify SMEs *directly*. Whenever information in the public domain suggested that these companies could fulfil the criteria, they have been contacted individually. Again, the results have been very meagre.

In the absence of individual responses explaining why a company has not participated in the study, one can only guess the underlying reasons. It can certainly not be due to a lack of participation in sectorial federations alone. In the case of privately owned companies, ownership structures may be hard to disentangle. It *could* be that none of the companies that have been contacted is an SME, simply because it is part of a larger group, but the information that is available does not allow us to verify this hypothesis. It could just as well be that these companies are SMEs, but that they have declined to respond. It is then important to understand why.

3.4.1.3 Cost of providing inputs to studies

Actually, there are several sectors where we can be confident that they are completely dominated by SMEs, even according to the restrictive definition: the end users. With the exception of the landscaping industry, the response rate from the sectors that have been contacted has been close to zero, although we are very confident that they are essentially composed of very small enterprises. The responses we have received have also left no ambiguity concerning the reasons for declining to cooperate: the inputs that were requested were felt to be too technical, and individual companies did not see sufficient benefits from responding to the questionnaires, compared to the cost involved in answering them. In the case of end users, it is clear that a substantial amount of effort is required to understand the indirect effects of changes that are barely understood by those who will have to implement the technical solutions.

It is possible that, even amongst the manufacturers of equipment, the burden of responding actively to the questionnaire is simply too high compared to the (perceived) benefits of doing so. This could especially be the case for very small companies where the necessary language skills are not present to respond to questionnaires drafted in English. Again, in the absence of explicit statement on why they decline to cooperate, one can only guess the real motivation, but this is certainly one possible explanation we have to take into account.

3.4.1.4 Lessons learned for future work

What conclusions can we draw for future work?

One possible approach would be to use a less restrictive definition of SMEs in future work.

Whilst such an approach could lead to a higher response rate, the value added is not obvious:

- Relaxing the definition would mean that we would ignore the two essential problems of SMEs that are solved when they integrate in a larger group (high fixed costs and difficult access to capital).
- A change of the scope of the definition could lead to confusion on the side of the industry. It has taken the project team a lot of effort to explain to the sector federations that they should look at the criterion of financial independence, but, even then, some responses were submitted by enterprises that did not fulfil all the criteria. This confusion could make future similar projects even more difficult to conduct.

The second approach would consist in sticking to the current definition, but to make life easier to the respondents. Several possibilities can be considered here, but none of them seems very realistic:

- As suggested above, we have used UEAPME as an alternative channel to get in touch with SMEs. However, UEAPME has indicated that the response time allowed was too short. While allowing longer response times could maybe lead to a slightly higher response rate, the time that was allowed for responding to the questionnaires was the maximum time that was feasible within the constraints of our contract with the Commission.
- Drafting a questionnaire in several languages (or allowing SMEs to answer in their mother tongue) could maybe decrease the barriers for some SMEs. However, the implications in terms of translation budget and in execution time could be huge. Limiting the number of languages could be an option, but this obviously raises the question where to put the boundary between the languages that are included in the study and those that are not.
- It is highly doubtful that further simplifications of the questionnaires would lead to a higher response rate. Compared to the questionnaires that we had used in the IA study, the questionnaires used for the SME test were already a drastic simplification. One has to acknowledge that the questions that are tackled in an Impact Assessment Study are complex, and that there are limits to how far we can go in simplifying complex issues without missing the whole point of the study.

3.4.2 Policy conclusions

The next question is: taking into account the low response rate, what policy conclusions can we draw?

There are essentially two possible approaches to this question:

- The first possibility is to assume that the responses that we have received are indeed representative. This leads to the conclusion that at most 10 to 20 European manufacturers of equipment subject to the Noise Directive are actually SMEs. Taking into account the information that we have found in business directories, we think that this would be an underestimation of the actual number. However, in the absence of any response from the companies that have been contacted directly, and taking into account that the Eurostat data cannot be used as a benchmark (see Section 3.2), we cannot reliably estimate how large this discrepancy is.
- The second possibility is to assume that the companies that have actually responded are only a small subsample of the complete population of SMEs, but that those who have responded are the only ones for which the stakes are sufficiently high to justify an active participation in the study.

However, under both assumptions, the conclusions remain the same:

- Even if all companies would face the cost disadvantages of SMEs, the outcome of the cost-benefit analysis of Nomeval would not be affected fundamentally, except maybe in the case of aerial access platforms.
- The most important disadvantage faced by SMEs is the high share of fixed costs (including those related to regulatory compliance) compared to variable costs. In a market economy, one would expect this to lead to mergers and acquisitions, which would allow to spread these fixed costs over higher production volumes. Actually, several sectors affected by the Directive have undergone an important consolidation phase in the recent past.
- In total, employment in SMEs affected by the Directive does not exceed a few thousand units at the European level. However, the information gathered during this study does not suggest that all these jobs are actually threatened. If mergers and acquisitions would indeed take place, some overhead jobs may indeed be cut. In most cases, the SMEs affected by the Directive are located in regions with lower than average structural unemployment, although there are some notable exceptions.
- In a few cases, SMEs have also reported difficult access to capital markets and weak negotiating position vis-à-vis suppliers and industrial clients as a problem. However, these problems are not caused by the Noise Directive, and the solutions for these problems lie in different policy areas (financial markets policy³⁵ and competition policy).
- In the case of snowmobiles, the only SMEs affected are dealers and the professional end users. The actual impact depends crucially on how snowmobile producers will react to noise limits.

³⁵ This point is illustrated in The Economist, "Small businesses in Europe. Humble but nimble" (May 21st 2009): as a consequence of the financial crisis, governments are ordering banks to lend to companies, providing credit guarantees, suspending some tax obligations and forcing public bodies to pay up more quickly.

- Spreading the introduction of more stringent noise emission limits over time would help SMEs overcoming the bottlenecks in their R&D capacities.

Table 8 summarizes the information of this chapter.

Table 8: Summary table for the SME-test

	Number of SMEs	Comparison with cost estimate of previous studies	Worst case employment impacts	Other issues
Cluster I: Cleaning equipment				
We have identified no SMEs that are relevant for this study.				
Cluster II: Construction equipment				
Professional end users	No data provided by the sector.			
Manufacturers	2 SMEs	High share of fixed costs, but no concrete cost data provided by sector.	Total workforce < 350 people; average regional unemployment rates varied between 6.41 and 12.72%, compared to 8.27% at the EU27 level.	
Cluster III: gardening equipment				
Professional end users	74,000 companies in landscape gardening. No response from other end users such as municipal services, farmers or forestry workers.	Share of machine costs within the total cost structure varies from 8% to 28%; no concrete info on equipment covered by Noise Directive	350,000 employees in landscape gardening spread over EU27; no indication given by the professional end users of the actual number of jobs that would be threatened if the cost increases reported in the IA study would be passed on to professional end users.	
Equipment manufacturers	5 SMEs	One estimate indicates that, in order to reach the relative increase in	The <i>total</i> workforce of then SMEs lies in the range of 500-750	The most important issue for SMEs are the

	Number of SMEs	Comparison with cost estimate of previous studies	Worst case employment impacts	Other issues
		<p>costs estimated in the IA study (5 to 6%), annual sales of SMEs would need to increase tenfold. This confirms the existence of increasing returns to scale.</p> <p>However, even if the unit cost increase of lawnmowers would be 14% instead of 5 to 6%, the global benefits of Scenario II as calculated would still vastly outweigh the costs.</p>	<p>people. Average regional unemployment rates in the regions where these SMEs are based varied between 2.56% and 6.71%, compared to 8.27% at the EU27 level.</p>	<p>limited resources available when the whole product range has to comply within a short timeframe with more stringent emission limits or is moved from Article 13 to Article 12 (implying a change in the CAP).</p>
Cluster IV: Loading and lifting equipment				
Aerial access platforms	1 SME	<p>Taking the cost figures reported by the SME as representative, the environmental benefits are at least 4 times at large as compliance costs. If there is increasing demand for platforms that are powered by electrical engines, the economic cost of compliance may be even smaller.</p>	<p>A maximum of 125 jobs are at stake in just one SME located in a region where average employment in the last 10 years has remained below the 4%.</p>	<p>Aerial access platforms may be used less often in urban areas than assumed in Nomeval.</p>
Fork lifts	2 SMEs	<p>The information received during the SME test has not provided us with elements that would lead to a revision of cost figures reported in the IA study.</p>	<p>At most a few hundred jobs could be at stake in this market segment. These SMEs are located in regions with average unemployment levels between 3 and 10%.</p>	<p>Whether explosion proof fork lifts need specific noise limits requires a technical evaluation outside the scope of this study.</p>

	Number of SMEs	Comparison with cost estimate of previous studies	Worst case employment impacts	Other issues
Cluster V: Power generators and cooling equipment				
No specific impacts on SMEs have been identified.				
Cluster VI: Pumping and suction equipment				
No specific impacts on SMEs have been identified				
Cluster VII: snowmobiles and snowgroomers				
Snowgroomers	Neither scenario II nor scenario III foresee any changes compared to the baseline.			
Snowmobiles	There are no SMEs amongst the manufacturers of snowmobiles. All SMEs in this sector are professional end users (mostly in the tourist industry or reindeer farmers) or dealers.	The snowmobile industry does not agree with the cost estimates of the IA study, but has provided no alternative estimates of their own.	The dealers represent an employment of 2000 jobs and the tourism industry of 9000 jobs. The impact on employment in SMEs varies between a few hundred to a few thousand units, depending on the actual scenario for compliance costs. Total employment in Lapland in 2004 was 69,629 units and unemployment 16.7% (as to an average of 10.6% country-wide). Similar employment figures apply to Eastern and Central Finland.	
Cluster VIII: Waste collection, processing and recycling				
We have identified no SMEs that are relevant for this study.				

4 The IA related to the Conformity Assessment Procedure

4.1 Approach

4.1.1 Analysis of the relevant background documents

The New Legislative Framework, the modernisation of the New Approach for marketing of products, was adopted in Council on 23rd June 2008 and published in the Official Journal on 13 August 2008. The objective of these measures is to remove the remaining obstacles to free circulation of products within the EU.

The legal texts published in the OJEU are:

- Regulation (EC) No 764/2008 of the European Parliament and of the Council of 9 July 2008 laying down procedures relating to the application of certain national technical rules to products lawfully marketed in another Member State and repealing Decision No 3052/95/EC.
- Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93
- Decision No 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products, and repealing Council Decision 93/465/EEC

As a first step in the project, we have analysed these legal texts. Moreover, in order to identify the most relevant questions to tackle during the study, we have consulted the Commission's Impact Assessment related to Decision 768/2008/EC (SEC(2007)173) – some issues raised in SEC(2007)173 are discussed further in Section 4.1.6.

4.1.2 Identification of the relevant stakeholders

The most important groups of stakeholders are the manufacturers, the notified bodies and the national contact points in the member states.

The project team has contacted the manufactures' associations that have also been consulted in the context of the SME test (see Section 3.1.2).

We have also used the list of market surveillance authorities used by the Commission services³⁶ to contact the surveillance authorities in member states. The questionnaire has first been submitted on 11 May 2009, followed by reminders on 08 June, 23 June and 04 July.

The notified bodies have been contacted first on 12 May. A general reminder has been sent on 25 June, together with supplementary information on the scope of the study.

We have also consulted the European Environmental Citizens Organisation for Standardisation (ECOS), a consortium of Environmental NGOs created to enhance the voice of environmental protection in the standardisation processes, but have not obtained a response.

³⁶ http://ec.europa.eu/enterprise/mechan_equipment/noise/marksurv.htm

4.1.3 Drafting a questionnaire

A questionnaire has been drafted that addresses the relevant impacts. A balance has been struck between the comprehensiveness of the questionnaire and its user-friendliness for the respondents.

Respondents do not always have the resources to answer detailed questionnaires, or do not see the usefulness of doing so. Requiring the respondents to answer questions related to issues of secondary importance can actually lead to lower quality responses for essential issues.

On prior grounds, we expected that the choice between different Conformity Assessment Procedures would mostly affect:

- Administrative costs for manufacturers, notified bodies and surveillance authorities
- The probability that noncompliant products are put on the market, leading to:
 - Cost disadvantages for the compliant manufacturers
 - Negative environmental impacts

Therefore, the questionnaire focused on these issues and did not consider further the other impacts listed in Tables 1, 2 and 3 of the IA Guidelines.

We have used open-ended questions, depending on the specific impact that is being investigated.

The questionnaire is attached as an annex to this report.

4.1.4 Consultation with the identified target group

The questionnaires have been sent out immediately after the inception meeting with the Commission services.

As the experience with the IA study has shown that few stakeholders have the resources to provide comprehensive answers to this type of questionnaire, the project team had proposed to single out representative groups of stakeholders that would be willing and able to cooperate on this study. The selection of these groups would take place in consultation with the representatives identified in previous steps. We aimed at three groups of homogeneous manufacturers and a group of notified bodies. The project team would organise round table discussions with those selected stakeholders. Experience with the IA study had shown that this is the most effective means to elicit a maximum of information.

If meetings in Brussels would prove difficult for some specific manufactures and notified bodies, or if considered useful, we had proposed to organise additional in-depth telephone interviews and mail exchange.

4.1.5 Evolution of the consultation process

By mid-July, we had received the following feedback:

- market surveillance authorities: 11 questionnaire + 2 telephone interviews;
- notified bodies: 4 questionnaires + 2 telephone interviews;
- industry: 3 questionnaires.

In quantitative terms, the response received had thus been very low – we will discuss the quality of the information received in Section 4.2.

The low response rate may be due to the following factors:

- Generally speaking, the New Legislative Framework is not well known, and stakeholders do not know themselves how changes in the CAP will affect their business.
- During follow-up contacts with the sector federations, it turned out that some stakeholders had understood that the IA related to the CAP was part of the SME test. Taking into account that some sector federations had not identified SMEs amongst their members, it is not surprising that no response was obtained. This misunderstanding has been corrected.
- Some enterprises use other CAP than Annex VI. Consultation within PNEUROP, for instance, had indicated that the vast majority of their members actually use Annex VIII to the Noise Directive. For this sector, the current investigation has therefore no practical relevance.

On 10 July, EUnited, CECE and CEMA have informed us that, before tackling the questionnaire related to the CAP of the Noise Directive, they would have liked to receive more information related to the New Legislative Framework in general. Similar requests have been received from some notified bodies.

ARCADIS has repeated its proposal to organise round table meetings as a way to obtain a better understanding of the implications of the NLF for their business.

4.1.6

Cost-benefit analysis

When conducting a cost-benefit analysis on this subject, a few points have to be kept in mind that were already identified in SEC(2007)173:

- The introduction of strict *pre*-market controls will not solve the problem of non-compliance by manufacturers unless it is backed up by an efficient mechanism for *post*-market control. Therefore, additional testing and certification requirements would lead to additional costs for compliant manufacturers but would allow non-compliant ones to have a free ride. SEC(2007)173 also expressed doubts that the systematic involvement of the notified bodies in the conformity assessment process, independent of product type and risk involved, would contribute to getting hold of manufacturers not sticking to the rules.
- Because causal relationships for environmental damage are in general very complex and because the role of notified bodies is just one element in a more comprehensive set of measures, it is not possible to quantify the damage resulting from the lack of competence of notified bodies or improper quality of their conformity assessment. The same applies to the lack of market surveillance.
- It is difficult to estimate the share of non-compliant products on the market. Therefore it is equally difficult to estimate the loss of industry due to non-compliant products. Due to lack of an EU database linking accidents with their cause, it is not possible to give figures on the accidents caused by non-compliance of a product.
- For the New Approach Directives, the (old) Decision 93/465/EEC contained 8 different modules which could be used for demonstrating compliance with the legal requirements. However, individual directives have not always stuck to the text the Decision. Furthermore, the directives do not all use the same modules or combination of modules. As a product may be covered by several different directives, a manufacturer may have to apply several different procedures to demonstrate that his product complies – the text of SEC(2007)173 explicitly refers to outdoor machinery as being covered by at least 4 Directives.

- Until the New Legislative Framework was introduced, differences in Member States in the criteria and procedures relating to the assessment and the monitoring of competence of notified bodies distorted competition between these bodies. Notified bodies submitted to stricter assessment and monitoring requirements were facing additional costs³⁷. The distortion of competition between notified bodies had a spill-over effect on the competition between manufacturers. It is not clear whether this issue has now been solved.

In general, it is very difficult to provide monetary estimates of the benefits of more stringent conformity assessment procedures. Whilst assessing administrative compliance costs is easier in principle, the provision of reliable estimates is heavily dependent on the organisation of the accounting systems of manufacturers and notified bodies.

Therefore, any monetary estimates will have to be treated with a lot of circumspection.

The focus of the analysis is largely on the estimation of the costs.

When quantitative data are extrapolated, the methodology used is fully transparent and described in such detail that an independent observer can verify the calculations for himself.

The study explicitly lists all elements of uncertainty and explores how they affect the analysis.

4.2 The consultation process

As pointed out above, the response rate to the initial consultation process has been very low, taking into account the size of the potential target audience.

Moreover, the quality of the responses received was extremely unequal. In several questionnaires, strong statements on the implications of possible changes in the CAP were made without any substantiation. We have requested the authors of these questionnaires to clarify their position, but have received only limited further feedback.

The most useful information received until now was through in depth telephone interviews and through the round table meeting with the garden manufacturing industry. These experiences clearly confirm that much more information can be obtained in an interactive discussion than through written questionnaires.

After the first consultation round, it was not clear how representative the answers were. In general, it can be expected that the stakeholders who do respond to questionnaires are those who:

- Have the highest stakes in the outcome of the consultation process;
- Have the resources to respond to the questionnaire;
- Have the widest experience with the New Approach Directives, and the different procedures for conformity assessment.

Some contradictory elements however did suggest to interpret the information with a lot of caution. ARCADIS has therefore proposed to cross-check some statements by using the following alternative approach: we have drafted provisional conclusions (based upon the first round) and allowed all contacted stakeholders to comment on each point – this questionnaire is attached as an Annex to this report. We expected that, by lowering the barriers to responding, more stakeholders would be willing to participate.

³⁷ However, the majority of notified bodies could not quantify these additional costs.

Some stakeholders –mainly the respondents in the first consultation round- did provide us with supplementary information.

Table 9: Respondents to the second rate of consultation

Public authorities	
Belgium	Federal Public Service of Health, Food chains safety and Environment
Cyprus	Environment Service within Ministry of Agriculture, Natural Resources and Environment
Denmark	Danish Environmental Protection Agency
Estonia	Ministry of Economic Affairs and Communications / Estonian Technical Surveillance Authority
Finland	Ministry of the Environment
Germany	Regierung von Niederbayern
Malta	MSA
Romania	Labour inspection - Market surveillance Body
Notified Bodies	
Poland	The institute of advanced manufacturing technology (Krakow)
Poland	Urząd Dozoru Technicznego
Poland	Przemysłowy Instytut Maszyn Budowlanych
Germany	Tüv Süd industry service
Germany	Tüv Nord cert GmbH
Bulgaria	Center for testing and european certification
Italy	Imamoter Institute, national research council of Italy
Industry	
	Pneurop
	Cisma
	CECE
	VDMA
	International Snowmobile Manufacturers

The majority of the stakeholders did not answer our repeated inquiries and it is assumed that they are taking a neutral position towards the provisional conclusions. A few stakeholders explicitly refused to take any position, claiming not to be able or willing to do so.

4.2.1 Current practices

According to Article 14 of the Noise Directive, equipment referred to in Article 13 has to be subjected to the internal control of production procedure referred to in Annex V before placing on the market or putting into service. Equipment referred to in Article 12 is subject to one of the CAP described in Annex VI, VII or VIII to the Directive before placing on the market or putting into service. Annex VII (“unit verification”) is normally used for products with very low series volumes.

With respect to the **current use of Annex VI**, there are two possibilities in the production phase.

In the *first variant*:

“the notified body shall carry out periodical checks in order to verify continuing compliance of the manufactured equipment with the technical documentation and with the requirements of this Directive; in particular the notified body shall concentrate on:

- the correct and complete marking of the equipment according to Article 11,
- issuing of the EC declaration of conformity according to Article 8,

- the technical instruments applied and the results of the evaluation of the uncertainties due to production variation and their relation to the guaranteed sound power level,

(...) Only if the above checks give unsatisfactory results shall the notified body carry out noise tests (...).

In practical wordings, this means *that the manufacturer carries out the measurement, using company laboratories, but under surveillance of the NB*. The manufacturer is not required to have a system for quality management, although the majority of the notified bodies who have responded to the questionnaire have remarked that large companies who use this variant usually operate a quality management system in practice. The decision for implementing a quality management system is more likely to be inspired by marketing strategy than by the choice of a specific CAP. Several industry stakeholders added that a company laboratory and quality system are often indispensable as they offer the additional advantage of having all “noise information” during the development process of a new model or machine. Noise measurement on prototypes or pre-series delivers adequate input for determining the guaranteed sound level.

Using a “company laboratory” entails both capital costs and operational costs. Such a “company laboratory” does not imply huge capital expenditures in *all* cases: for some equipment types, a single calibrated sound level meter and one qualified person are enough. However, we have also received evidence to the contrary:

- One notified body has reported, but without giving quantitative estimates, that the costs for maintaining or operating the laboratory should not be underestimated: training, calibration of the equipment or specific testing conditions.
- At least one industry-party claims “high” costs for such a company laboratory, without giving details whether this is always the case. For certain industry sectors with complex and specific end-products, this can be particularly true and thus making it practically impossible for enterprises with limited resources (SMEs). Major cost factors are the free field test area (and calibration), sound level metering devices, multi-channel data acquisition systems and skilled personnel.

In the *second variant*:

the notified body shall carry out or have carried out product checks at random intervals. An adequate sample of the final equipment, chosen by the notified body, must be examined and appropriate noise tests (...) must be carried out (...)

In this variant, *the laboratory of the NB is carrying out the measurement, and the manufacturer does not need specific equipment or staff for the tests*. This variant will usually be chosen by small companies.

One industry stakeholder has pointed out that, in some cases, even small manufacturers need skilled personnel, sound measurement equipment and a free field area in order to be able to develop their products in compliance with the Noise Directive – the benefit of using the second variant would then be limited. Another industry respondent underlines that, in their experience, this variant is also widely chosen by medium-sized and larger companies, because investments and operational costs of an internal laboratory are comparable to the total costs for an external laboratory. Notified bodies usually have the proper test facilities (both instruments and a test field).

All in all, *there does not seem to exist a one-to-one relationship between the size of a company and the variant of Annex VI that is actually chosen*.

If a manufacturer chooses **Annex VIII** (which corresponds to Module H in Decision 768/2008/EC ("full quality assurance")) he must operate an approved quality assurance system for design, manufacture and final product inspection and testing. He is subject to surveillance under the responsibility of the notified body. The manufacturer must allow the notified body entrance for inspection purposes to the locations of design, manufacture, inspection and testing, and storage and must provide it with all necessary information. The notified body shall periodically carry out audits to make sure that the manufacturer maintains and applies the quality assurance system and must provide an audit report to the manufacturer. Additionally the notified body may pay unexpected visits to the manufacturer. During such visits the notified body may carry out, or cause to be carried out, tests to verify that the quality assurance system is functioning correctly, if necessary.

The use of Annex VIII implies that the manufacturer uses the necessary measurement equipment, test grounds, and qualified staff.

It is not really clear what currently determines the **choice between Annex VI and Annex VIII** in the Noise Directive.

For instance, a notified body has reported that in Germany, large companies mostly used Annex VIII to the directive. However, in France, contrary to what was expected when the Directive was introduced, less than 10% of the companies currently use Annex VIII of Directive 2000/14/EC (even the very large companies tend to prefer Annex VI). The principal reason reported is that, if a company chooses Annex VIII, the notified body will have to go deeper in its analysis of the company's processes: the notified body indeed assesses the quality system to determine that this system ensures compliance of the products. As pointed out above, this includes allowing the notified body access to the design, manufacture, inspection, testing and storage sites. The notified body is required to carry out periodic audits and may pay unexpected visits. This procedure is also more costly for the company. At least one notified body confirms the reluctance of some manufacturers to use Annex VIII for CAP as every new product leads to additional large scale audits by the notified body (change in the scope of certification).

One notified body reckons that, if a company places less than 3 new models on the market per year, it is less expensive to use Annex VI than Annex VIII. Other notified bodies have confirmed that Annex VI is less expensive for the manufacturers, but without providing more specific information.

Several respondents from industry indicate that the costs linked to the quality system control and the costs linked to the Noise CAP are cumulative, as in practice the notified body for the quality assurance system is not the same as the notified body for the Noise Directive. Another industry stakeholder mentions that the additional cost of verifying new models placed on the market is relatively low compared to the overall yearly cost for "control" (for annex VIII or module H"), the latter being regular production control measurements and the yearly control by the notified body.

Still another source estimates that currently 70% of the companies use Annex VI and 30% Annex VIII but has emphasized that this figure is based uniquely upon his personal experience.

Finally, we have received the following input from the manufacturers;

- Consultation within PNEUROP had indicated that the vast majority of their members actually use Annex VIII.
- EGMF has reported that most of its members use annex VI, nobody uses annex VII because these are all mass production goods, and some use annex VIII.

This suggests that the preference for Annex VIII may be linked to sectorial characteristics rather than to differences in the national context.

Another possible explanation for these differences in practices could find its origin in the following clause of Annex VIII:

The notified body must assess the quality assurance system to determine whether it satisfies the requirements referred to in point 3.2. It shall presume conformity with these requirements in respect of quality assurance systems that implement EN ISO 9001.

A notified body has pointed out to us that the prevalence of ISO 9001 as a precondition to use annex VIII is very different in the Member States. One industry stakeholder confirms the relevance of this issue by stipulating that an implemented ISO 9001 even stimulates smaller companies to use annex VIII instead of annex VI.

This may also be due to the behaviour of individual notified bodies: if they do not push annex VIII only a few customers will indeed chose this option. Reasons why notified bodies do not promote Annex VIII include:

- In some Member States, you need a separate permit of the accreditation agency to certify “Quality Management System” as understood in Annex VIII. This requires personnel personal skilled and experienced in auditing (EOQ-auditor ISO 9001) and in noise measurement.
- Noise measurements are a source of income for notified bodies, and therefore they may prefer CAP where they have to conduct the noise measurement themselves, such as in Annex VI (in the variant with product checks at random intervals) or Annex VII.

It is not clear to what extent these experiences are representative, or why they differ.

Finally, we have obtained some (limited) information of the **costs linked to the different CAP.**

We have received one detailed estimate of the cost breakdown for Annex VI:

- 600€ for the examination of the technical documentation.
- 300€ per year for the production conformity checks if only the internal audits have to be evaluated.
- Tests by the NB in both cases could be between 800 and 1000 € based on the equipment type and for each piece of equipment to be tested.
- Costs for internal testing by the manufacturer are between 1000 and 2000€ for new certification (at least 5 machines) and 400 to 600 € for each production control.
- Travel can be estimated at 500€ per certification.

However, other sources have argued that the current costs of CAP depend on the equipment, how and where the manufacturers choose to have the testing carried out and also which notified body they choose. For manufacturers with good research and development laboratories, laboratory costs linked to the CAP could be negligible. Some SMEs, however, will have to hire a laboratory which can be very expensive. One surveillance authority has reported that they recommend that manufacturers get at least 3 quotes from the notified bodies as the costs vary so much with each notified body. Travel costs will be dependant on which notified body is chosen and where they have offices.

Most responses in the second consultation round have confirmed the *order of magnitude* of this cost breakdown. Some notified bodies argued that the figures are overestimations

due to the lower labour cost in some member states (half to three times lower). At least one notified body claims that testing costs for the notified bodies are somewhat higher (+/- 12 percent) and others estimate at least double travel costs when travel time is included, also depending on the location of the manufacturer. One notified body mentions the practice where annual (company) laboratory audits are performed at a cost of around 2000 € per year.

Most market surveillance authorities admit not to have any quantitative information on costs. One authority however estimates examination of technical documentation by the notified body at around 1500 €. The cost of product testing depends on the type of equipment, ranging from 2000 € for a single small machine to 4000 € for a larger and more complex machine. Consecutive measurements of the same machine type of course give lower unit measurement costs.

Industry stakeholders confirm large differences between equipment types. One respondent agrees on the cost for internal testing by the manufacturer (new certification), suggesting that the upper boundary of 2000 € would be the best approximation. Internal production controls would be situated between 200 and 400 €. According to the same source, case by case examination of the technical documentation would cost around 2000 €. Another industry source claims significantly higher costs, adding up to 20.000 € for one specific type of equipment. This amount would be valid for both internal testing and testing by notified bodies. These high costs follow directly from the fact that testing is a time-consuming operation (two days generally for notified bodies), requiring specific knowledge, equipment and staff. A more central estimation by the same source states a 2500 € cost increase for initial approval and another 2500 € for random tests per annum.

Still another industry source estimates incremental costs for one internal production control by the manufacturer between 1000 and 2000 €. Annual costs for checks by notified bodies lie around 1500 €, plus 500 € travel costs and an additional 500 € internal costs for the manufacturer.

Other industry respondents did not provide further quantitative estimates.

The variety of cost estimates suggests that the actual costs depend on specific circumstances: the type of equipment, the relative bargaining power of manufacturers and notified bodies, the relative importance of labour costs versus capital costs (which varies from Member States to Member States),...However, taking into account the way we have organised the second consultation round, we will assume that these figures are representative.

4.2.2 The market position of notified bodies

Some stakeholders have raised concerns with respect to the independence of some notified bodies. It is indeed the manufacturers who choose and pay the notified bodies, and some notified bodies have a very limited clientele. However, several elements indicate that both the manufacturers and the notified bodies have some bargaining power, and that it is not clear where the balance lies:

- The CAP often requires very specific product knowledge and measuring equipment, and this confers some market power to the notified bodies as well. This is particularly true in their relation with SMEs. For several types of equipment, there is a large personal involvement of the operator for noise tests. The outcome of the noise test could therefore sometimes be influenced by the (expertise of) the operator. The fact that they have the final say has an impact on their bargaining power.

- In some specific situations, manufacturers can have the strongest position, for instance in case the manufacturer owns a very specific measurement site.
- For manufacturers, the choice criterion in choosing a notified body is often minimisation of costs instead of know-how, skills and expertise, resulting in higher bargaining power for manufacturers. One industry source confirms that manufacturers do expect notified bodies to keep the cost of their services as low as possible.
- Notified bodies with a small clientele for CAP within the Noise Directive often have notification for other directives as well, which puts them in a somewhat more comfortable position.
- Some stakeholders have pointed out that, in some cases, there is a high level of market concentration at the NB's side. One industry source argues that the notified bodies in most cases have the bargaining power, referring to the situation in some countries where a notified body has a monopoly position. However, generalisations should be avoided: EGMF for instance reckons that there is enough competition between the notified bodies.
- All in all, other sources (notified bodies as well as one industry respondent) point out that the relation is often a cooperative one, which is often built on intensive support and good knowledge transfer: the notified body offers services to the manufacturer to improve his products. According to this perspective, both parties are targeting products of higher quality which at the end are sold by the manufacturer, thus the discussion of market power is no key issue.

Other possible points of concern are the limited experience of some notified bodies and substantial differences in national practices with respect to the application of the criteria for notification. One notified body mentions only problems vis-à-vis countries where accreditation for notified bodies is not obliged. Most industry stakeholders did not raise any specific concerns on differences in national practices, though one source emphasized the necessity of crystal clear criteria for notification of the bodies.

Taking into account that the NLF has been adopted very recently, we think it is not clear yet how the application of the NLF will affect these problems in practice – it is noteworthy that all these problems referred to in this section are in line with the problems raised in SEC(2007)173.

Concerning the specific issue of the differences in national practices, we have to refer to one of the cornerstones of the New Legislative Framework, Regulation EC 765/2008, which requires Member States to establish accreditation authorities, responsible for accrediting all “conformity assessment bodies” within their borders. 2 notified bodies have reported that they believe that the NLF should eliminate most current differences between Member States. One market surveillance authority also reckons that the ongoing harmonisation process could enhance the importance of the CAP itself.

4.2.3

Effects of possible changes to module A2 of Decision 768/2008/EC

Compared to the current Annex VI to the Directive, the most important changes in module A2 are:

- Module A2 only leaves room for product checks (“variant 1” of Annex VI has not been withheld in Module A2)
- the product checks can be carried out either by a notified body or by an accredited in-house body.

4.2.3.1 Switches from Annex VI to Module H

The **majority of the notified bodies expect** that once the Directive has been adapted to the NLF, **large companies who currently use the first variant of Annex VI, will switch to Module H** of Decision 768/2008/EC (rather than having to pay the notified bodies for product checks). However, Module H is the most expensive, as it requires a complete test laboratory, and one notified body and one market surveillance authority think that such a move is unlikely. One industry stakeholder underlines that such a switch would only be cost-effective if the system would meet the full quality assurance requirements for other directives as well (f.i. Machinery Directive). Expenses for Module H are high as for each change in the quality system, supplementary audits by the notified body are required leading to several extraordinary audits per year. As already pointed out in Section 4.2.1, *the lack of detailed cost figures does not allow to confirm or refute these claims*. All industry stakeholders confirm that a cost analysis will be made by each individual manufacturer, the outcome being unpredictable for companies in general. One industry respondent assumes that a manufacturer producing rather complex equipment and releasing many new types of equipment yearly will find himself more comfortable with module H.

4.2.3.2 Use of accredited in-house bodies

The **possibility to use an accredited in-house body** turns out to be a relatively contentious matter.

Article R21 of Decision 68/2008/EC requires explicitly that an accredited in-house body constitutes a separate and distinct part of the undertaking and that it shall not participate in the design, production, supply, installation or maintenance of the product it assesses. In some market segments, this could effectively result in more competition for the notified bodies. At least one notified body agrees that accredited in-house bodies will lead to increased competition and possible higher quality of testing services.

An important difficulty in assessing the consequences of the possible replacement of Annex VI is the possibility that the national surveillance authorities will all have different interpretations of the new requirements (even now, there are big differences in accreditation practices between member states).

For instance, one of the notified bodies we have interviewed expects that in Germany, the accreditation authorities will not accept in house conformity assessment bodies because they think there are no guarantees for independence. Other Member States could be more relaxed in this respect. In countries with a less strict interpretation, the existence of in house conformity assessment bodies could lead to problems for the Notified Bodies.

In one member state, the Ministry of the Environment has expressed the opinion that the use of in-house accredited bodies would lead to a decrease of the rigour of the conformity assessment procedure. They argue that accredited in-house bodies and notified bodies will not be equivalent in practice, because the procedures for accreditation and notification are different. The respondent has referred to the example of one Member State where the Ministry of Economic Affairs is responsible for accreditation, and the Ministry of the Environment and Public Health is not further involved formally in the accreditation procedure; however, in the notification procedure, it is the Ministry of the Environment who has the final word. In this Member State, the accreditation authority will mainly look formally at the general technical competence. However, it has not always the specific expertise to verify the specific technical competence of the in-house bodies.

Several market surveillance authorities and notified bodies disagree with the concerns raised above and argue that the accreditation should be harmonised and performed

according to (the) international standards. Hence this problem of different interpretations between member states equally exists for notification. Some industry stakeholders confirm that fair competition can only be guaranteed if the same rules apply to all. The industry viewpoint is not unequivocal, apparently, even within one sector. As already pointed out above, one of the central objectives of the NLF (and Regulation EC 765/2008 in particular) is precisely to coordinate a system of peer review between national accreditation bodies. Only experience can show how this will work in practice.

At least one notified body thinks that the autonomy of in-house bodies cannot be guaranteed and that they should be excluded from the Noise Directive. The legal basis for this exclusion could lie in Article 4.5.c of Decision 768/2008/EC, which allows the specific legislative instrument to specify the manufacturers' choice as to whether the tests are carried out either by an accredited in-house body or under the responsibility of a notified body chosen by the manufacturer. The majority of notified bodies however believes that the accredited in-house bodies can not and should not be excluded from the Noise Directive. One notified body refers to other directives where the wide use of Module H proves that CAP requirements can be met within the company without involvement of NBs. Companies should be obliged to prove their independency and impartiality, which are the most important preconditions for an accreditation. Supervision of this independency should be guaranteed by an additional entry in the Directive and must be organized through objective strategies.

On the industry side, EGMF has reported that the possibility of using an in-house accredited body might be difficult, as the barriers to entry might be very high. The initial accreditation would be a big investment in terms of both time and money. Maintaining the accreditation requires continuous effort. The use of in-house bodies would be out of the question for SMEs. This has been confirmed by several notified bodies and a market surveillance authority who also believe that in-house accredited bodies can only be cost-effective for larger companies. The barriers to entry go beyond the need to make physical investment: it also involves learning how to deal with the accreditation authorities. Another industry source argues that this statement does not apply the industry in general. The decision depends on various factors like machine type, production series, location. One industry source suggests the possibility of *ad hoc* enterprise associations, sharing a common in-house laboratory to reduce costs. As this proposal was too late for inclusion in the draft final report, we have not been able to ask other stakeholders whether they think this a realistic idea.

It has also been pointed out to us that, in the case of railway equipment for instance, the test by the in-house bodies are not the end of the story. Indeed, operators still have to ask for a permit of one of the national safety authorities before a new train may start on European tracks. These authorities check the plausibility of the test procedure and in this sense they supervise the NoBos and the in-house bodies³⁸. This would not be the case for equipment subject to the Noise Directive.

4.2.3.3

The issue of random checks

Problems could also occur with respect to the requirement to hold supervised product checks at random intervals:

- It is not clear how "random samples" should be determined in the case of very small series. Several notified bodies agree that mass production and

³⁸ See Directive 2008/57/EC.

manufacturing in small quantities should be treated differently. Random checks are only possible for mass products like lawnmowers.

- Several notified bodies think it is unrealistic to expect that product checks can really be held at random intervals. Some of the checks are complicated and require equipment to be available. One surveillance authority claims that even a production line walk would have to be supervised. This is only possible if the product check has been announced in advance and the notified body would have to book a time that someone was available and the specific product being made available. EGMF however claims that it would be possible for an auditor to randomly select a product from production and seal it with tape for later testing. One other industry stakeholder does not agree with the latter as quite a lot of equipment is made-to-order and should therefore be delivered to the customer in time.
- The notified bodies do not all agree whether or not product checks should be announced in advance. Both parties however have an interest in avoiding fruitless unannounced checks, when for instance certain equipment has not been manufactured or is out of stock at the time of the visit. Most industry stakeholders emphasize that in practice the notified body announces upcoming controls.
- One surveillance authority has pointed out that the term “random” may have different interpretations between notified bodies and the random period would need to be set.
- One notified body claims that it is the responsibility of the body to assess the frequency of checking, based on the risk specific to the product or technology. Another notified body confirms that intervals should be defined by the NBs, which are not necessarily constant over time³⁹.
- EGMF has expressed concerns that, because the term “random” has not been defined, notified bodies could increase the frequency of product checks just to generate business. One market surveillance authority reckoned that this problem equally exists in current Annex VI. One other industry stakeholder states that this risk is rather limited as the frequency of (‘random’) checking is usually subject of the contractual agreement between the manufacturer and a notified body.
- One stakeholder has expressed doubts as to whether notified bodies would really be able to hold truly random checks with their clients.

We conclude that whether or not random checks are possible depends on the characteristics of the equipment under consideration and the related business practices. It can clearly **not** be assumed that random checks are possible for all equipment types.

4.2.3.4

Other issues

One stakeholder has pointed out that, currently, in Annex VI, there are few constraints with respect to the timing. Manufacturers do the testing, and the audit by the notified bodies has as only purpose to verify if the tests have been done properly. This procedure leaves a lot of flexibility.

One stakeholder has remarked that Module A2 seems to be in line with the (new) Machine Directive and the EMC Directive.

³⁹ Several notified bodies have suggested that the notified body Working Group should draft recommendations on the implication of “random”, for instance for equipment like wheel loaders.

Just one stakeholder has expressed a concern that Module A2 would lead to a significant increase in the risk of non-compliant products being put on the market if in-house conformity assessment bodies would be allowed.

EGMF has concluded that option A2 would be a valuable option because it allows for a very short time to market, and because there is no time-consuming type approval procedure before putting on the market. At least three of the responding notified bodies disagree with this statement without substantiating their opinion. One industry stakeholder vents criticism on this statement if a shorter time to market would imply a decrease in effective controls.

Other industry sources refer to module A2 as being more advantageous, not because of the shorter time to market but rather because of the notified body no longer being an essential part in the procedure or because it is less expensive than the alternative.

4.2.4 **Effects of possible changes to module B+C of Decision 768/2008/EC**

Several notified bodies and surveillance authorities have expressed concerns that the application of Module B+C would be a step backwards compared to what is currently done in Directive 2000/14/EC.

4.2.4.1 **The representativity of specimen**

"CE type" examination assumes that the first sample is representative, but at least 2 notified bodies doubt that the sample taken is always representative for subsequent production⁴⁰. Especially in small serial production of a new model, there are often small technical modifications needed. The prototype tested for type approval differs from later series. One surveillance authority has argued that in practice, the specimen would be chosen by the manufacturer and not taken on site by a notified body.

This lack of certainty on the representative nature of the specimen would hold, even in the absence of deliberate fraud⁴¹: the first machines have in general been verified thoroughly by the development team, while the follow up in production is not always as rigorous. Moreover, there is often a gap of several months between the sample taking and the production in series.

Taking into account production variability, statistical inference based upon a specimen that is not chosen at random would not be valid. According to one notified body, a study on lawnmowers undertaken by CETIM has shown that the majority of the lawnmowers do not meet the levels declared in Module B. One body believes that the notified body can request for more than one sample for type examination which brings some opportunity to comment on uncertainties. One industry sector representative underlines that specimen testing within the frame of the CAP is only a kind of verification, without being a procedure to check if all uncertainties are properly evaluated. Furthermore it is argued that the technical documentation is the appropriate tool for this kind of evaluation.

Another notified body has expressed a quite different viewpoint on this issue. Based upon their experience with the CAP linked to other Directives, they think that EC type examination *reduces* the probability of noncompliant products being introduced on the market. They think the presence of a notified body in an early stage of product development prevents noncompliant products from being put into production, and this avoids the subsequent cost of removing discrepancies. In their view, the real issue is to complement Module B+C with effective market surveillance. Several other notified bodies

⁴⁰ The text of Decision 768/2008/EC requires specimen to be representative of the production envisaged. One market surveillance authority argues that this is a problem for all type tests.

⁴¹ EGMF has pointed out that deliberate fraud could lead to civil litigation by the notified body.

indeed confirm that their services at an early stage of the product phase 'assist' the manufacturer to market compliant products. One notified body however claims that the probability of non compliance should not depend on the module chosen as product certification must always be finished before placing the product on the market. One market surveillance authority agrees on the latter, confirming that module B not specifically opens an opportunity for early presence of notified bodies (i.e. compared to other modules). This line of thinking is also followed by at least one industry source, elucidating that with the type examination the notified body is not necessarily present in an early stage. His role is only to check the result of the design and development phases.

4.2.4.2 The concept of guaranteed sound power level

Two other stakeholders have argued that Module B is not compatible with the concept of the guaranteed sound power level as defined in the Directive. The Directive requires the "guaranteed sound power level" to include the uncertainties due to both production variation and measurement procedures (Article 3.(f).). As argued by these stakeholders, a single test carried out by the notified body would not give any useful element to define the guaranteed sound power level – this would be a step back to the procedures that were in use before Directive 2000/14/EC was introduced. This opinion is confirmed by the majority of the notified bodies.

4.2.4.3 Specific issues with Module C

With Module C, no follow up of the manufacturing process by the notified body would take place. In the current Annex VI to the Directive, however, the notified body is further involved in the production phase.

Again, opinions are divided on the exact implications:

- 2 surveillance authorities have expressed concerns in this respect.
- One other surveillance authority is more sanguine in this respect and points out that the responsibility for compliance remains with the manufacturer.
- One notified body indicates that the risk of non-compliance is also present with periodical product checks, but has not provided an assessment of how this risk is affected by the actual CAP in use.
- One notified body claims that that it is in the interest of quality manufacturers -the majority of the market-, to market only compliant products (without providing more details or arguments). Most respondents from industry confirm this opinion though one industry source admits that market surveillance does not work for certain product categories, such that incompliant products are not rapidly detected.

Finally, one surveillance authority has pointed out that, under Module C, the manufacturer has to draw up a written declaration of conformity for a product model and to make a copy available to the relevant authorities upon request only (Module C, 3.2). According to Article 16 of the Directive, the declaration of conformity has to be submitted to the responsible authority of the Member State and to the Commission Services. This respondent has emphasized the need to maintain similar requirements in the new Directive.

4.2.4.4 Cost implications

One authority has suggested that the application of Module B+C would lead to significant increases in costs compared to the current situation:

- In case a specimen (representative of the production envisaged) would be examined, the estimate is that certification costs would double compared to the

current situation (which only implies an assessment of the technical documentation and periodical checking).

- Costs would quadruple in case the second variant would be chosen (assessment of the adequacy of the technical design of the product plus examination of specimens).
- Costs would remain unchanged if the assessment would take place through examination of the technical documentation.

We have not obtained any alternative estimates of these figures. However, one notified body has remarked that the costs linked to Module B are one-off costs, and they think that the life-cycle costs of Module A2 would be higher. They have not provided us with concrete figures that could substantiate this claim, however. Other notified bodies confirm that they don't have sufficient information or practical experience to comment on this.

4.3 Comparison of costs

The consultation with stakeholders has not lead to a clear cut conclusion with respect to how a change in the CAP would impact on the probability of compliance. However, it has indicated that this effect can be expected to be small and to depend largely on side-conditions (such as market surveillance) that do not depend on the CAP.

Therefore, we will not consider here the environmental cost of non-compliance.

However, it is useful to have a look at the impact on the costs for the manufacturers.

Let us assume that, in the case of Module A2, the costs of new certification are x EUR and the recurring annual costs are y EUR. Based upon the information in Section 4.2.1, we assume for illustrative purposes that $1.66 \cdot y < x < 5 \cdot y$.

In order to ensure compatibility with Nomeval, let us assume a discount rate of 3% (p 141).

We compare now the lifetime costs under three different assumptions concerning the lifetime of an individual equipment type. We assume that the costs linked to the CAP are incurred at the beginning of the year.

With 10 years lifetime, discounted lifetime costs linked to Module A2 are:

$$x + \sum_{n=0}^9 \frac{y}{(1 + 0.03)^n}, \text{ or } x + y \cdot 8.79.$$

If Module B+C would be chosen, there are three possibilities.

- In case only a specimen is examined, Module B+C is the least costly if $2x < x + y \cdot 8.79$, or thus if $x < y \cdot 8.79$.
- In case an assessment would take place of the adequacy of the technical design of the product plus examination of specimens, Module B+C is the least costly if $4x < x + y \cdot 8.79$, or thus if $x < y \cdot 2.93$.
- If only an assessment of the technical documentation takes place, Module B+C is obviously the least costly solution.

With 5 years lifetime, discounted lifetime costs linked to Module A2 are:

$$x + \sum_{n=0}^4 \frac{y}{(1 + 0.03)^n}, \text{ or } x + y \cdot 4.72.$$

If Module B+C would be chosen, there are three possibilities.

- In case only a specimen is examined, Module B+C is the least costly if $2x < x + y \cdot 4.72$, or thus if $x < y \cdot 4.72$.
- In case an assessment would take place of the adequacy of the technical design of the product plus examination of specimens, Module B+C is the least costly if $4x < x + y \cdot 4.72$, or thus if $x < y \cdot 1.57$, which is not compatible with the assumptions stated above.
- If only an assessment of the technical documentation takes place, Module B+C is obviously the least costly solution.

With 2 years lifetime, discounted lifetime costs linked to Module A2 are:

$$x + \sum_{n=0}^1 \frac{y}{(1+0.03)^n}, \text{ or } x + y \cdot 1.97.$$

If Module B+C would be chosen, there are three possibilities.

- In case only a specimen is examined, Module B+C is the least costly if $2x < x + y \cdot 1.97$, or thus if $x < y \cdot 1.97$. This is on the borderline of the assumptions stated above.
- In case an assessment would take place of the adequacy of the technical design of the product plus examination of specimens, Module B+C is the least costly if $4x < x + y \cdot 1.97$, or thus if $x < y \cdot 0.65$, which is not compatible with the assumptions stated above.
- If only an assessment of the technical documentation takes place, Module B+C is obviously the least costly solution.

We can thus conclude:

- If only an assessment of the technical documentation takes place, Module B+C is always the least costly solution.
- For equipment types with a short economic life, Module A2 will most likely be the solution with the lowest life cycle costs if Module B implies both an assessment of the adequacy of the technical design and the examination of specimens. The exact cut-off point depends on the equipment type.

4.4

Conclusion

The most important recurring answers are that:

- **As far as the environmental impacts are concerned, the actual choice of the CAP is of secondary importance, and market surveillance is the real key to compliance.** This position has been expressed by all categories of stakeholders. One notified body has pointed out for instance that most fake products have never been checked by a notified body and come from the black market (often via the Internet) anyway. One Ministry of the Environment has however responded that the stringency and transparency of the CAP are important as a necessary condition for satisfactory product quality put on the market and are a pre-requisite of efficient market surveillance. In their view, relying only on market surveillance just means that the problem is transferred to another party, with possibly less technical expertise and a limited budget. This authority is convinced that a three-party model (manufacturer, notified body, market surveillance authority) is the most efficient as different parties -with their own rules of play, cost/efficiency evaluation, expertise, budget, etc.- share the responsibility for noise quality. Most

notified bodies confirmed the latter in the second consultation round, underlining that market surveillance is a necessary mean together with clear definitions (from the beginning) for the producers. The stringency of the CAP should be proportional to the risks related to the products concerned. At least one industry stakeholder disagrees with the secondary role of the CAP by underlining that the choice of the CAP introduces the formality of compliance to the manufacturer and affects costs for companies launching new machines into the market.

- The **New Legislative Framework is not well known** and several stakeholders involved (industry, notified bodies, public authorities) admitted that they do not have a clear idea of what changes in the CAP may imply in practical terms. Some clearly stated that it was not possible for them to answer the questionnaire because at this stage they have no information regarding the practical implications of the new modules. From some sides, there is a clear demand for more extensive information (for instance, through the organisation of conferences with the involvement of NLF experts).

There is **not a clear consensus on the cost implications**. Actually, even the net costs and benefits of the *current* Annexes to the Directive are not well known⁴². Some indicative estimates of costs have been provided, and several stakeholders have given us a qualitative assessment of the advantages and drawbacks of each Annex. However, once one tries to go beyond the costs and benefits for individual equipment types, no clear conclusion emerges. Costs and benefits vary according to the technical characteristics of the equipment types, according to the country and according to the business practices in individual business sectors. Taking into account that the Noise Directive covers a very heterogeneous set of equipment, this should not be surprising.

Once one moves to an assessment of the costs and benefits of changes to the CAP, additional complications arise:

- There are some points where the Directive only sets minimal requirements. For instance, Annex IX sets minimum criteria to be taken into account by Member States for the notification of bodies. Some member states can be expected to require much more than these minimum criteria. Therefore, one notified body claims that nothing much can be said on the cost implications of replacing Annex VI, because costs would be heavily dependent on the national circumstances.
- The actual costs of Module B+C depend on whether the assessment would include: the examination of a specimen, the assessment of the adequacy of the technical design or the examination of the technical documentation.

As, moreover, the costs of Module A2 are uncertain as well, we have, for illustrative purposes, compared the life cycle costs of Module A2 and Module B+C under different assumptions with respect to the economic life time of an equipment type.

We have assumed that, in the case of Module A2, the costs of new certification are x EUR and the recurring annual costs are B EUR. Based upon the information in Section 4.2.1, we assume for illustrative purposes that $1.66 \cdot y < x < 5 \cdot y$.

We summarize the result of our cost comparison in the table below, where the inequalities are the conditions for Module B+C to be the least costly procedure. If the cell is coloured red, this means that the condition does not seem compatible with the orders

⁴² The vast majority of surveillance authorities admit that they have no view on what the CAP imply for the industry and the notified bodies in terms of costs.

of magnitude for x and y that the stakeholder consultation has suggested. Orange means that the condition is unlikely to be fulfilled in practice.

Table 10: Comparison of Module A2 with Module B+C (life cycle costs)

EC type examination used	Examination of specimen	Assessment of the adequacy of the technical design of the product plus examination of specimens	Examination of technical documentation
Cost of module B+C	$2.x$	$4.x$	x
10 years lifetime	$x < y \cdot 8.79$	$x < y \cdot 2.93$	always
5 years lifetime	$x + y \cdot 4.72$	$x < y \cdot 1.57$	always
2 years lifetime	$x < y \cdot 1.97$	$x < y \cdot 0.65$	always

These results should be interpreted cautiously. In general, we think that, taking into account:

- The wide range and the heterogeneity of the equipment types covered by the Directive on the one hand;
- The limited concrete information on costs and benefits that have been provided by the stakeholders on the other hand,

a robust and meaningful estimate of the costs and benefits of the different options cannot be given.

The most important additional issues with Module A2 are:

- As Module A2 only leaves room for product checks, some companies that currently use Annex VI could switch to Annex VIII.
- The possible use of accredited “in house body” raises questions concerning their independence.
- It is not clear how the requirement to hold “random samples” could be implemented in practice.

The most important additional issues with Module B+C are:

- Whether it can be assumed that the specimen are indeed representative with subsequent production ;
- Whether CE type examination is compatible with the concept of guaranteed sound power level, which is central to the Noise Directive;
- The absence of follow-up of the manufacturing process by the notified bodies when Module C is applied.

Although the Terms of Reference to this study have limited its scope to the consideration of Module A2 and Module B+C, we would like to point out that several stakeholders have proposed to consider other Modules as well. To be more specific:

- Some stakeholders argue that the implication of notified bodies is disproportionate to the risks implied by non-compliance with the Noise Directive (in comparison with, for instance, the risks covered by the Machinery Directive). These

stakeholders think that Module A (“internal production control”) would be sufficient *if combined with effective market surveillance*.

- At the opposite side of the spectrum, one authority has expressed the opinion that, if CE type examination would be applied, further involvement of the notified body in the manufacturing process is essential. Their preferred option would then be Module B+C2 (EC-type examination followed by “conformity to type based on internal production control plus supervised product checks at random interval”).

The impacts are summarized in the table below.

Category	Module A2	Module B + C
Functioning of the internal market	A better alignment with the New Legal Framework could lead to be a better functioning of the internal market, but there are no elements indicating that the change compared to the current situation will be very large.	A better alignment with the New Legal Framework could lead to be a better functioning of the internal market, but there are no elements indicating that the change compared to the current situation will be very large.
Competitiveness, trade and investment flows	The impact of the Noise Directive on international trade depends more on the effectiveness of market surveillance than on the choice of the CAP.	The impact of the Noise Directive on international trade depends more on the effectiveness of market surveillance than on the choice of the CAP.
Operating costs and costs of business	Because Module A2 leaves fewer options than the current Annex VI, some firms may want to move to the use of Annex VIII. This move to full quality assurance will lead to an increase in operating costs. For other firms, no significant change is expected compared to Annex VI	Under Module B+C, the burdens will be concentrated in the evaluation of the specimen. The net effect compared to Module A2 will be product dependent and no option comes unambiguously out as the preferred one for all equipment types.
Administrative burden to companies/SME's	Because Module A2 leaves fewer options than the current Annex VI, some firms may want to move to the use of Annex VIII. This move to full quality assurance will lead to an increase in administrative burdens. For other firms, no significant change is expected compared to Annex VI. The uncertainties surrounding the concept of “random checks” can lead to an increase in transaction	Under Module B+C, the burdens will be concentrated in the evaluation of the specimen. The net effect compared to Module A2 will be product dependent and no option comes unambiguously out as the preferred one for all equipment types. Generally speaking, the administrative complexity of the CAP increases when aligning the Directive with the NLF.

	<p>costs between manufacturers and notified bodies.</p> <p>Generally speaking, the administrative complexity of the CAP increases when aligning the Directive with the NLF.</p>	
Property rights	There are no elements indicating that this option will affect property rights.	There are no elements indicating that this option will affect property rights.
Innovation and technological development	There are no elements indicating that this option will affect innovation and technological development.	There are no elements indicating that this option will affect innovation and technological development.
Consumer and households	There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on side-conditions such as the effectiveness of market surveillance. Therefore, the impact on consumers and households can be expected to be close to zero.	<p>There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on side-conditions such as the effectiveness of market surveillance. Therefore, the impact on consumers and households can be expected to be close to zero.</p> <p>There are some elements indicating that compliance will be slightly lower than under Module A2, but with good market surveillance, this difference should be negligible.</p>
Specific regions, sectors or workers	There are no elements indicating that this option will affect specific regions, sectors or workers.	There are no elements indicating that this option will affect specific regions, sectors or workers.
Third countries and international relations	The impact of the Noise Directive on international trade depends more on the effectiveness of market surveillance than on the choice of the CAP.	The impact of the Noise Directive on international trade depends more on the effectiveness of market surveillance than on the choice of the CAP.
Impact on public authorities, including administrative costs	If the option to use accredited in house conformity assessment bodies would be maintained, then this will add work to the accreditation authorities.	The use of Module B+C may call for higher market surveillance efforts, to compensate for the fact that the notified bodies are not involved in Module C.
Impact on macroeconomic environment	The amounts at stake here can safely be assumed to negligible at the macroeconomic level.	The amounts at stake here can safely be assumed to negligible at the macroeconomic level.

<p>Employment and labour markets</p>	<p>There are no elements indicating that this option will affect employment and the labour market.</p>	<p>There are no elements indicating that this option will affect employment and the labour market.</p>
<p>Standards and rights related to job quality</p>	<p>There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on side-conditions such as the effectiveness of market surveillance. Therefore, the impact on job quality can be expected to be close to zero.</p>	<p>There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on side-conditions such as the effectiveness of market surveillance. Therefore, the impact on job quality can be expected to be close to zero.</p> <p>There are some elements indicating that compliance will be slightly lower than under Module A2, but with good market surveillance, this difference should be negligible.</p>
<p>Social inclusion and protection of particular groups</p>	<p>There are no elements indicating that this option will affect social inclusion.</p>	<p>There are no elements indicating that this option will affect social inclusion.</p>
<p>Public health and safety</p>	<p>There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on side-conditions such as the effectiveness of market surveillance. Therefore, the impact on public health and safety can be expected to be close to zero.</p>	<p>There is no strong indication that a change in the CAP will modify the probability of compliance with the Directive significantly. Moreover, the effect on the probability of compliance depends largely on side-conditions such as the effectiveness of market surveillance. Therefore, the impact on public health and safety can be expected to be very small.</p> <p>There are some elements indicating that compliance will be slightly lower than under Module A2, but with good market surveillance, this difference should be negligible.</p>

5 Literature list

ARCADIS Belgium, Impact Assessment Study on possible policy options for reviewing the Outdoor Equipment Noise Directive, Final report, 30 January 2009,

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TNO : Noise of Machinery – Evaluation of Directive 2000/14/EC Study on the experience in the implementation and administration of Directive 2000/14/EC relating to the noise emission in the environment by equipment for use outdoors, FINAL REPORT, 12 December 2007.

http://ec.europa.eu/enterprise/mechan_equipment/noise/pdf/nomeval_rep12-12-07.pdf

WG7: Contribution to the Commission Report required by Article 20 of Directive 2000/14/EC

A Questionnaires for the SME test

Some elements are common to all questionnaires related to the SME test: the table with covered equipment types, the background information and the table with the cost increases linked to each scenario. Therefore, these have only been represented for the first questionnaire (the SME test for producers).

A.1 Questionnaire SME test producers

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENT), ARCADIS Belgium has recently performed a complete and detailed assessment⁴³ (“the IA study”) of the impacts and distributive effects of three scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the “Noise Directive”).

DG ENT has now awarded a new contract to ARCADIS to complement the existing Impact Assessment Study with a detailed assessment of the specific impacts the identified policy options may have on SMEs.

The objectives of this study are:

- to understand how the identified policy options affect the SMEs in comparison with larger enterprises
- to identify and to assess possible alternative options and mitigating measures for SMEs

The input from field players like you is essential in order to obtain a good understanding of these issues. Therefore, we kindly ask you to fill in the questionnaire attached to this letter.

As your answers will be part of the inputs to the preparation of the legislative process, they can be **important for the future of your business**.

This will usually not last longer than 1 hour.

This questionnaire is organised as follows:

- Annex A contains for your information some general information on the Noise Directive and the steps that have been undertaken until now in the review of the Noise Directive
- In Annex B, you are requested to identify yourself, and to select the equipment types you produce in a limitative list.
- Annex C contains the questionnaire properly speaking.
- Annex D summarizes all the scenarios that have been the subject of the IA study.

If your company does not use any of the equipment types listed in Table of Annex B, you do not need to fill out the questionnaire.

Please send the filled out questionnaire by 25 September 2009 to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

Laurent Franckx, PhD
 Department Strategic Policy Advice
 Project manager environmental economics

⁴³ http://ec.europa.eu/enterprise/mechan_equipment/noise/studies.htm#a

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A. BACKGROUND INFORMATION

Directive 2000/14/EC as amended (hereinafter “Noise Directive”) aims to harmonise the laws of the Member States relating to noise emission standards, conformity assessment procedures, technical documentation and collection of data concerning the noise emissions in the environment of equipment for use outdoors.

The Noise Directive requires noise marking for 57 types of equipment used outdoors, and additionally, sets noise limits for 22 of these⁴⁴. For those types of equipment where permissible sound power levels apply there are two stages of application. The first one came into force on 3 January 2002 (“stage 1”); the second series of reduced limits was due to come into operation on 3 January 2006 (“stage 2”). For all types of equipments covered by the Directive, procedures and operating conditions are specified for measurement of the sound power level.

In order to allow certain types of equipment (for which clear technical evidence has been provided that stage II limits were presently not yet technically feasible) to be placed on the market, an amending Directive 2005/88/EC (hereafter ‘amendment’) was adopted which made the stage II permissible sound power levels for certain types of equipment indicative only. These indicative power levels may be turned into compulsory ones if the current review of Directive 2000/14/EC would indicate such need and conclude that the Noise Directive should be amended accordingly.

According to Article 20 of the Noise Directive the Commission shall submit to the European Parliament and the Council a report concerning the Commission’s experience in the implementation and administration of this Directive. In anticipation of this report, a stocktaking study on the experience in the implementation and administration of the Noise Directive, was carried out by TNO in 2007⁴⁵. The study has concluded with a number of possible scenarios for strengthening limits, transfers of equipment types from Article 13 (no noise limits) to Article 12 (noise limits), additions of new types of equipment both in Article 12 and 13 and on the other hand for removal of some types of equipment from the Noise directive. In addition it concludes with several considerations for changing of the test codes.

In parallel, regular meetings have been organized with stakeholders to review the implementation and administration of the Directive and to discuss the findings of the aforementioned study. In order to take account of diverging opinions voiced by stakeholders, alternative scenarios have been considered by a technical experts group as published in the position paper issued by WG7⁴⁶:

- | | |
|---------------------------------|--|
| Scenario 1 (baseline scenario): | ‘do-nothing-option’ – retain of the status quo, no change of the Directive |
| Scenario 2: | as suggested by the stocktaking study made by TNO ⁴⁷ |
| Scenario 3: | as suggested by WG7 (Industry, Member States, Notified Bodies...) |

⁴⁴ These equipment types are listed in Article 12 – the equipment types for which only labelling is required are listed in Article 13.

⁴⁵ TNO: Noise of Machinery – Evaluation of Directive 2000/14/EC Study on the experience in the implementation and administration of Directive 2000/14/EC relating to the noise emission in the environment by equipment for use outdoors, FINAL REPORT, 12 December 2007.

⁴⁶ A position paper from WG7: Contribution to the Commission Report required by Article 20 of Directive 2000/14/EC

⁴⁷ http://ec.europa.eu/enterprise/mechan_equipment/noise/pdf/nomeval_rep12-12-07.pdf

There are not always three scenarios applicable to each individual type of equipment. However, consensus was reached on the fact that the three options cover all the options that can be reasonably defined. In case of snowmobiles there are four options: (1) do-nothing-option, (2) scenario TNO, (3) scenario WG7, (4) scenario developed by the snowmobile manufacturing industry.

The scenarios are described in detail Annex D to this letter.

A detailed impact assessment has recently been undertaken by ARCADIS Belgium, addressing the technical, social, environmental and economical aspects of each alternative. The Commission services have judged that this analysis needs to be complemented with a more extended and detailed assessment of impacts related to SMEs (the "SME test", as specified in the updated Commission's Impact Assessment Guidelines of 15th of January 2009).

The full background to the Noise Directive can be found on:

http://ec.europa.eu/enterprise/mechan_equipment/noise/index.htm

B. IDENTIFICATION OF THE RESPONDENT

1. Name of your company

.....

2. Contact person

Name:

.....

Telephone number:

.....

Mobile number:

.....

Email:

.....

3. Activities of your company

Please describe in general terms the activities of your company.

.....

3 Size of the company

For the purposes of this study, we use the following classification of SMEs. Please mark with which is applicable on your company:

Enterprise category	Headcount – Annual Work Unit (AWU)	Annual turnover	or	Annual balance sheet total	
Medium-sized	< 250	≤ €50 million	or	≤ €43 million	<input type="checkbox"/>
Small	< 50	≤ €10 million	or	≤ €10 million	<input type="checkbox"/>
Micro	< 10	≤ €2 million	or	≤ €2 million	<input type="checkbox"/>

4. List of products manufactured or traded

A total of 57 outdoor equipment types are the subject of the Directive. Some extra equipment types have been added in scenario 2. Most of them are split up in subcategories to reflect the different scenario options. Please mark with in the checkbox the equipment types relevant for your company. - **choose the level of detail for which information is readily available.**

Please note that this table is limited to the equipment types for which the IA study has identified cost increases compared to scenario I (should scenario II or III be applied).

Table 1: covered equipment types

checkbox	Identification number	Description
I. cleaning equipment		
<input type="checkbox"/>	26	high pressure flushers
<input type="checkbox"/>	27	high pressure water jet machines
<input type="checkbox"/>	27a	high pressure water jet machines, < 3kW, electric
<input type="checkbox"/>	27b	high pressure water jet machines, other
<input type="checkbox"/>	46	power sweepers
<input type="checkbox"/>	109	road sweepers, no aspirators; motorised broom
II. Construction machinery		
IIa. construction machinery; excavators and dozers		
<input type="checkbox"/>	16	dozers (< 500 kW)
<input type="checkbox"/>	16c	dozers (< 500 kW), steel tracked
<input type="checkbox"/>	16ca	dozers (< 500 kW), steel tracked, $P \leq 55$
<input type="checkbox"/>	16cb	dozers (< 500 kW), steel tracked, $P > 55$
IIb. construction machinery; saws		
<input type="checkbox"/>	5	building site circular saw benches
<input type="checkbox"/>	30	joint cutters
<input type="checkbox"/>	119	stone circular saw
<input type="checkbox"/>	120	stone chainsaw
IIc. other construction machinery		
<input type="checkbox"/>	8	compaction machines
<input type="checkbox"/>	8b	compaction machines, vibratory plates
<input type="checkbox"/>	8bb	compaction machines, vibratory plates $3 < P \leq 8$
<input type="checkbox"/>	8bc	compaction machines, vibratory plates $8 < P \leq 70$
<input type="checkbox"/>	8bd	compaction machines, vibratory plates $P > 70$
<input type="checkbox"/>	8c	compaction machines, vibratory rammers
<input type="checkbox"/>	8ca	compaction machines, vibratory rammers, $P \leq 8$
<input type="checkbox"/>	8cb	compaction machines, vibratory rammers, $8 < P \leq 70$
<input type="checkbox"/>	8cc	compaction machines, vibratory rammers, $P > 70$
<input type="checkbox"/>	8d	compaction machines, walk by, vibrating rollers
<input type="checkbox"/>	8da	compaction machines, walk by, vibrating rollers, $P \leq 8$
<input type="checkbox"/>	8db	compaction machines, walk by, vibrating rollers, $8 < P \leq 70$
<input type="checkbox"/>	8dc	compaction machines, walk by, vibrating rollers, $P > 70$
<input type="checkbox"/>	13	conveying and spraying machines for concrete and mortar
<input type="checkbox"/>	17	drill rigs
<input type="checkbox"/>	17a	drill rigs, percussive
<input type="checkbox"/>	17b	drill rigs, non percussive
<input type="checkbox"/>	28	hydraulic hammer
<input type="checkbox"/>	42	piling equipment
<input type="checkbox"/>	42a	piling equipment, impacting
<input type="checkbox"/>	42b	piling equipment, vibrating + static
<input type="checkbox"/>	48	road milling machines
<input type="checkbox"/>	55	truck mixers
III gardening equipment		
<input type="checkbox"/>	2	brush cutters
<input type="checkbox"/>	6	chain saws, portable

<input type="checkbox"/>	6a	chain saws, portable, CE
<input type="checkbox"/>	6b	chain saws, portable, electric
<input type="checkbox"/>	24	grass trimmers/grass edge trimmers
<input type="checkbox"/>	25	hedge trimmers
<input type="checkbox"/>	25a	hedge trimmers, CE
<input type="checkbox"/>	32	lawnmowers
<input type="checkbox"/>	32a	lawnmowers, $L \leq 50$
<input type="checkbox"/>	32b	lawnmowers, $50 < L \leq 70$
<input type="checkbox"/>	32c	lawnmowers, $70 < L \leq 120$
<input type="checkbox"/>	32d	lawnmowers, $L > 120$
<input type="checkbox"/>	33	lawn trimmers/lawn edge trimmers
<input type="checkbox"/>	33a	lawn trimmers/lawn edge trimmers, $L \leq 30$
<input type="checkbox"/>	33b	lawn trimmers/lawn edge trimmers, $30 \leq L \leq 50$
<input type="checkbox"/>	34	leaf blowers
<input type="checkbox"/>	34a	leaf blowers, CE
<input type="checkbox"/>	34b	leaf blowers, electric
<input type="checkbox"/>	35	leaf collectors
<input type="checkbox"/>	35a	leaf collectors, CE
<input type="checkbox"/>	35b	leaf collectors, electric
<input type="checkbox"/>	49	scarifiers
<input type="checkbox"/>	49a	scarifiers, CE
<input type="checkbox"/>	50	shredders/chippers
<input type="checkbox"/>	50a	shredders/chippers, inlet ≤ 200 mm CE
<input type="checkbox"/>	50b	shredders/chippers, inlet ≤ 200 mm electric
<input type="checkbox"/>	50c	shredders/chippers, inlet > 200 mm
<input type="checkbox"/>	115	telescopic pruner
<input type="checkbox"/>	115a	telescopic pruner, CE
<input type="checkbox"/>	115b	telescopic pruner, electric
IV loading and lifting equipment		
<input type="checkbox"/>	1	aerial access platforms with combustion engine
<input type="checkbox"/>	36	lift trucks, combustion-engine driven, counterbalanced
<input type="checkbox"/>	36a	lift trucks, combustion-engine driven, counterbalanced, $>10t$, vertical mast
<input type="checkbox"/>	36ab	lift trucks, combustion-engine driven, counterbalanced, $>10t$, vertical mast, $P > 55$
<input type="checkbox"/>	36b	lift trucks, combustion-engine driven, counterbalanced, $>10t$, variable reach
<input type="checkbox"/>	36bb	lift trucks, combustion-engine driven, counterbalanced, $>10t$, variable reach, $P > 55$
<input type="checkbox"/>	36c	lift trucks, combustion-engine driven, counterbalanced, $<10t$
<input type="checkbox"/>	36ca	lift trucks, combustion-engine driven, counterbalanced, $<10t$, $P \leq 55$
<input type="checkbox"/>	36cb	lift trucks, combustion-engine driven, counterbalanced, $<10t$, $P > 55$
<input type="checkbox"/>	37	loaders (< 500 kW)
<input type="checkbox"/>	37b	loaders, rubber tracked (< 500 kW) or steel tracked (<55 kW)
<input type="checkbox"/>	37bc	loaders, steel tracked, $P \leq 55$
<input type="checkbox"/>	37c	loaders, steel tracked, $55 < P < 500$
<input type="checkbox"/>	107	bridge/gantry cranes
<input type="checkbox"/>	117	straddle carrier
<input type="checkbox"/>	118	reach stacker
V power generators and cooling equipment		
<input type="checkbox"/>	15	cooling equipment on vehicles
<input type="checkbox"/>	29	hydraulic power packs
<input type="checkbox"/>	29a	hydraulic power packs, $P \leq 40$
<input type="checkbox"/>	29b	hydraulic power packs, $40 \leq P \leq 55$
<input type="checkbox"/>	45	power generators

<input type="checkbox"/>	45a	power generators, < 400 kW, $P_{el} \leq 2$
<input type="checkbox"/>	45b	power generators, < 400 kW, $2 < P_{el} \leq 10$
<input type="checkbox"/>	45c	power generators, < 400 kW, $P_{el} > 10$
<input type="checkbox"/>	45d	power generators, ≥ 400 kW
<input type="checkbox"/>	57	welding generators
<input type="checkbox"/>	57a	welding generators, $P_{el} \leq 2$
<input type="checkbox"/>	57b	welding generators, $2 < P_{el} \leq 10$
<input type="checkbox"/>	57c	welding generators, $P_{el} > 10$
VI: pumping and suction equipment		
<input type="checkbox"/>	7	combined high pressure flushers and suction vehicles
<input type="checkbox"/>	9	compressors (< 350 kW)
<input type="checkbox"/>	9a	compressors (< 350 kW), $P \leq 15$
<input type="checkbox"/>	19	equipment for loading and unloading silos or tanks on trucks
<input type="checkbox"/>	52	suction vehicles
<input type="checkbox"/>	56	water pump units (not for use under water)
<input type="checkbox"/>	56a	water pump units (not for use under water), electric
<input type="checkbox"/>	56b	water pump units (not for use under water), CE
<input type="checkbox"/>	121	swimming pool pumps
VII snowmobiles and snowgroomers		
<input type="checkbox"/>	111	snow mobiles
VIII: waste collection, processing and recycling		
<input type="checkbox"/>	22	glass recycling containers
<input type="checkbox"/>	39	mobile waste containers
<input type="checkbox"/>	47	refuse collection vehicles
<input type="checkbox"/>	102	mobile sieve installation
<input type="checkbox"/>	103	mobile waste breakers

(j) higher flexibility

(k) other advantages (please detail)

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Please provide any quantitative information that can help substantiate your appreciation of these (dis)advantages.

7. Per equipment type, the IA study has provided detailed estimates of the cost increases for each scenario. These estimates are provided in detail in Annex D. As the equipment manufacturers can pass on part of their costs, these cost increases can also affect you professional users indirectly. Do you have elements indicating that a disproportionate share of these costs would be borne by SMEs? Please be as concrete as possible⁴⁸.

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8. Please suggest possible changes in the existing Noise Directive that would better take into account the specific needs of SMEs amongst the professional end users of the equipment.

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9. Please add any comments on this questionnaire.

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⁴⁸ Take into account that the scope of this study is not to develop new of changed scenarios but to assess the impact of the proposed scenarios, or to select the most appropriate scenario for each equipment type.

D. COST INCREASES LINKED TO THE POSSIBLE SCENARIOS

For each scenario that has been analysed in the context of the IA study, this annex provides the estimate of the cost linked to this scenario:

- Scenario 1: 'do-nothing-option' – retain of the status quo, no change of the Directive
- Scenario 2: as suggested by the stocktaking study
- Scenario 3: as suggested by WG7 (Industry, Member States, Notified Bodies...)

There are not always three options for each individual type of equipment. Consensus was reached on the fact that the three options cover all the options that can be reasonably defined. In the case of snowmobiles there are four options: (1) do-nothing-option, (2) scenario TNO-NOMEVAL, (3) scenario WG7, (4) scenario developed by the snowmobile manufacturing industry.

Cluster number	subcategory number Arcadis	Calculated change in compliance cost scenario I -> II (Million €)	Calculated change in compliance cost scenario I -> III (Million €)	Calculated change in compliance cost scenario I -> II (%)	Calculated change in compliance cost scenario I -> III (%)
I	26	25.8	25.8	4.30%	4.30%
	109	0.22	0.22	1.10%	1.10%
	27a	1.01	1.01	8.05%	8.05%
	27b	0.09	0.09	0.75%	0.75%
	46a	6.45	6.45	4.30%	4.30%
	46b	19.35	19.35	4.30%	4.30%
Iia	16ca	0	1.98	0.00%	4.25%
	16cb	0	2.98	0.00%	4.25%
IIb	5	3.78	0	6.30%	0.00%
	30	0.32	0	6.30%	0.00%
	119	2.36	1.89	7.88%	6.30%
IIC	13	-1.38	-1.38	-0.55%	-0.55%
	28	3.94	3.94	6.30%	6.30%
	17aa	3.1	-0.32	4.30%	-0.45%
	17ab	4.64	-0.49	4.30%	-0.45%
	17ba	2.06	1.85	4.30%	3.85%
	17bb	3.1	2.77	4.30%	3.85%
	42a	0.18	0	0.45%	0.00%
	42b	3.8	0	4.75%	0.00%
	48a	1.7	0	4.30%	0.00%
	48b	2.63	0	4.30%	0.00%
	55a	10.6	0	5.30%	0.00%
	55b	12.9	0	4.30%	0.00%
	8bb	13.24	0	4.20%	0.00%
	8bc	13.24	0	4.20%	0.00%
8bd	13.24	0	4.20%	0.00%	

	8ca	6.25	0	5.25%	0.00%	
	8cb	6.25	0	5.25%	0.00%	
	8cc	6.25	0	5.25%	0.00%	
	8da	2.72	-0.36	3.40%	-0.45%	
	8db	2.72	-0.36	3.40%	-0.45%	
	8dc	2.72	-0.36	3.40%	-0.45%	
III	2	0.92	0.92	7.30%	7.30%	
	24	22.63	28.29	7.30%	9.13%	
	115a	1.45	1.3	6.30%	5.65%	
	115b	0.16	0.14	6.30%	5.65%	
	25a	0.48	0.48	7.30%	7.30%	
	32a	177.48	177.48	5.80%	5.80%	
	32b	13.5	0	5.00%	0.00%	
	32c	25	25	5.00%	5.00%	
	32d	8.5	8.5	5.00%	5.00%	
	33a	4.82	4.82	7.25%	7.25%	
	33b	4.24	0	7.25%	0.00%	
	34a	0.6	0.6	7.30%	7.30%	
	34b	5.29	5.29	7.30%	7.30%	
	35a	0.6	0.6	7.30%	7.30%	
	35b	5.29	5.29	7.30%	7.30%	
	49a	0.44	0.44	7.30%	7.30%	
	50a	0.55	0	7.30%	0.00%	
	50b	0.55	0	7.30%	0.00%	
	50c	1.1	0	7.30%	0.00%	
	50d	0	0	0.00%	0.00%	
		6a	27.38	21.9	9.13%	7.30%
		6b	2.52	2.52	7.30%	7.30%
	IV	107	28	0	0.70%	0.00%
1a		12.72	12.72	5.30%	5.30%	
1b		19.08	19.08	5.30%	5.30%	
36aa		0	0	0.00%	0.00%	
36ab		74.72	64.94	4.20%	3.65%	
36ba		0	0	0.00%	0.00%	
36bb		217.94	189.4	5.25%	4.56%	
36ca		38.96	0	5.30%	0.00%	
36cb		16.7	0	5.30%	0.00%	
37bc		1.09	1.09	3.40%	3.40%	
V	15	86.88	63	8.69%	6.30%	
	29a	0.96	0	6.25%	0.00%	
	29b	1.53	1.53	5.00%	5.00%	
	45a	15.63	12.5	6.25%	5.00%	
	45b	31.25	0	6.25%	0.00%	
	45c	65.63	0	5.25%	0.00%	
	45d	86	86	4.30%	4.30%	
	57a	7.81	0	6.25%	0.00%	
	57b	15.63	12.5	6.25%	5.00%	
	57c	32.81	0	5.25%	0.00%	

VI	7	25.8	25.8	4.30%	4.30%
	19	-0.55	0	-0.55%	0.00%
	52	12.9	12.9	4.30%	4.30%
	56aa	17.89	17.89	5.30%	5.30%
	56ab	35.78	35.78	5.30%	5.30%
	56ba	17.89	0	5.30%	0.00%
	56bb	35.78	0	5.30%	0.00%
	9a	0	-0.2	0.00%	-0.65%
VII	111	26.5	19	6.63%	4.75%
VIII	22	7.3	7.3	7.30%	7.30%
	39	196.5	219	6.55%	7.30%
	47	86	-9	4.30%	-0.45%
	102	5.81	1.22	4.30%	0.90%
	103	13.98	2.93	4.30%	0.90%
Total		1711.7	1144.01		

A.2 SME test professional end users

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENT), ARCADIS Belgium has recently performed a complete and detailed assessment⁴⁹ ("the IA study") of the impacts and distributive effects of three scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the "Noise Directive").

DG ENT has now awarded a new contract to ARCADIS to complement the existing Impact Assessment Study with a detailed assessment of the specific impacts the identified policy options may have on SMEs.

The objectives of this study are:

- to understand how the identified policy options affect the SMEs in comparison with larger enterprises
- to identify and to assess possible alternative options and mitigating measures for SMEs

The input from field players like you is essential in order to obtain a good understanding of these issues. Therefore, we kindly ask you to fill in the questionnaire attached to this letter.

As your answers will be part of the inputs to the preparation of the legislative process, they can be **important for the future of your business**.

This will usually not last longer than 1 hour.

This questionnaire is organised as follows:

- Annex A contains for your information some general information on the Noise Directive and the steps that have been undertaken until now in the review of the Noise Directive
- In Annex B, you are requested to identify yourself, and to select the equipment types you use in a limitative list.
- Annex C contains the questionnaire properly speaking.
- Annex D summarizes all the scenarios that have been the subject of the IA study.

If your company does not use any of the equipment types listed in Table 1 of Annex B, you do not need to fill out the questionnaire.

Please send the filled out questionnaire by 25 September 2009 to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

(pm – same for all questionnaires)

⁴⁹ http://ec.europa.eu/enterprise/mechan_equipment/noise/studies.htm#a

A. BACKGROUND INFORMATION

(pm – same for all questionnaires)

B. IDENTIFICATION OF THE RESPONDENT

(pm – same for all questionnaires)

4. List of products manufactured or traded

A total of 57 outdoor equipment types are the subject of the Directive. Some extra equipment types have been added in scenario 2. Most of them are split up in subcategories to reflect the different scenario options. Please mark with in the checkbox the equipment types relevant for your company. - **choose the level of detail for which information is readily available.**

(pm – same for all questionnaires)

C. QUESTIONNAIRE

When you refer to “equipment type” in the questionnaire, please use the numbering used in the table in annex B.

1. For each equipment type you use that is subject the Directive, could you give an indication of their importance in your cost structure (both in EUR and in relative terms) for your activities within the European Union?

equipment number	EUR	Relative terms (compared to total costs)

2. Could you describe briefly your assessment of the **current** situation in the market(s) you are operating in. Elements that should be taken into account are: existing and potential competition, general growth prospects, maturity of the technology, etc

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3. Do you think you operate in a market where size constitutes a competitive advantage/disadvantage?

To what factors would you ascribe these cost (dis)advantages?

A (non-limitative) list of possible sources for cost disadvantages for small enterprises are:

- (a) high share of fixed costs for R&D
- (b) high share of fixed costs for marketing
- (c) high fixed levels of physical capital
- (d) high fixed costs linked to testing and conformity assessment

- (e) high fixed costs linked to the understanding of the regulatory context
- (f) weak negotiating position with respect to clients or suppliers: difficulties to obtain discounts
- (g) difficult access to capital markets
- (h) other disadvantages (please detail)

A (non-limitative) list of possible for cost advantages for small enterprises are:

- (i) better understanding of a specific niche (geographical or technical)
- (j) higher flexibility
- (k) other advantages (please detail)

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Please provide any quantitative information that can help substantiate your appreciation of these (dis)advantages.

7. Per equipment type, the IA study has provided detailed estimates of the cost increases for each scenario. These estimates are provided in detail in Annex D. As the equipment manufacturers can pass on part of their costs, these cost increases can also affect you professional users indirectly. Do you have elements indicating that a disproportionate share of these costs would be borne by SMEs? Please be as concrete as possible⁵⁰.

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8. Please suggest possible changes in the existing Noise Directive that would better take into account the specific needs of SMEs amongst the professional end users of the equipment.

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9. Please add any comments on this questionnaire.

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D. COST INCREASES LINKED TO THE POSSIBLE SCENARIOS

(pm – same for all questionnaires)

⁵⁰ Take into account that the scope of this study is not to develop new of changed scenarios but to assess the impact of the proposed scenarios, or to select the most appropriate scenario for each equipment type.

A.3 Questionnaire SME test notified bodies

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENT), ARCADIS Belgium has recently performed a complete and detailed assessment⁵¹ ("the IA study") of the impacts and distributive effects of three scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the "Noise Directive").

DG ENT has now awarded a new contract to ARCADIS to complement the existing Impact Assessment Study with a detailed assessment of the specific impacts the identified policy options may have on SMEs.

The objectives of this study are:

- to understand how the identified policy options affect the SMEs in comparison with larger enterprises
- to identify and to assess possible alternative options and mitigating measures for SMEs

The input from field players like you is essential in order to obtain a good understanding of these issues. Therefore, we kindly ask you to fill in the questionnaire attached to this letter.

As your answers will be part of the inputs to the preparation of the legislative process, they can be **important for the future of your business**.

This will usually not last longer than 1 hour.

This questionnaire is organised as follows:

- Annex A contains for your information some general information on the Noise Directive and the steps that have been undertaken until now in the review of the Noise Directive
- In Annex B, you are requested to identify yourself, and to select the equipment types you produce in a limitative list.
- Annex C contains the questionnaire properly speaking.
- Annex D summarizes all the scenarios that have been the subject of the IA study.

If your company does not use any of the equipment types listed in Table 1 of Annex B, you do not need to fill out the questionnaire.

Please send the filled out questionnaire by 25 September 2009 to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

(pm – same for all questionnaires)

⁵¹ http://ec.europa.eu/enterprise/mechan_equipment/noise/studies.htm#a

A. BACKGROUND INFORMATION

(pm – same for all questionnaires)

B. IDENTIFICATION OF THE RESPONDENT

(pm – same for all questionnaires)

4. List of products manufactured or traded

A total of 57 outdoor equipment types are the subject of the Directive. Some extra equipment types have been added in scenario 2. Most of them are split up in subcategories to reflect the different scenario options. Please mark with in the checkbox the equipment types relevant for your company. - **choose the level of detail for which information is readily available.**

Please note that this table is limited to the equipment types for which the IA study has identified cost increases compared to scenario I (should scenario II or III be applied).

(pm – same for all questionnaires)

C. QUESTIONNAIRE

When you refer to “equipment type” in the questionnaire, please use the numbering used in the table in annex B.

1. For each equipment type you use that is subject the Directive, could you give an indication of their importance in your cost structure (both in EUR and in relative terms) for your activities within the European Union?

equipment number	EUR	Relative terms (compared to total costs)

2. Could you describe briefly your assessment of the **current** situation in the market(s) you are operating in. Elements that should be taken into account are: existing and potential competition, general growth prospects, maturity of the technology, etc

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3. Do you think you operate in a market where size constitutes a competitive advantage/disadvantage?

To what factors would you ascribe these cost (dis)advantages?

A (non-limitative) list of possible sources for cost disadvantages for small enterprises are:

- (a) high share of fixed costs for R&D

- (b) high share of fixed costs for marketing
- (c) high fixed levels of physical capital
- (d) high fixed costs linked to testing and conformity assessment
- (e) high fixed costs linked to the understanding of the regulatory context
- (f) weak negotiating position with respect to clients or suppliers: difficulties to obtain discounts
- (g) difficult access to capital markets
- (h) other disadvantages (please detail)

A (non-limitative) list of possible for cost advantages for small enterprises are:

- (i) better understanding of a specific niche (geographical or technical)
- (j) higher flexibility
- (k) other advantages (please detail)

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Please provide any quantitative information that can help substantiate your appreciation of these (dis)advantages.

7. Per equipment type, the IA study has provided detailed estimates of the cost increases for each scenario. These estimates are provided in detail in Annex D. As the equipment manufacturers can pass on part of their costs, these cost increases can also affect you professional users indirectly. Do you have elements indicating that a disproportionate share of these costs would be borne by SMEs? Please be as concrete as possible⁵².

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8. Please suggest possible changes in the existing Noise Directive that would better take into account the specific needs of SMEs amongst the professional end users of the equipment.

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9. Please add any comments on this questionnaire.

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D. COST INCREASES LINKED TO THE POSSIBLE SCENARIOS

(pm – same for all questionnaires)

⁵² Take into account that the scope of this study is not to develop new of changed scenarios but to assess the impact of the proposed scenarios, or to select the most appropriate scenario for each equipment type.

A.4 SME test: adapted questionnaire for FIEC

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENT), ARCADIS Belgium has recently performed a complete and detailed assessment⁵³ (“the IA study”) of the impacts and distributive effects of three scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the “Noise Directive”).

DG ENT has now awarded a new contract to ARCADIS to complement the existing Impact Assessment Study with a detailed assessment of the specific impacts the identified policy options may have on SMEs.

The objectives of this study are:

- to understand how the identified policy options affect the SMEs in comparison with larger enterprises
- to identify and to assess possible alternative options and mitigating measures for SMEs

The input from field players like you is essential in order to obtain a good understanding of these issues. Therefore, we kindly ask you to fill in the questionnaire attached to this letter.

As your answers will be part of the inputs to the preparation of the legislative process, they can be **important for the future of your business**.

This will usually not last longer than 1 hour.

This questionnaire is organised as follows:

- Annex A contains for your information some general information on the Noise Directive and the steps that have been undertaken until now in the review of the Noise Directive
- In Annex B, you are requested to identify yourself, and to select the equipment types you produce in a limitative list.
- Annex C contains the questionnaire properly speaking.
- Annex D summarizes all the scenarios that have been the subject of the IA study.

If your company does not use any of the equipment types listed in Table of Annex B, you do not need to fill out the questionnaire.

Please send the filled out questionnaire by 25 September 2009 to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

(pm – same for all questionnaires)

⁵³ http://ec.europa.eu/enterprise/mechan_equipment/noise/studies.htm#a

A. BACKGROUND INFORMATION

(pm – same for all questionnaires)

B. IDENTIFICATION OF THE RESPONDENT

(pm – same for all questionnaires)

4. List of products manufactured or traded

A total of 57 outdoor equipment types are the subject of the Directive. Some extra equipment types have been added in scenario 2. Most of them are split up in subcategories to reflect the different scenario options. Please mark with in the checkbox the equipment types relevant for your company. - **choose the level of detail for which information is readily available.**

Please note that this table is limited to the equipment types for which the IA study has identified cost increases compared to scenario I (should scenario II or III be applied).

(pm – same for all questionnaires)

C. QUESTIONNAIRE

When you refer to “equipment type” in the questionnaire, please use the numbering used in the table in annex B.

1. For each equipment type you use that is subject the Directive, could you give an indication of their importance in your cost structure (both in EUR and in relative terms) for your activities within the European Union?

equipment number	EUR	Relative terms (compared to total costs)

2. Could you describe briefly your assessment of the **current** situation in the market(s) you are operating in. Elements that should be taken into account are: existing and potential competition, general growth prospects, maturity of the technology, etc

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3. Do you think you operate in a market where size constitutes a competitive advantage/disadvantage?

To what factors would you ascribe these cost (dis)advantages?

A (non-limitative) list of possible sources for cost disadvantages for small enterprises are:

(a) high share of fixed costs for R&D

- (b) high share of fixed costs for marketing
- (c) high fixed levels of physical capital
- (d) high fixed costs linked to testing and conformity assessment
- (e) high fixed costs linked to the understanding of the regulatory context
- (f) weak negotiating position with respect to clients or suppliers: difficulties to obtain discounts
- (g) difficult access to capital markets
- (h) other disadvantages (please detail)

A (non-limitative) list of possible for cost advantages for small enterprises are:

- (i) better understanding of a specific niche (geographical or technical)
- (j) higher flexibility
- (k) other advantages (please detail)

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Please provide any quantitative information that can help substantiate your appreciation of these (dis)advantages.

7. Per equipment type, the IA study has provided detailed estimates of the cost increases for each scenario. These estimates are provided in detail in Annex D. As the equipment manufacturers can pass on part of their costs, these cost increases can also affect you professional users indirectly. Do you have elements indicating that a disproportionate share of these costs would be borne by SMEs? Please be as concrete as possible⁵⁴.

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8. Please suggest possible changes in the existing Noise Directive that would better take into account the specific needs of SMEs amongst the professional end users of the equipment.

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9. Please add any comments on this questionnaire.

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D. COST INCREASES LINKED TO THE POSSIBLE SCENARIOS

(pm – same for all questionnaires)

⁵⁴ Take into account that the scope of this study is not to develop new of changed scenarios but to assess the impact of the proposed scenarios, or to select the most appropriate scenario for each equipment type.

A.5 SME test: adapted questionnaire for ENFE

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENTR), ARCADIS Belgium has recently performed a complete and detailed assessment ("the IA study") of the impacts and distributive effects of various scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the "Noise Directive").

DG ENTR has now awarded a new contract to ARCADIS to complement the existing Impact Assessment Study with a detailed assessment of the impacts the identified policy options may have on SMEs.

The objectives of this study are:

- to understand how the identified policy options affect the SMEs in comparison with larger enterprises
- to identify and to assess possible alternative options and mitigating measures for SMEs

As the manufacturers of the equipment covered by the study have the option to pass on part of their costs to their clients, **we believe that your members**, as professional users of some of the equipment covered by the Directive, **could also be affected** by changes in the Directive.

The input from field players like your members is essential in order to obtain a good understanding of these issues. As your answers will be part of the inputs to the preparation of the legislative process, they can be **important for the future of the business of your members**.

Therefore, we kindly ask you to fill in the questionnaire attached to this letter. This will usually not last longer than 1 hour.

This questionnaire is organised as follows:

- Annex A contains general information on the Noise Directive and the steps that have been undertaken until now
- In Annex B, you are requested to identify yourself, and to list which equipment types your members use fall within the scope of this study.
- Annex C contains the questionnaire properly speaking.
- Annex D provides cost estimates linked to each scenario that has been the subject of the IA study.

Please send the filled out questionnaire by 05 September 2009 to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

(pm – same for all questionnaires)

A. BACKGROUND INFORMATION

(pm – same for all questionnaires)

B. IDENTIFICATION OF THE RESPONDENT

(pm – same for all questionnaires)

5. List of products used

A total of 57 outdoor equipment types are the subject of the Directive. Some extra equipment types have been added in scenario 2. Most of them are split up in subcategories to reflect the different scenario options. Please mark with in the checkbox the equipment types that your members use professionally - **choose the level of detail for which information is readily available.**

Please note that this table is limited to the equipment types for which the IA study has identified cost changes compared to scenario I (should scenario II or III be applied).

If none of these are used by your members, please do not further complete the questionnaire.

(pm – same for all questionnaires)

C. QUESTIONNAIRE

When you refer to “equipment type” in the questionnaire, please use the numbering used in the table in annex B.

1. For each equipment type used by your members, do you have any elements indicating that compliance with the Noise Directive has led to decreased power of the equipment they use? If there any other positive or negative side-effects of more stringent Noise limits, please also give them.

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2. For each equipment type used by your members, do you think that current noise levels are a nuisance for them? Would they like to see a further decrease in Noise levels? How do they cope with the nuisance currently caused by the noise levels?

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3. Annex D provides cost estimates linked to each scenario that has been the subject of the Impact Assessment study. Do you think that the suppliers of

equipment could pass on these costs to the end users? How do you think such cost increases would affect demand by your members? In case some equipment types would become too expensive, are there any substitutes available for you as end users (for instance, electricity driven engines instead of diesel powered engines)?

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4. Would it be possible to give an indication of the importance of each equipment category within the total cost structure of your members (preferably split up in: fuel costs, depreciation, maintenance etc)?

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D. COST CHANGES LINKED TO THE POSSIBLE SCENARIOS

(pm – same for all questionnaires)

A.6 SME test : specific questionnaire for ELCA

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENTR), ARCADIS Belgium has recently performed a complete and detailed assessment ("the IA study") of the impacts and distributive effects of various scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the "Noise Directive").

DG ENTR has now awarded a new contract to ARCADIS to complement the existing Impact Assessment Study with a detailed assessment of the impacts the identified policy options may have on SMEs.

The objectives of this study are:

- to understand how the identified policy options affect the SMEs in comparison with larger enterprises
- to identify and to assess possible alternative options and mitigating measures for SMEs

As the manufacturers of the equipment covered by the study have the option to pass on part of their costs to their clients, **we believe that your members**, as professional users of some of the equipment covered by the Directive, **could also be affected** by changes in the Directive.

The input from field players like your members is essential in order to obtain a good understanding of these issues. As your answers will be part of the inputs to the preparation of the legislative process, they can be **important for the future of the business of your members**.

Therefore, we kindly ask you to fill in the questionnaire attached to this letter. This will usually not last longer than 1 hour.

This questionnaire is organised as follows:

- Annex A contains general information on the Noise Directive and the steps that have been undertaken until now
- In Annex B, you are requested to identify yourself, and to list which equipment types your members use fall within the scope of this study.
- Annex C contains the questionnaire properly speaking.
- Annex D provides cost estimates linked to each scenario that has been the subject of the IA study.

Please send the filled out questionnaire by 05 September 2009 to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

(pm – same for all questionnaires)

A. BACKGROUND INFORMATION

Directive 2000/14/EC as amended (hereinafter “Noise Directive”) requires noise marking for 57 types of equipment used outdoors, and additionally, sets noise limits for 22 of these (Article 12 – the equipment types for which only labelling is required are listed in Article 13). For those types of equipment where permissible sound power levels apply there are two stages of application. The first one came into force on 3 January 2002 (“stage 1”); the second series of reduced limits was due to come into operation on 3 January 2006 (“stage 2”).

A stocktaking study on the experience in the implementation and administration of the Noise Directive, was carried out by TNO in 2007⁵⁵. The study has concluded with a number of possible scenarios for strengthening limits, transfers of equipment types from Article 13 (no noise limits) to Article 12 (noise limits), additions of new types of equipment both in Article 12 and 13 and on the other hand for removal of some types of equipment from the Noise directive.

In parallel, alternative scenarios have been considered by a technical experts group as published in the position paper issued by the so-called Working Group 7⁵⁶:

- Scenario 1: ‘do-nothing-option’ – retain of the status quo, no change of the Directive
- Scenario 2: as suggested by the stocktaking study
- Scenario 3: as suggested by WG7 (Industry, Member States, Notified Bodies...)

There are not always three options for each individual type of equipment. Consensus was reached on the fact that the three options cover all the options that can be reasonably defined. In case of snowmobiles there are four options: (1) do-nothing-option, (2) scenario TNO-NOMEVAL, (3) scenario WG7, (4) scenario developed by the snowmobile manufacturing industry.

A detailed impact assessment has recently been undertaken by ARCADIS, addressing the technical, social, environmental and economical aspects of each alternative. The estimated costs linked to each scenario are reported in Annex D.

The full background to the Noise Directive can be found on:

http://ec.europa.eu/enterprise/mechan_equipment/noise/index.htm

The Impact Assessment Study (IA Study) can be found at:

http://ec.europa.eu/enterprise/mechan_equipment/noise/pdf/ias2009_finalreport.pdf

B. IDENTIFICATION OF THE RESPONDENT

(pm – same for all questionnaires)

3. Description of sector

Can you briefly describe your sector (activities, employment, market trends) and the relative importance of SMEs within the sector (expressed in employment, value added etc)?

⁵⁵ TNO: Noise of Machinery – Evaluation of Directive 2000/14/EC Study on the experience in the implementation and administration of Directive 2000/14/EC relating to the noise emission in the environment by equipment for use outdoors, FINAL REPORT, 12 December 2007.

⁵⁶ A position paper from WG7: Contribution to the Commission Report required by Article 20 of Directive 2000/14/EC

Please use the EC definition for SMEs, which requires to take into account the headcount, turnover and balance sheet total of partner and linked enterprises. See:

http://ec.europa.eu/enterprise/enterprise_policy/sme_definition/index_en.htm

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4. List of products used

A total of 57 outdoor equipment types are the subject of the Directive. Some extra equipment types have been added in scenario 2. Most of them are split up in subcategories to reflect the different scenario options. Please mark with in the checkbox the equipment types that your members use professionally - **choose the level of detail for which information is readily available.**

Please note that this table is limited to the equipment types for which the IA study has identified cost changes compared to scenario I (should scenario II or III be applied).

If none of these are used by your members, please do not further complete the questionnaire.

(pm – same for all questionnaires)

C. QUESTIONNAIRE

When you refer to “equipment type” in the questionnaire, please use the numbering used in the table in annex B.

- 1. For each equipment type used by your members, do you have any elements indicating that compliance with the Noise Directive has led to decreased power of the equipment they use? If there any other positive or negative side-effects of more stringent Noise limits, please also give them.

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- 2. For each equipment type used by your members, do you think that current noise levels are a nuisance for them? Would they like to see a further decrease in Noise levels? How do they cope with the nuisance currently caused by the noise levels?

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- 3. Annex D provides cost estimates linked to each scenario that has been the subject of the Impact Assessment study. Do you think that the suppliers of equipment could pass on these costs to the end users? How do you think such cost increases would affect demand by your members? In case some equipment types would become too expensive, are there any substitutes available for you as end users (for instance, electricity driven engines instead of diesel powered engines)?

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- 4. Would it be possible to give an indication of the importance of each equipment category within the total cost structure of your members (preferably split up in: fuel costs, depreciation, maintenance etc)?

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D. COST CHANGES LINKED TO THE POSSIBLE SCENARIOS

(pm – same for all questionnaires)

A.7 SME test : questionnaire for cities

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENTR), ARCADIS Belgium has recently performed a complete and detailed assessment⁵⁷ ("the IA study") of the impacts and distributive effects of three scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the "Noise Directive").

DG ENTR has now awarded a new contract to ARCADIS to complement the existing Impact Assessment Study with a detailed assessment of the specific impacts the identified policy options may have on small and medium enterprises ("SMEs").

The objectives of this study are:

- to understand how the identified policy options affect the SMEs in comparison with larger enterprises
- to identify and to assess possible alternative options and mitigating measures for SMEs

For the purposes of this study, we are also interested in the perspective of the **end users** of the equipment, **including municipalities**. The input from field players like you is essential in order to obtain a good understanding of these issues. Therefore, we kindly ask you to fill in the questionnaire attached to this letter. As your answers will be part of the inputs to the preparation of the legislative process, they can be **important for the future of your municipality**. This will usually not last longer than 1 hour.

This questionnaire is organised as follows:

- Annex A contains for your information some general information on the Noise Directive and the steps that have been undertaken until now in the review of the Noise Directive
- In Annex B, you are requested to identify yourself, and to select the equipment types you use professionally in a limitative list.
- Annex C contains the questionnaire properly speaking.
- Annex D provides cost estimates linked to each scenario that has been the subject of the IA study.

If your municipality does not use any of the equipment types listed in Table 1 of Annex B, you do not need to fill out the questionnaire.

Please send the filled out questionnaire by 05 June 2009 to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

(pm – same for all questionnaires)

⁵⁷ http://ec.europa.eu/enterprise/mechan_equipment/noise/studies.htm#a

A. BACKGROUND INFORMATION

(pm – same for all questionnaires)

B. IDENTIFICATION OF THE RESPONDENT

(pm – same for all questionnaires)

3 Size of the municipality

Please mark with which is applicable to your municipality

Enterprise category	Headcount – Annual Work Unit (AWU)	Annual budget	
Medium-sized	< 250	≤ €50 million	<input type="checkbox"/>
Small	< 50	≤ €10 million	<input type="checkbox"/>
Micro	< 10	≤ €2 million	<input type="checkbox"/>
None of the above			

4. List of products used

A total of 57 outdoor equipment types are the subject of the Directive. Some extra equipment types have been added in scenario 2. Most of them are split up in subcategories to reflect the different scenario options. Please mark with in the checkbox the equipment types relevant for your municipality. - **choose the level of detail for which information is readily available.**

Please note that this table is limited to the equipment types for which the IA study has identified cost increases compared to scenario I (should scenario II or III be applied).

(pm – same for all questionnaires)

C. QUESTIONNAIRE

When you refer to “equipment type” in the questionnaire, please use the numbering used in the table in annex B.

1. For each equipment type in Table 1 that you use professionally, could you give an indication of their importance (in terms of depreciation) in your total budget (both in EUR and in relative terms)?

equipment number	EUR	Relative terms (compared to total costs)

2 Per equipment type, the IA study has provided estimates of the cost changes for each scenario. These estimates are provided in detail in Annex D. Note that these are the changes for the equipment manufacturers, not for the end users. However, as the equipment manufacturers can pass on part of their costs, these cost increases can also affect you as professional users indirectly. Would you be willing as a professional user to pay for this cost increase? In your answer, please take into account that changes in the Directive do not only have an impact on costs, but also on the wellbeing of the citizens living in your municipality.

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3. Please suggest possible changes in the existing Noise Directive that would better take into account the specific needs of small municipalities amongst the professional end users of the equipment, when a certain scenario is to be applied for the equipment you use.

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4. Please add any comments on this questionnaire.

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D. COST CHANGES LINKED TO THE POSSIBLE SCENARIOS

(pm – same for all questionnaires)

B Questionnaires for the CAP

Some elements are common to all questionnaires related to the CAP IA: the table with covered equipment types, and the table with the scenarios. Therefore, these have only been represented for the first questionnaire (the CAP for producers).

B.1 Questionnaire CAP for producers

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENTR), ARCADIS Belgium has recently performed a complete and detailed assessment ("the IA study") of the impacts and distributive effects of various scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the "Noise Directive").

DG ENTR has now awarded a new contract to ARCADIS to make a complete and detailed assessment of the impacts and distributive effects of the possible replacement of the existing Conformity Assessment Procedures (the 'CAP') as defined in Annex VI of the Directive by:

- module A2 of Decision 768/2008/EC or
- module B of Decision 768/2008/EC in combination with module C of Decision 768/2008/EC.

Please note that the objective of this study is nor to question the contents of Decision 768/2008/EC, neither to propose additional modules for consideration.

The input from field players like you is essential in order to obtain a good understanding of these issues. As your answers will be part of the inputs to the preparation of the legislative process, they can be **important for the future of your business**.

Therefore, we would kindly like ask you a few minutes of your time to fill in the questionnaire attached to this letter.

This questionnaire is organised as follows:

- Annex A contains general information on the Noise Directive and on the specific issue of the CAP
- In Annex B, you are requested to identify yourself, and to list which equipment types you produce fall within the scope of this study.
- Annex C contains the questionnaire properly speaking.
- Annex D summarizes all the scenarios that have been the subject of the IA study.

Please send the filled out questionnaire by 21 June 2009 to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

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A. BACKGROUND INFORMATION

Directive 2000/14/EC as amended (hereinafter “Noise Directive”) aims to harmonise the laws of the Member States relating to noise emission standards, conformity assessment procedures, technical documentation and collection of data concerning the noise emissions in the environment of equipment for use outdoors.

The Noise Directive requires noise marking for 57 types of equipment used outdoors, and additionally, sets noise limits for 22 of these⁵⁸. For those types of equipment where permissible sound power levels apply there are two stages of application. The first one came into force on 3 January 2002 (“stage 1”); the second series of reduced limits was due to come into operation on 3 January 2006 (“stage 2”). For all types of equipments covered by the Directive, procedures and operating conditions are specified for measurement of the sound power level.

In order to allow certain types of equipment (for which clear technical evidence has been provided that stage II limits are presently not yet technically feasible) to be placed on the market, an amending Directive 2005/88/EC (hereafter ‘amendment’) was adopted which made the stage II permissible sound power levels for certain types of equipment indicative only. These indicative power levels may be turned into compulsory ones if the current review of Directive 2000/14/EC would indicate such need and conclude that the Noise Directive should be amended accordingly.

According to Article 20 of the Noise Directive the Commission shall submit to the European Parliament and the Council a report concerning the Commission’s experience in the implementation and administration of this Directive. In anticipation of this report, a stocktaking study on the experience in the implementation and administration of the Noise Directive, was carried out by TNO in 2007⁵⁹. The study has concluded with a number of possible scenarios for strengthening limits, transfers of equipment types from Article 13 (no noise limits) to Article 12 (noise limits), additions of new types of equipment both in Article 12 and 13 and on the other hand for removal of some types of equipment from the Noise directive. In addition it concludes with several considerations for changing of the test codes.

In parallel, regular meetings have been organized with stakeholders to review the implementation and administration of the Directive and to discuss the findings of the aforementioned study. In order to take account of diverging opinions voiced by stakeholders, alternative scenarios have been considered by a technical experts group as published in the position paper issued by WG7⁶⁰:

- Scenario 1: ‘do-nothing-option’ – retain of the status quo, no change of the Directive
- Scenario 2: as suggested by the stocktaking study
- Scenario 3: as suggested by WG7 (Industry, Member States, Notified Bodies...)

There are not always three options for each individual type of equipment. Consensus was reached on the fact that the three options cover all the options that can be reasonably defined. In case of snowmobiles there are four options: (1) do-nothing-option, (2)

⁵⁸ These equipment types are listed in Article 12 – the equipment types for which only labelling is required are listed in Article 13.

⁵⁹ TNO: Noise of Machinery – Evaluation of Directive 2000/14/EC Study on the experience in the implementation and administration of Directive 2000/14/EC relating to the noise emission in the environment by equipment for use outdoors, FINAL REPORT, 12 December 2007.

⁶⁰ A position paper from WG7: Contribution to the Commission Report required by Article 20 of Directive 2000/14/EC

scenario TNO-NOMEVAL, (3) scenario WG7, (4) scenario developed by the snowmobile manufacturing industry.

The scenarios are described in detail Annex D to this letter.

A detailed impact assessment has recently been undertaken by ARCADIS Belgium, addressing the technical, social, environmental and economical aspects of each alternative. The Commission services have judged that this analysis needs to be complemented with an Impact Assessment study on possible options concerning the Conformity Assessment Procedures.

The current CAP (“Internal control of production with assessment of technical documentation and periodical checking”) is defined in Annex VI to the Noise Directive (“**option cap0**”).

The two following alternatives are under consideration:

- **Module A2** of Decision 768/2008/EC (“Internal production control plus supervised product checks at random interval”) (“**option cap1**”)
- Or **Module B** of Decision 768/2008/EC (“EC-type examination”) in combination with module C of Decision 768/2008/EC (Conformity to type based on internal production control”). (“**option cap 2**”)

The full background to the Noise Directive can be found on:

http://ec.europa.eu/enterprise/mechan_equipment/noise/index.htm

The text of Decision 768/2008/EC can be found on the following link:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32008D0768:EN:NOT>

B. IDENTIFICATION OF THE RESPONDENT

1. Name of your organisation

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2. Contact person

Name:

.....

Telephone number:

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Mobile number:

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Email:

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3 Size

For the purposes of this study, we use the following classification of SMEs. Please mark with which is applicable on your company:

Enterprise category	Headcount – Annual Work Unit (AWU)	Annual turnover	or	Annual balance sheet total	
Medium-sized	< 250	≤ €50 million	or	≤ €43 million	<input type="checkbox"/>
Small	< 50	≤ €10 million	or	≤ €10 million	<input type="checkbox"/>
Micro	< 10	≤ €2 million	or	≤ €2 million	<input type="checkbox"/>

4. List of products manufactured or traded

A total of 57 outdoor equipment types are the subject of the Directive. Some extra equipment types have been added in scenario 2. Most of them are split up in subcategories to reflect the different scenario options. Please mark with in the checkbox the equipment types relevant for your company. - **choose the level of detail for which information is readily available.**

Table 1: covered equipment types

checkbox	Identification number	Description
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I. cleaning equipment		
<input type="checkbox"/>	26	high pressure flushers
<input type="checkbox"/>	27	high pressure water jet machines
<input type="checkbox"/>	27a	high pressure water jet machines, < 3kW, electric
<input type="checkbox"/>	27b	high pressure water jet machines, other
<input type="checkbox"/>	46	power sweepers
<input type="checkbox"/>	51	snow-removing machines with rotating tools, self-propelled
<input type="checkbox"/>	109	road sweepers, no aspirators; motorised broom
II. Construction machinery		
IIa. construction machinery; excavators and dozers		
<input type="checkbox"/>	16	dozers (< 500 kW)
<input type="checkbox"/>	16a	dozers (< 500 kW), wheeled
<input type="checkbox"/>	16aa	dozers (< 500 kW), wheeled, $P \leq 55$
<input type="checkbox"/>	16ab	dozers (< 500 kW), wheeled, $P > 55$
<input type="checkbox"/>	16b	dozers (< 500 kW), rubber tracked
<input type="checkbox"/>	16ba	dozers (< 500 kW), rubber tracked, $P \leq 55$
<input type="checkbox"/>	16bb	dozers (< 500 kW), rubber tracked, $P > 55$
<input type="checkbox"/>	16c	dozers (< 500 kW), steel tracked
<input type="checkbox"/>	16ca	dozers (< 500 kW), steel tracked, $P \leq 55$
<input type="checkbox"/>	16cb	dozers (< 500 kW), steel tracked, $P > 55$
<input type="checkbox"/>	20	excavators, hydraulic or rope-operated (< 500 kW)
<input type="checkbox"/>	20a	excavators, hydraulic or rope-operated (< 500 kW), $P \leq 15$
<input type="checkbox"/>	20b	excavators, hydraulic or rope-operated (< 500 kW), $P > 15$
<input type="checkbox"/>	21	excavator-loaders (< 500 kW)
<input type="checkbox"/>	21a	excavator-loaders (< 500 kW), wheeled
<input type="checkbox"/>	21aa	excavator-loaders (< 500 kW), wheeled, $P \leq 55$
<input type="checkbox"/>	21ab	excavator-loaders (< 500 kW), wheeled, $P > 55$
<input type="checkbox"/>	21b	excavator-loaders (< 500 kW), tracked
<input type="checkbox"/>	21ba	excavator-loaders (< 500 kW), tracked, $P \leq 55$
<input type="checkbox"/>	21bb	excavator-loaders (< 500 kW), tracked, $P > 55$
<input type="checkbox"/>	23	graders (< 500 kW)
<input type="checkbox"/>	23a	graders (< 500 kW), $P \leq 55$
<input type="checkbox"/>	23b	graders (< 500 kW), $P > 55$
<input type="checkbox"/>	54	trenchers
IIb. construction machinery; saws		
<input type="checkbox"/>	4	building site band saw machines
<input type="checkbox"/>	5	building site circular saw benches
<input type="checkbox"/>	30	joint cutters
<input type="checkbox"/>	119	stone circular saw
<input type="checkbox"/>	120	stone chainsaw
IIc. other construction machinery		
<input type="checkbox"/>	8	compaction machines
<input type="checkbox"/>	8a	compaction machines, explosion rammers
<input type="checkbox"/>	8b	compaction machines, vibratory plates
<input type="checkbox"/>	8ba	compaction machines, vibratory plates $P \leq 3$
<input type="checkbox"/>	8bb	compaction machines, vibratory plates $3 < P \leq 8$
<input type="checkbox"/>	8bc	compaction machines, vibratory plates $8 < P \leq 70$
<input type="checkbox"/>	8bd	compaction machines, vibratory plates $P > 70$
<input type="checkbox"/>	8c	compaction machines, vibratory rammers
<input type="checkbox"/>	8ca	compaction machines, vibratory rammers, $P \leq 8$
<input type="checkbox"/>	8cb	compaction machines, vibratory rammers, $8 < P \leq 70$

<input type="checkbox"/>	8cc	compaction machines, vibratory rammers, $P > 70$
<input type="checkbox"/>	8d	compaction machines, walk by, vibrating rollers
<input type="checkbox"/>	8da	compaction machines, walk by, vibrating rollers, $P \leq 8$
<input type="checkbox"/>	8db	compaction machines, walk by, vibrating rollers, $8 < P \leq 70$
<input type="checkbox"/>	8dc	compaction machines, walk by, vibrating rollers, $P > 70$
<input type="checkbox"/>	8e	compaction machines, ride on, vibrating rollers
<input type="checkbox"/>	8ea	compaction machines, ride on, vibrating rollers, $P \leq 8$
<input type="checkbox"/>	8eb	compaction machines, ride on, vibrating rollers, $8 < P \leq 70$
<input type="checkbox"/>	8ec	compaction machines, ride on, vibrating rollers, $P > 70$
<input type="checkbox"/>	8f	compaction machines, ride on, non-vibrating rollers
<input type="checkbox"/>	8fa	compaction machines, ride on, non-vibrating rollers, $P \leq 55$
<input type="checkbox"/>	8fb	compaction machines, ride on, non-vibrating rollers, $P > 55$
<input type="checkbox"/>	8fc	compaction machines, walk by, non-vibrating rollers, $P \leq 55$
<input type="checkbox"/>	8fd	compaction machines, walk by, non-vibrating rollers, $P > 55$
<input type="checkbox"/>	8fe	compaction machines, towed non-vibrating rollers, $P \leq 55$
<input type="checkbox"/>	8ff	compaction machines, towed non-vibrating rollers, $P > 55$
<input type="checkbox"/>	10	concrete-breakers and picks, hand-held
<input type="checkbox"/>	10a	concrete-breakers and picks, hand-held, non CE
<input type="checkbox"/>	10aa	concrete-breakers and picks, hand-held, non CE, $m < 3$
<input type="checkbox"/>	10ab	concrete-breakers and picks, hand-held, non CE, $3 \leq m \leq 15$
<input type="checkbox"/>	10ac	concrete-breakers and picks, hand-held, non CE, $15 < m < 30$
<input type="checkbox"/>	10ad	concrete-breakers and picks, hand-held, non CE, $m \geq 30$
<input type="checkbox"/>	10b	concrete-breakers and picks, hand-held, CE, $15 < m < 30$
<input type="checkbox"/>	10c	concrete-breakers and picks, hand-held, CE, other mass
<input type="checkbox"/>	10ca	concrete-breakers and picks, hand-held, CE, other mass, $m < 3$
<input type="checkbox"/>	10cb	concrete-breakers and picks, hand-held, CE, other mass, $3 \leq m \leq 15$
<input type="checkbox"/>	10cc	concrete-breakers and picks, hand-held, CE, other mass, $m \geq 30$
<input type="checkbox"/>	11	concrete or mortar mixers
<input type="checkbox"/>	13	conveying and spraying machines for concrete and mortar
<input type="checkbox"/>	17	drill rigs
<input type="checkbox"/>	17a	drill rigs, percussive
<input type="checkbox"/>	17b	drill rigs, non percussive
<input type="checkbox"/>	18	dumpers (< 500 kW)
<input type="checkbox"/>	18a	dumpers (< 500 kW), $P \leq 55$
<input type="checkbox"/>	18b	dumpers (< 500 kW), $P > 55$
<input type="checkbox"/>	28	hydraulic hammer
<input type="checkbox"/>	41	paver-finishers
<input type="checkbox"/>	41a	paver-finishers, high-compaction screed
<input type="checkbox"/>	41b	paver-finishers, compaction screed
<input type="checkbox"/>	41ba	paver-finishers, compaction screed, $P \leq 55$
<input type="checkbox"/>	41bb	paver-finishers, compaction screed, $P > 55$
<input type="checkbox"/>	41c	paver-finishers, pre-compaction screed
<input type="checkbox"/>	41ca	paver-finishers, pre compaction screed, $P \leq 55$
<input type="checkbox"/>	41cb	paver-finishers, pre compaction screed, $P > 55$
<input type="checkbox"/>	42	piling equipment
<input type="checkbox"/>	42a	piling equipment, impacting
<input type="checkbox"/>	42b	piling equipment, vibrating + static
<input type="checkbox"/>	48	road milling machines
<input type="checkbox"/>	55	truck mixers
III gardening equipment		
<input type="checkbox"/>	2	brush cutters

<input type="checkbox"/>	6	chain saws, portable
<input type="checkbox"/>	6a	chain saws, portable, CE
<input type="checkbox"/>	6b	chain saws, portable, electric
<input type="checkbox"/>	24	grass trimmers/grass edge trimmers
<input type="checkbox"/>	25	hedge trimmers
<input type="checkbox"/>	25a	hedge trimmers, CE
<input type="checkbox"/>	25b	hedge trimmers, electric
<input type="checkbox"/>	32	lawnmowers
<input type="checkbox"/>	32a	lawnmowers, $L \leq 50$
<input type="checkbox"/>	32b	lawnmowers, $50 < L \leq 70$
<input type="checkbox"/>	32c	lawnmowers, $70 < L \leq 120$
<input type="checkbox"/>	32d	lawnmowers, $L > 120$
<input type="checkbox"/>	33	lawn trimmers/lawn edge trimmers
<input type="checkbox"/>	33a	lawn trimmers/lawn edge trimmers, $L \leq 30$
<input type="checkbox"/>	33b	lawn trimmers/lawn edge trimmers, $30 \leq L \leq 50$
<input type="checkbox"/>	33c	lawn trimmers/lawn edge trimmers, $50 < L \leq 70$
<input type="checkbox"/>	33d	lawn trimmers/lawn edge trimmers, $70 < L \leq 120$
<input type="checkbox"/>	33e	lawn trimmers/lawn edge trimmers, $L > 120$
<input type="checkbox"/>	34	leaf blowers
<input type="checkbox"/>	34a	leaf blowers, CE
<input type="checkbox"/>	34b	leaf blowers, electric
<input type="checkbox"/>	35	leaf collectors
<input type="checkbox"/>	35a	leaf collectors, CE
<input type="checkbox"/>	35b	leaf collectors, electric
<input type="checkbox"/>	40	motor hoes (< 3 kW)
<input type="checkbox"/>	40a	motor hoes (< 3 kW), $P \leq 15$
<input type="checkbox"/>	40b	motor hoes (< 3 kW), $P > 15$
<input type="checkbox"/>	49	scarifiers
<input type="checkbox"/>	49a	scarifiers, CE
<input type="checkbox"/>	49b	scarifiers, electric
<input type="checkbox"/>	50	shredders/chippers
<input type="checkbox"/>	50a	shredders/chippers, inlet ≤ 200 mm CE
<input type="checkbox"/>	50b	shredders/chippers, inlet ≤ 200 mm electric
<input type="checkbox"/>	50c	shredders/chippers, inlet > 200 mm
<input type="checkbox"/>	50d	shredders/chippers, $P > 100$ kW
<input type="checkbox"/>	115	telescopic pruner
<input type="checkbox"/>	115a	telescopic pruner, CE
<input type="checkbox"/>	115b	telescopic pruner, electric
IV loading and lifting equipment		
<input type="checkbox"/>	1	aerial access platforms with combustion engine
<input type="checkbox"/>	3	builders' hoists for the transport of goods
<input type="checkbox"/>	3a	builders' hoists for the transport of goods, CE
<input type="checkbox"/>	3aa	builders' hoists for the transport of goods, CE, $P \leq 15$
<input type="checkbox"/>	3ab	builders' hoists for the transport of goods, CE, $P > 15$
<input type="checkbox"/>	3b	builders' hoists for the transport of goods, electric
<input type="checkbox"/>	12	construction winches
<input type="checkbox"/>	12a	construction winches, CE
<input type="checkbox"/>	12aa	construction winches, CE, $P \leq 15$
<input type="checkbox"/>	12ab	construction winches, CE, $P > 15$
<input type="checkbox"/>	12b	construction winches, electric
<input type="checkbox"/>	14	conveyor belts

<input type="checkbox"/>	36	lift trucks, combustion-engine driven, counterbalanced
<input type="checkbox"/>	36a	lift trucks, combustion-engine driven, counterbalanced, >10t, vertical mast
<input type="checkbox"/>	36aa	lift trucks, combustion-engine driven, counterbalanced, >10t, vertical mast, $P \leq 55$
<input type="checkbox"/>	36ab	lift trucks, combustion-engine driven, counterbalanced, >10t, vertical mast, $P > 55$
<input type="checkbox"/>	36b	lift trucks, combustion-engine driven, counterbalanced, >10t, variable reach
<input type="checkbox"/>	36ba	lift trucks, combustion-engine driven, counterbalanced, >10t, variable reach, $P \leq 55$
<input type="checkbox"/>	36bb	lift trucks, combustion-engine driven, counterbalanced, >10t, variable reach, $P > 55$
<input type="checkbox"/>	36c	lift trucks, combustion-engine driven, counterbalanced, <10t
<input type="checkbox"/>	36ca	lift trucks, combustion-engine driven, counterbalanced, <10t, $P \leq 55$
<input type="checkbox"/>	36cb	lift trucks, combustion-engine driven, counterbalanced, <10t, $P > 55$
<input type="checkbox"/>	37	loaders (< 500 kW)
<input type="checkbox"/>	37a	loaders (< 500 kW), wheeled
<input type="checkbox"/>	37aa	loaders (< 500 kW), wheeled, $P \leq 55$
<input type="checkbox"/>	37ab	loaders (< 500 kW), wheeled, $P > 55$
<input type="checkbox"/>	37b	loaders , rubber tracked (< 500 kW) or steel tracked (<55 kW)
<input type="checkbox"/>	37ba	loaders , rubber tracked, $P \leq 55$
<input type="checkbox"/>	37bb	loaders , rubber tracked ($55 < P < 500$ kW)
<input type="checkbox"/>	37bc	loaders, steel tracked, $P \leq 55$
<input type="checkbox"/>	37c	loaders, steel tracked, $55 < P < 500$
<input type="checkbox"/>	38	mobile cranes
<input type="checkbox"/>	38a	mobile cranes, single engine
<input type="checkbox"/>	38aa	mobile cranes, single engine, $P \leq 55$
<input type="checkbox"/>	38ab	mobile cranes, single engine, $P > 55$
<input type="checkbox"/>	38b	mobile cranes, multiple engine
<input type="checkbox"/>	38ba	mobile cranes, multiple engine, $P \leq 55$
<input type="checkbox"/>	38bb	mobile cranes, multiple engine, $P > 55$
<input type="checkbox"/>	43	pipelayers
<input type="checkbox"/>	53	tower cranes
<input type="checkbox"/>	107	bridge/gantry cranes
<input type="checkbox"/>	117	straddle carrier
<input type="checkbox"/>	118	reach stacker
V power generators and cooling equipment		
<input type="checkbox"/>	15	cooling equipment on vehicles
<input type="checkbox"/>	29	hydraulic power packs
<input type="checkbox"/>	29a	hydraulic power packs, $P \leq 40$
<input type="checkbox"/>	29b	hydraulic power packs, $40 \leq P \leq 55$
<input type="checkbox"/>	29c	hydraulic power packs, $P > 55$
<input type="checkbox"/>	45	power generators
<input type="checkbox"/>	45a	power generators, < 400 kW, $P_{el} \leq 2$
<input type="checkbox"/>	45b	power generators, < 400 kW, $2 < P_{el} \leq 10$
<input type="checkbox"/>	45c	power generators, < 400 kW, $P_{el} > 10$
<input type="checkbox"/>	45d	power generators, ≥ 400 kW
<input type="checkbox"/>	57	welding generators
<input type="checkbox"/>	57a	welding generators, $P_{el} \leq 2$
<input type="checkbox"/>	57b	welding generators, $2 < P_{el} \leq 10$
<input type="checkbox"/>	57c	welding generators, $P_{el} > 10$
VI: pumping and suction equipment		
<input type="checkbox"/>	7	combined high pressure flushers and suction vehicles
<input type="checkbox"/>	9	compressors (< 350 kW)
<input type="checkbox"/>	9a	compressors (< 350 kW), $P \leq 15$
<input type="checkbox"/>	9b	compressors (< 350 kW), $P > 15$

<input type="checkbox"/>	19	equipment for loading and unloading silos or tanks on trucks
<input type="checkbox"/>	52	suction vehicles
<input type="checkbox"/>	56	water pump units (not for use under water)
<input type="checkbox"/>	56a	water pump units (not for use under water), electric
<input type="checkbox"/>	56b	water pump units (not for use under water), CE
<input type="checkbox"/>	121	swimming pool pumps
VII snowmobiles and snowgroomers		
<input type="checkbox"/>	44	Snowgroomers
<input type="checkbox"/>	111	snow mobiles
VIII: waste collection, processing and recycling		
<input type="checkbox"/>	22	glass recycling containers
<input type="checkbox"/>	31	landfill compactors, loader-type with bucket (< 500 kW)
<input type="checkbox"/>	31a	landfill compactors, loader-type with bucket (< 500 kW), P ≤ 55
<input type="checkbox"/>	31b	landfill compactors, loader-type with bucket (< 500 kW), P > 55
<input type="checkbox"/>	39	mobile waste containers
<input type="checkbox"/>	47	refuse collection vehicles
<input type="checkbox"/>	102	mobile sieve installation
<input type="checkbox"/>	103	mobile waste breakers

equipment number	Describe impact cap0->cap1

6. Please describe how moving from option cap0 to option cap2 would affect:

- The administrative costs for manufacturers and notified bodies
- The probability that noncompliant products are put on the market

For each equipment type you produce.

Please be as concrete and specific as possible. Please substantiate your claims with any publicly available information you may have knowledge of.

If you think the effects would depend on the scenario chosen in the revision of the Directive (see Annex D), explain why.

equipment number	Describe impact cap0->cap2

7. Possible negative effects of noncompliant products being put on the market include:

- Cost disadvantages for the compliant manufacturers

D. POSSIBLE SCENARIOS

This annex contains an exhaustive list of all scenarios that have been analysed in the context of the IA study.

- Scenario 1: 'do-nothing-option' – retain of the status quo, no change of the Directive
- Scenario 2: as suggested by the stocktaking study
- Scenario 3: as suggested by WG7 (Industry, Member States, Notified Bodies...)

There are not always three options for each individual type of equipment. Consensus was reached on the fact that the three options cover all the options that can be reasonably defined. In the case of snowmobiles there are four options: (1) do-nothing-option, (2) scenario TNO-NOMEVAL, (3) scenario WG7, (4) scenario developed by the snowmobile manufacturing industry.

In what follows the intermediate levels are in white rows. The basic level, in which detailed information of the scenarios is added, is represented in turquoise rows. Level values in plain text are obligatory, while cursory represented levels are merely indicative values in the baseline scenario I. A legend for the used symbols is added at the rear.

Table 2: Scenarios for cleaning equipment

group		range, subgroup		scenario I			scenario II			scenario III			
group number	description	unique detailed number ARCADIS	description	art.	stage I	stage II	art	stage I	stage II	modified or new test codes or procedures	art	stage I	stage II
26	high pressure flushers												
26		26		13			12		109		12		109
27	high pressure water jet machines												
27a		27a	< 3kW, electric	13			12		95	yes	12		95
27b		27b	other	13			13			yes	13		change test code
46	power sweepers (road sweepers)												
46		46a	<10kW	13			12		100	yes	12		100
46		46b	≥ 10 kW	13			12		90 + 11 lg P	yes	12		90 + 11 lg P

51	snow-removing machines with rotating tools,self-propelled										
51		51		13			13				13
109	road sweepers, no aspirators										
109		109	motorised broom				13				13

Table 3: Scenarios for construction machinery; excavators and dozers

Group		range, subgroup		baseline scenario I directive			scenario II			scenario III			
group number	description	unique detailed number ARCADIS	Description	art.	stage I	stage II	art	stage I	stage II	modified or new test codes or procedures	art	stage I	stage II
16	dozers (< 500 kW)												
20	excavators, hydraulic or rope-operated (< 500 kW)												
21	excavator-loaders (< 500 kW)												
23	graders (< 500 kW)												
54	Trenchers												
54		54		13			removed				13		

Table 4: Scenarios for construction machinery; saws

Group		range, subgroup		baseline scenario I directive			scenario II			scenario III			
group number	Description	unique detailed number ARCADIS	description	art.	stage I	stage II	art	stage I	stage II	modified or new test codes or procedures	art	stage I	stage II
4	building site band saw machines												
4		4		13			removed				removed		

5	building site circular saw benches												
5		5		13			12	110			13		
30	joint cutters												
30		30		13			12	111			13		
119	stone circular saw												
119		119					12	112 + 2 P	110 + 2 P		12	115 + 1 P	
120	stone chainsaw												
120		120	(include with chain saws)					12, include with chain saws			13		

Table 5: Scenarios for other construction machinery

Group		range, subgroup		baseline scenario I directive			scenario II			scenario III			
group number	Description	unique detailed number ARCADIS	description	art .	stage I	stage II	art	stage I	stage II	modified or new test codes or procedures	art	stage I	stage II
8	compaction machines												
8a		8a	explosion rammers	13			removed				removed		
8b		8ba	vibratory plates $P \leq 3$	12	108	105	12	105			12	105	
8b		8bb	vibratory plates $3 < P \leq 8$	12	108	105	12	107			12	108	
8b		8bc	vibratory plates $8 < P \leq 70$	12	109	106	12	108			12	109	
8b		8bd	vibratory plates $P > 70$	12	89 + 11 lg P	86 + 11 lg P	12	88 + 11 lg P			12	89 + 11 lg P	
8c		8ca	vibratory rammers, $P \leq 8$	12	108	105	12	105			12	108	

8c		8cb	vibratory rammers, $8 < P \leq 70$	12	109	106	12	106	12	109
8c		8cc	vibratory rammers, $P > 70$	12	$89 + 11 \lg P$	$86 + 11 \lg P$	12	$86 + 11 \lg P$	12	$89 + 11 \lg P$
8d		8da	walk by, vibrating rollers, $P \leq 8$	12	108	105	12	107	12	108
8d		8db	walk by, vibrating rollers, $8 < P \leq 70$	12	109	106	12	108	12	109
8d		8dc	walk by, vibrating rollers, $P > 70$	12	$89 + 11 \lg P$	$86 + 11 \lg P$	12	$88 + 11 \lg P$	12	$89 + 11 \lg P$
8e		8ea	ride on, vibrating rollers, $P \leq 8$	12	108	105	12	105	12	105
8e		8eb	ride on, vibrating rollers, $8 < P \leq 70$	12	109	106	12	106	12	106
8e		8ec	ride on, vibrating rollers, $P > 70$	12	$89 + 11 \lg P$	$86 + 11 \lg P$	12	$86 + 11 \lg P$	12	$86 + 11 \lg P$
8f		8fa	ride on, non-vibrating rollers, $P \leq 55$	12	104	101	12	101	12	101
8f		8fb	ride on, non-vibrating rollers, $P > 55$	12	$85 + 11 \lg P$	$82 + 11 \lg P$	12	$82 + 11 \lg P$	12	$82 + 11 \lg P$

8f		8fc	walk by, non-vibrating rollers, P ≤ 55	12	104	101	12	101		12	101
8f		8fd	walk by, non-vibrating rollers, P > 55	12	85 + 11 lg P	82 + 11 lg P	12	82 + 11 lg P		12	82 + 11 lg P
8f		8fe	towed non-vibrating rollers, P ≤ 55	12	104	101	12	101		remov ed	
8f		8ff	towed non-vibrating rollers, P > 55	12	85 + 11 lg P	82 + 11 lg P	12	82 + 11 lg P		remov ed	
10	concrete-breakers and picks, hand-held										
10a		10aa	non CE, m < 3	12	107	105	remov ed			12	105
10a		10ab	non CE, 3 ≤ m ≤ 15	12	107	105	12	105		12	105
10a		10ac	non CE, 15 < m < 30	12	94 + 11 lg m	92 + 11 lg m	12	92 + 11 lg m		12	92 + 11 lg m
10a		10ad	non CE, m ≥ 30	12	96 + 11 lg m	94 + 11 lg m	12	94 + 11 lg m		12	94 + 11 lg m
10b		10b	CE, 15 < m < 30	12	94 + 11 lg m	92 + 11 lg m	12	94 + 11 lg m		12	94 + 11 lg m
10c		10ca	CE, m < 3	12	107	105	remov ed			12	105
10c		10cb	CE, 3 ≤ m ≤ 15	12	107	105	12	105		12	105
10c		10cc	CE, m ≥ 30	12	96 + 11 lg m	94 + 11 lg m	12	94 + 11 lg m		12	94 + 11 lg m

11	concrete or mortar mixers											
11		11		13			13				13	
13	conveying and spraying machines for concrete and mortar											
13		13		13			13			yes	13	
17	drill rigs											
17		17aa	percussive, ≤ 15 kW	13			12		99		13	
17		17ab	percussive, > 15 kW	13			12		86 + 11 lg P		13	
17		17ba	non percussive, ≤ 15 kW	13			12		99		12	99
17		17bb	non percussive, > 15 kW	13			12		86 + 11 lg P		12	86 + 11 lg P
18	dumpers (< 500 kW)											
18		18a	$P \leq 55$	12	104	101	12		101		12	101
18		18b	$P > 55$	12	85 + 11 lg P	82 + 11 lg P	12		82 + 11 lg P		12	82 + 11 lg P
28	hydraulic hammer											
28		28		13			12	93 + 10 lg m	90 + 10 lg m		12	93 + 10 lg m 90 + 10 lg m
41	paver-finishers											
41a		41a	high-compacti on screed	13			13			yes	13	
41b		41ba	compacti on screed, $P \leq 55$	12	104	101	12		104	yes	12	104
41b		41bb	compacti on screed, $P > 55$	12	85 + 11 lg P	82 + 11 lg P	12		85 + 11 lg P	yes	12	85 + 11 lg P

41c		41ca	pre compacti on screed, P ≤ 55	12	104	101	12	101	yes	12	101
41c		41cb	pre compacti on screed, P > 55	12	85 + 11 lg P	82 + 11 lg P	12	82 + 11 lg P	yes	12	82 + 11 lg P
42	piling equipment										
42a		42a	impactin g	13			13		yes	13	
42b		42b	vibrating + static	13			12	115 112	yes	13	
48	road milling machines										
48		48a	≤ 55 kW	13			12	105	yes	13	
48		48b	> 55 kW	13			12	86 + 11 lg P	yes	13	
55	truck mixers										
55		55a	≤ 30 kW	13			12	101		13	
55		55b	> 30 kW	13			12	85 + 11 lg P		13	

Table 6: Scenarios for gardening equipment

group		range, subgroup		scenario I			scenario II				scenario III		
group number	description	unique detailed number ARCADIS	description	art	stage I	stage II	art	stage I	stage II	modified or new test codes or procedures	art	stage I	Stage II
2	brush cutters												
2		2		13			12	105 + 6 P	103 + 6 P	yes	12	114	112
6	chain saws, portable												
6a		6a	CE	13			12	110 + 2 P	108 + 2P	yes	12	114	112
6b		6b	electric	13			12	104		yes	12	104	

24	grass trimmers/grass edge trimmers												
24		24		13			12	105 + 6P	103 + 6P	yes	12	107	105
25	hedge trimmers												
25a		25a	CE	13			12	109		yes	12	109	107
25b		25b	electric	13			13			yes	13		
32	lawnmowers (excluding agricultural and forestry equipment, and multi-purpose devices, the main motorised component of which has an installed power of more than 20 kW)												
32		32a	$L \leq 50$	12	96	94	12	71 + 15 lg L			12		94
32		32b	$50 < L \leq 70$	12	100	98	12	71 + 15 lg L			12		98
32		32c	$70 < L \leq 120$	12	100	98	12	71 + 15 lg L			12		98
32		32d	$L > 120$	12	105	103	12	73 + 15 lg L			12		103
33	lawn trimmers/lawn edge trimmers												
33		33a	$L \leq 30$	12	96	94	12	91			12		93
33		33b	$30 \leq L \leq 50$	12	96	94	12	91			12		96
33		33c	$50 < L \leq 70$	12	100	98	12	91			12		96
33		33d	$70 < L \leq 120$	12	100	98	12	91			12		96
33		33e	$L > 120$	12	105	103	12	91			12		96
34	leaf blowers												
34a		34a	CE	13			12	104		yes	12	108	105
34b		34b	electric	13			12	99		yes	12		99
35	leaf collectors												
35a		35a	CE	13			12	104		yes	12		104
35b		35b	electric	13			12	99		yes	12		99
40	motor hoes (< 3 kW)												
40		40		12	96	93	removed				12		93
49	scarifiers												
49a		49a	CE	13			12	97 + 2 lg P		yes	12		99 + 2 lg P
49b		49b	electric	13			13			yes	13		
50	shredders/chippers												
50		50a	inlet ≤ 200 mm CE	13			12	109		yes	13		
50		50b	inlet ≤ 200 mm electric	13			12	99		yes	13		
50		50c	inlet > 200 mm	13			12	max(109 ; 86 + 11 lg		yes	13		

								P)					
50		50d	P>100kW	13			12	max(109 ; 86 + 11 lg P)	yes	removed			
115	telescopic pruner												
115a		115a	CE				12	110 + 2 P	108 + 2P		12	114	112
115b		115b	electric				12	104			12	104	

Table 7: Scenarios for loading and lifting equipment

group		range, subgroup		baseline scenario I directive			scenario II				scenario III		
group number	description	unique detailed number ARCADIS	description	art.	stage I	stage II	art	stage I	stage II	modified or new test codes or procedures	art	stage I	stage II
1	aerial access platforms with combustion engine												
1		1a	≤ 55 kW	13			12	101		yes	12	101	
1		1b	> 55 kW	13			12	82 + 11 lg P		yes	12	82 + 11 lg P	
3	builders' hoists for the transport of goods												
3a		3aa	CE P ≤ 15	12	96	93	12	93			12	93	
3a		3ab	CE P > 15	12	83 + 11 lg P	80 + 11 lg P	12	80 + 11 lg P			12	80 + 11 lg P	
3b		3b	electric	13			removed				removed		
12	construction winches												
12a		12aa	CE, P ≤ 15	12	96	93	removed				removed		
12a		12ab	CE, P > 15	12	83 + 11 lg P	80 + 11 lg P	removed				removed		
12b		12b	electric	13			removed				removed		
14	conveyor belts												
14		14		13			removed				removed		
36	lift trucks, combustion-engine driven, counterbalanced												
36a		36aa	CE > 10t, P ≤ 55, vertical mast	12	104	101	12	101		yes	12	101	
36a		36ab	CE > 10t,	12	85 + 11 lg P	82 + 11 lg P	12	82 + 11 lg P		yes	12	82 + 11 lg P	

			P > 55, vertical mast								
36b		36ba	CE > 10t, P ≤ 55, variable reach	12	104	101	12	101	yes	12	101
36b		36bb	CE > 10t, P > 55, variable reach	12	85 + 11 lg P	82 + 11 lg P	12	82 + 11 lg P	yes	12	82 + 11 lg P
36c		36ca	CE ≤ 10t, P ≤ 55	13			12	101	yes	13	
36c		36cb	CE ≤ 10t, P > 55	13			12	82 + 11 lg P	yes	13	
37	loaders (< 500 kW)										
37a		37aa	wheeled, P ≤ 55	12	104	101	12	101	yes	12	101
37a		37ab	wheeled, P > 55	12	85 + 11 lg P	82 + 11 lg P	12	82 + 11 lg P	yes	12	82 + 11 lg P
37b		37ba	rubber tracked, P ≤ 55	12	106	103	12	103	yes	12	103
37b		37bb	rubber tracked, P > 55	12	87 + 11 lg P	84 + 11 lg P	12	84 + 11 lg P	yes	12	84 + 11 lg P
37b		37bc	steel tracked, P ≤ 55	12	106	103	12	103	yes	12	103
37c		37c	steel tracked, P > 55	12	87 + 11 lg P	84 + 11 lg P	12	87 + 11 lg P	yes	12	87 + 11 lg P
38	mobile cranes										
38a		38aa	single engine, P ≤ 55	12	104	101	12	101		12	101
38a		38ab	single engine, P > 55	12	85 + 11 lg P	82 + 11 lg P	12	82 + 11 lg P		12	82 + 11 lg P
38b		38ba	multiple	12	104	101	12	101		12	101

			engine, P ≤ 55								
38b		38bb	multiple engine, P > 55	12	85 + 11 lg P	82 + 11 lg P	12	82 + 11 lg P		12	82 + 11 lg P
43	pipelayers										
43		43		13			removed			13	
53	tower cranes										
53		53		12	98 + lg P	96 + lg P	12	96 + lg P		12	96 + lg P
107	bridge/gantry cranes										
107		107					13			removed	
117	straddle carrier										
117		117	(include with lift trucks)				12, include with lift trucks			13	
118	reach stacker										
118		118	(include with lift trucks)				12, include with lift trucks			13	

Table 8: Scenarios for power generators and cooling equipment

group		range, subgroup		baseline scenario I directive			scenario II			scenario III			
group number	description	unique detailed number ARCADIS	description	art.	stage I	stage II	art.	stage I	stage II	modified or new test codes or procedures	art.	stage I	stage II
15	cooling equipment on vehicles												
15		15		13			12	96 + 2 lg P	90 + 2 lg P	yes	12	100 + 2 lg P	98 + 2 lg P
29	hydraulic power packs												
29		29a	P ≤ 40	12	104	101	12	99			12	101	
29		29b	40 ≤ P ≤ 55	12	104	101	12	82 + 11 lg P			12	82 + 11 lg P	
29		29c	P > 55	12	85 + 11 lg P	82 + 11 lg P	12	82 + 11 lg P			12	82 + 11 lg P	

45	power generators										
45		45a	< 400 kW, $P_{el} \leq 2$	12	97 + lg Pel	95 + lg Pel	12	90		12	93 + lg Pel
45		45b	< 400 kW, $2 < P_{el} \leq 10$	12	98 + lg Pel	96 + lg Pel	12	93		12	96 + lg Pel
45		45c	< 400 kW, $P_{el} > 10$	12	97 + lg Pel	95 + lg Pel	12	93 + 2 lg Pel		12	95 + lg Pel
45		45d	≥ 400 kW	13			12	93 + 2 lg Pel		12	95 + lg Pel
57	welding generators										
57		57a	$P_{el} \leq 2$	12	97 + lg Pel	95 + lg Pel	12	90		12	95 + lg Pel
57		57b	$2 < P_{el} \leq 10$	12	98 + lg Pel	96 + lg Pel	12	93		12	95 + lg Pel
57		57c	$P_{el} > 10$	12	97 + lg Pel	95 + lg Pel	12	93 + 2 lg Pel		12	95 + lg Pel

Table 9: Scenarios for pumping and suction equipment

group		range, subgroup		baseline scenario I directive			scenario II			scenario III			
group number	description	unique detailed number ARCADIS	description	art.	stage I	stage II	art.	stage I	stage II	modified or new test codes or procedures	art.	stage I	stage II
7	combined high pressure flushers and suction vehicles												
7		7		13			12	109			12	109	
9	compressors (< 350 kW)												
9		9a	$P \leq 15$	12	99	97	12	97			12	97	
9		9b	$P > 15$	12	97 + 2 lg P	95 + 2 lg P	12	95 + 2 lg P			12	95 + 2 lg P	
19	equipment for loading and unloading silos or tanks on trucks												
19		19		13			13			yes	13		
52	suction vehicles												
52		52		13			12	109			12	109	
56	water pump units (not for use under water)												
56a		56aa	electric, ≤ 35 kW	13			12	99		yes	12	99	
56a		56ab	electric, > 35 kW	13			12	82 + 11 lg P		yes	12	82 + 11 lg P	
56b		56ba	CE, ≤ 35 kW	13			12	99		yes	13		

56b		56bb	CE, > 35 kW	13			12	82 + 11 lg P	yes	13		
121	swimming pool pumps											
121		121	(include in waterpumps)				12	99	82 + 11 lg P		13	

Table 10: Scenarios for snowmobiles and snow groomers

group		range, subgroup		baseline scenario I directive			scenario II				scenario III		
group number	description	unique detailed number ARCADIS	description	art.	stage I	stage II	art	stage I	stage II	modified or new test codes or procedures	art	stage I	stage II
44	snow groomers												
44		44		13			removed				13		
111	snow mobiles												
111		111					12	107	105		12	111	109

Scenario IV for snowmobiles

For snowmobiles, there is moreover a Scenario IV:

Artikel	stage I	stage II
12	78	X

The stage I limit would enter into force in 2012. The stage II limit would still need to be defined as a result of a technical review and would enter into force in 2015.

Table 11: Scenarios for waste collection, processing and recycling

Group	range, subgroup	baseline scenario I directive	scenario II		scenario III

group number	description	unique detailed number ARCADIS	description	art.	stage I	stage II	art	stage I	stage II	modified or new test codes or procedures	art	stage I	stage II
22	glass recycling containers												
22		22		13			12	100			12	98	
31	landfill compactors, loader-type with bucket (< 500 kW)												
31		31a	P ≤ 55	12	104	101	removed				12	101	
31		31b	P > 55	12	85 + 11 lg P	82 + 11 lg P	removed				12	82 + 11 lg P	
39	mobile waste containers												
39		39		13			12	100	95	yes	12	100	95
47	refuse collection vehicles												
47		47		13			12	107	104	yes	13	test method to be revised	
102	mobile sieve installation												
102		102					12	84 + 11 lg P			13		
103	mobile waste breakers												
103		103					12	84 + 11 lg P			13		

Legend

- P net installed power in kW
 Pel electric power in kW
 m mass of appliance in kg
 l cutting width in cm
 CE combustion engine

B.2 Questionnaire CAP for notified bodies

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENTR), ARCADIS Belgium has recently performed a complete and detailed assessment ("the IA study") of the impacts and distributive effects of various scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the "Noise Directive").

DG ENTR has now awarded a new contract to ARCADIS to make a complete and detailed assessment of the impacts and distributive effects of the possible replacement of the existing Conformity Assessment Procedures (the 'CAP') as defined in Annex VI of the Directive by:

- module A2 of Decision 768/2008/EC or
- module B of Decision 768/2008/EC in combination with module C of Decision 768/2008/EC.

Please note that the objective of this study is nor to question the contents of Decision 768/2008/EC, neither to propose additional modules for consideration.

The input from field players like you is essential in order to obtain a good understanding of these issues. Therefore, we kindly ask you to fill in the questionnaire attached to this letter.

As your answers will be part of the inputs to the preparation of the legislative process, they can be **important for the future of your business**.

This will usually not last longer than 1 hour.

This questionnaire is organised as follows:

- Annex A contains general information on the Noise Directive and on the specific issue of the CAP
- In Annex B, you are requested to identify yourself.
- Annex C contains the questionnaire properly speaking.
- Annex D summarizes all the scenarios that have been the subject of the IA study.

Please send the filled out questionnaire by 05 June 2009 to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

(pm – same for all questionnaires)

A. BACKGROUND INFORMATION

(pm – same for all questionnaires related to the CAP)

B. IDENTIFICATION OF THE RESPONDENT

(pm – same for all questionnaires related to the CAP)

3. List of products under surveillance

A total of 57 outdoor equipment types are the subject of the Directive. Some extra equipment types have been added in scenario 2. Most of them are split up in subcategories to reflect the different scenario options. Please mark with in the checkbox the equipment types for which you act as notified body - **choose the level of detail for which information is readily available.**

(pm: identical for all questionnaires)

C. QUESTIONNAIRE

When you refer to “equipment type” in the questionnaire, please use the numbering used in Annex B.

1. Please describe how moving from option cap0 to option cap1 would affect:

- The administrative costs for all parties involved (market surveillance authorities, manufacturers and notified bodies)
- The probability that noncompliant products are put on the market

for each equipment type for which you act as notified body.

Please be as concrete and specific as possible. Use the level of detail that you think is the most appropriate. Please substantiate your claims with any publicly available information you may have knowledge of.

If you think the effects would depend on the scenario chosen in the revision of the Directive (see Annex D), explain why.

equipment number	Describe impact cap0->cap1

2. Please describe how moving from option cap0 to option cap2 would affect:

- The administrative costs for all parties involved (market surveillance authorities, manufacturers and notified bodies)
- The probability that noncompliant products are put on the market

for each equipment type for which you act as notified body.

Please be as concrete and specific as possible. Use the level of detail that you think is the most appropriate. Please substantiate your claims with any publicly available information you may have knowledge of.

If you think the effects would depend on the scenario chosen in the revision of the Directive (see Annex D), explain why.

equipment number	Describe impact cap0->cap2

3. Possible negative effects of noncompliant products being put on the market include:

- Cost disadvantages for the compliant manufacturers
- Negative environmental impacts

Can you provide us with reports, statistics or other evidence of the magnitude of these effects? Please also include personal experiences.

If you think the effects would depend on the scenario chosen in the revision of the Directive (see Annex D), explain why.

equipment number	Describe impact of noncompliant products put on the market

8. Outdoor machinery is covered by four directives⁶². If this affects your preferred option of CAP, please explain why.

.....

9. Please add any comments you may have on this questionnaire.

.....

D. POSSIBLE SCENARIOS

(pm: identical for all questionnaires)

⁶² The Machinery Directive, the Directive on Electromagnetic Compatibility, the Directive on Emissions from Non-Road Machinery and the Outdoor Equipment Noise Directive.

B.3 Questionnaire CAP for NGOs

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENT), ARCADIS Belgium has recently performed a complete and detailed assessment ("the IA study") of the impacts and distributive effects of various scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the "Noise Directive").

DG ENT has now awarded a new contract to ARCADIS to make a complete and detailed assessment of the impacts and distributive effects of the possible replacement of the existing Conformity Assessment Procedures (the 'CAP') as defined in Annex VI of the Directive by:

- module A2 of Decision 768/2008/EC or
- module B of Decision 768/2008/EC in combination with module C of Decision 768/2008/EC.

Please note that the objective of this study is nor to question the contents of Decision 768/2008/EC, neither to propose additional modules for consideration.

Your input is essential in order to obtain a good understanding of these issues.

Therefore, we would kindly like ask you a few minutes of your time to fill in the questionnaire attached to this letter.

This questionnaire is organised as follows:

- Annex A contains general information on the Noise Directive and on the specific issue of the CAP
- In Annex B, you are requested to identify yourself.
- Annex C contains the questionnaire properly speaking.
- Annex D summarizes all the scenarios that have been the subject of the IA study.

Please send the filled out questionnaire by 05 June 2009 to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

(pm – same for all questionnaires)

A. BACKGROUND INFORMATION

(pm – same for all questionnaires related to the CAP)

B. IDENTIFICATION OF THE RESPONDENT

1. Name of your organisation

(pm – same for all questionnaires related to the CAP)

3. List of products that are subject to the Directive and the scenarios under scrutiny

(pm: identical for all questionnaires)

C. QUESTIONNAIRE

When you refer to “equipment type” in the questionnaire, please use the numbering used in Annex B.

1. Please describe how, according to you, moving from option cap0 to option cap1 would affect:

- The administrative costs for all parties involved (market surveillance authorities, manufacturers and notified bodies)
- The probability that noncompliant products are put on the market

for each equipment type that belongs to your field of expertise.

Please be as concrete and specific as possible. Use the level of detail that you think is the most appropriate. Please substantiate your claims with any publicly available information you may have knowledge of.

If you think the effects would depend on the scenario chosen in the revision of the Directive (see Annex D), explain why.

equipment number	Describe impact cap0->cap1

2. Please describe how, according to you, moving from option cap0 to option cap2 would affect:

- The administrative costs for all parties involved (market surveillance authorities, manufacturers and notified bodies)
- The probability that noncompliant products are put on the market

for each equipment type that belongs to your field of expertise.

Please be as concrete and specific as possible. Use the level of detail that you think is the most appropriate. Please substantiate your claims with any publicly available information you may have knowledge of.

If you think the effects would depend on the scenario chosen in the revision of the Directive (see Annex D), explain why.

equipment number	Describe impact cap0->cap2

3. Possible negative effects of noncompliant products being put on the market include:

- Cost disadvantages for the compliant manufacturers
- Negative environmental impacts

Can you provide us with reports, statistics or other evidence of the magnitude of these effects? Please also include personal experiences.

If you think the effects would depend on the scenario chosen in the revision of the Directive (see Annex D), explain why.

equipment number	Describe impact of noncompliant products put on the market

4. Outdoor machinery is covered by four directives⁶³. If this affects your preferred option of CAP, please explain why.

.....

5. Please add any comments you may have on this questionnaire.

.....

D. POSSIBLE SCENARIOS

(pm: identical for all questionnaires)

⁶³ The Machinery Directive, the Directive on Electromagnetic Compatibility, the Directive on Emissions from Non-Road Machinery and the Outdoor Equipment Noise Directive.

B.4 Questionnaire CAP for authorities

Dear Madam/Sir

On behalf of the European Commission (Directorate General Enterprise and Industry - DG ENTR), ARCADIS Belgium has recently performed a complete and detailed assessment ("the IA study") of the impacts and distributive effects of various scenarios for reviewing the outdoor equipment noise Directive 2000/14/EC as amended (the "Noise Directive").

DG ENTR has now awarded a new contract to ARCADIS to make a complete and detailed assessment of the impacts and distributive effects of the possible replacement of the existing Conformity Assessment Procedures (the 'CAP') as defined in Annex VI of the Directive by:

- module A2 of Decision 768/2008/EC or
- module B of Decision 768/2008/EC in combination with module C of Decision 768/2008/EC.

Please note that the objective of this study is nor to question the contents of Decision 768/2008/EC, neither to propose additional modules for consideration.

The input from field players like you is essential in order to obtain a good understanding of these issues.

Therefore, we would kindly like ask you a few minutes of your time to fill in the questionnaire attached to this letter.

This questionnaire is organised as follows:

- Annex A contains general information on the Noise Directive and on the specific issue of the CAP
- In Annex B, you are requested to identify yourself.
- Annex C contains the questionnaire properly speaking.
- Annex D summarizes all the scenarios that have been the subject of the IA study.

Please send the filled out questionnaire as soon as possible to Mr. Laurent Franckx. Any further questions about this questionnaire may be addressed to the same contact person.

If some of your answers can only be provided subject to a confidentiality agreement, please let us know.

(pm – same for all questionnaires)

A. BACKGROUND INFORMATION

(pm – same for all questionnaires related to the CAP)

B. IDENTIFICATION OF THE RESPONDENT

(pm – same for all questionnaires related to the CAP)

3. List of products under surveillance

A total of 57 outdoor equipment types are the subject of the Directive. Some extra equipment types have been added in scenario 2. Most of them are split up in subcategories to reflect the different scenario options. Please mark with in the checkbox the equipment types for which you act as the market surveillance authority - **choose the level of detail for which information is readily available.**

(pm: identical for all questionnaires)

C. QUESTIONNAIRE

When you refer to “equipment type” in the questionnaire, please use the numbering used in Annex B.

1. Please describe how moving from option cap0 to option cap1 would affect:

- The administrative costs for all parties involved (market surveillance authorities, manufacturers and notified bodies)
- The probability that noncompliant products are put on the market

for each equipment type for which you act as surveillance authority.

Please be as concrete and specific as possible. Use the level of detail that you think is the most appropriate. Please substantiate your claims with any publicly available information you may have knowledge of.

If you think the effects would depend on the scenario chosen in the revision of the Directive (see Annex D), explain why.

equipment number	Describe impact cap0->cap1

6. Please describe how moving from option cap0 to option cap2 would affect:

- The administrative costs for all parties involved (market surveillance authorities, manufacturers and notified bodies)
- The probability that noncompliant products are put on the market

for each equipment type for which you act as surveillance authority.

Please be as concrete and specific as possible. Use the level of detail that you think is the most appropriate. Please substantiate your claims with any publicly available information you may have knowledge of.

If you think the effects would depend on the scenario chosen in the revision of the Directive (see Annex D), explain why.

equipment number	Describe impact cap0->cap2

7. Possible negative effects of noncompliant products being put on the market include:

- The administrative costs for all parties involved (market surveillance authorities, manufacturers and notified bodies)
- The probability that noncompliant products are put on the market

for each equipment type for which you act as surveillance authority.

Please be as concrete and specific as possible. Use the level of detail that you think is the most appropriate. Please substantiate your claims with any publicly available information you may have knowledge of.

If you think the effects would depend on the scenario chosen in the revision of the Directive (see Annex D), explain why.

equipment number	Describe impact of noncompliant products put on the market

8. Outdoor machinery is covered by four directives⁶⁴. If this affects your preferred option of CAP, please explain why.

.....

9. Please add any comments you may have on this questionnaire.

.....

D. POSSIBLE SCENARIOS

(pm: identical for all questionnaires)

⁶⁴ The Machinery Directive, the Directive on Electromagnetic Compatibility, the Directive on Emissions from Non-Road Machinery and the Outdoor Equipment Noise Directive.

C Contacts made during the study

This annex contains an overview of all contacts with individual companies made during the project. The tables correspond to different possible datasources acquired in the course of the study:

- The first table represents a targeted sample built from different industry directories handed over by CECE. In the sampling process we have started from the Bauma list of exhibitors (www.bauma.de) as companies are displayed by equipment type. This selection of companies of the construction sector was complemented with enterprises from other industry sectors (agricultural and forestry machinery, garden, waste) by using the Lectura-directory (www.lectura.de). Further internet search identified www.agmachine.com as another possible source for enterprises in the agricultural sector. The total sample constitutes of 167 enterprises with 84 of them being contacted as possibly being SMEs. Enterprises that are not withheld as possible SMEs employ either over 250 employees (as an independent company or as a member of a group) or do not fulfil other conditions. A company is labelled as “not relevant” if it is not based in Europe or if its activities not subject to the Noise Directive (e.g. company that produces camera’s for forklifts)
- The second table is a sample of the Noise database: 74 enterprises have been screened and 8 out of them were contacted by e-mail.
- The table of contacts lists Italian SMEs, an overview that has been delivered by an Italian stakeholder. All enterprises have repeatedly been contacted by e-mail and telephone but only three did respond to the questions.
- The last two datasets were delivered by various sources. The first table contains a list of smaller compressor builders provided by Pneurop. The second table contains names of enterprises that have been suggested by other respondents to the questionnaire and industry federations.

Company	Equipment group	SME?	Comments	Action
Wilking Drucklufttechnik Herne GmbH	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Wimmer International	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Cestné A Stavebné Mechanizmy Tisovec A.S.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
BROKK AB	construction	no	owned by Lifco, large industrial group	
Mecalac S.A.S.	construction	no	+/- 400 employees	
DOOSAN INFRACORE	construction	no	over 5000 employees	
Sennebogen Maschinenfabrik GmbH	construction	no	+/- 400 employees	
SIMEX S.R.L.	construction	possibly	world leader	e-mail on 30/07/2009
DRESSTA Co. Ltd.	construction	no	Sells construction equipment produced at Huta Stalowa Wola. Owned by same group HSW SA	
AVOLA Maschinenfabrik A. Volkenborn GmbH & Co. KG	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
SIMA, S.A.	construction	possibly	over 140 employees	e-mail on 30/07/2009
Euro Shatal ApS	construction	not relevant	Branch in Denmark of Shatal engineering (Israelean ownership)	
Trelawny SPT Limited	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
ESSER-WERKE GmbH & Co. KG	construction	no	member of Putzmeister Group (3871 employees in 2007)	-
TECWILL Oy	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
LIEVERS B.V. Holland	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
NEUMAC, S.A.	construction	possibly	30 employees, assets +/- 1,2 million €, family-owned	e-mail on 30/07/2009
TYROLIT Schleifmittelwerke Swarovski K.G.	construction	no	4580 employees and over 500 million € turnover	-
Trufflo Air Movement Limited	construction	no	bought by Phillips & Temro in 2005 (US). The company currently has more than 550 employees	-
ICS Blount Europe S.A.	construction	not relevant	US-company, located in Portland, Oregon	
Habermann, Arthur GmbH & Co. KG	construction	no	+/- 300 employees	-
Robit Rocktools Ltd.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
ENTEKO s.r.l.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009

Company	Equipment group	SME?	Comments	Action
Rubi - Germans Boada, S.A.	construction	no	turnover between 50-100 million US \$, number of employees category 101-500 (already 100 people in R&D) / Cutman is part of Germans Boaga group	
GTA Maschinensysteme GmbH	construction	possibly	workforce around 80 people	e-mail on 30/07/2009
Hycon A/S	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Agria Hispania, S.A.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Orlaco Products BV	construction	not relevant	camera and monitor systems for forklifts and cranes	
Neuson Kramer Baumaschinen AG	construction	no	over 3000 employees in the group	-
Gebrüder WANNER GmbH	construction	possibly	pulling and safety equipment for cranes etc	e-mail on 30/07/2009
IHC Hydrohammer B.V.	construction	no	business unit of IHC Merwede (over 2000 employees in total)	
Hammelmann Maschinenfabrik GmbH	construction	no	Member of the Interpump group, Italy (275 employees at Hamelmann unit)	
Brendon Powerwashers	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Heide-Pumpen GmbH	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
INDECO Ind S.p.A.	construction	probably not	indec north america, Australia, UK, etc integral part of this group	e-mail on 30/07/2009
Morath, Franz	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Comer S.p.A.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Fambo	construction	no	part of the Bauer Maschinen Group of Companies (8600 employees and > 1,5 billion € turnover)	-
NPK Europe	construction	not relevant	Part of Nippon Pneumatic Manufacturing Co.,Ltd (Japanese)	-
Belle Group	construction	no	taken over by Altrad group (over 400 million € annual turnover)	-
Riedlberger-Coupfix	construction	possibly	no info on Coupfix employees. Riedlberger has around 50 employees	e-mail on 30/07/2009
WAKRA Maschinen GmbH	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
EDT Eurodimas GmbH Diamond Technologies	construction	no	member of large german Rothenberger group (+/- 1500 employees)	-
NTC STAVEBNI TECHNIKA spol. s r.o.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009

Company	Equipment group	SME?	Comments	Action
Hamm AG	construction	no	member of Wirtgen Group (4500 employees) + already 500 employees at the Hamm plant near Munich	-
BAIER, OTTO, Maschinenfabrik GmbH	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Nordic Construction Equipment AB	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Layher Bautechnik GmbH	construction	no	member of Layher with broader range of activities, over 1000 employees. Bautechnik has started a a subsidiary in the year 2000	
Ammann-Yanmar SAS	construction	no	Part of the larger Swiss Amman group (+/- 3200 employees)	-
Cangini Benne s.r.l.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
CAMAC, S.A.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Damman-Croes S.A.	construction	possibly	Financial statement 2007 NBB Belgium (total assets: 8,5 million €, turnover 11,9 million € + around 70 employees)	e-mail on 30/07/2009
IRBAL	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
SKAKO A/S	construction	no	Skako Industries (=Group) has over 400 employees	
LOCATELLI S.p.A.	construction	no	bought by Venpa Group in 2007, with +/- 400 employees	-
CWB-RIKU ENTERPRISE GMBH	construction	probably not	member of CRB manufacturer group, Redman precision manufacturing. Presumably chinese ownership	e-mail on 30/07/2009
BLUFAQ S.A.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
ENSINGER GmbH	construction	not relevant	Ensinger group around 1800 employees	
JCB Power Systems	construction	no	over 8000 employees	
TMS S.A.	construction	not relevant	over 55 million € turnover and 220 employees (spare parts for mobile equipment)	
PALFINGER GmbH	construction	no	large group Palfinger	
BATMATIC SRL	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Hamer Romuald Szozda	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Netter GmbH	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
PERMON s.r.o.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
DYNASET OY, Powered by hydraulics	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Wacker Construction Equipment AG	construction	no	Wacker Neuson concern (over 3000 employees in the group)	-

Company	Equipment group	SME?	Comments	Action
SDMO Industries	construction	no	member of Kohler group since 2005. This is an american group with over 32.000 employees	
Minelli srl	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
BauTec Anbaugerätevertriebs GmbH	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Cimolai Technology S.p.A.	construction	no	member of Cimolai group with over 400 employees	
GEHL Europe GmbH	construction	not relevant	Gehl europe within Gehl International - North american ownership	
Kiesel GmbH	construction	no	over 550 employees	
Perlini International S.p.A.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Hinowa S.p.A.	construction	possibly	around 100 employees	e-mail on 30/07/2009
MUSTANG Europe	construction	not relevant	member of nort-american Mustang manufacturing company Inc	
Broendum A/S, V.	construction	possibly	Industrial vacuum cleaners, possibly this details refer to another company	e-mail on 30/07/2009
SELWOOD PUMPS	construction	no	40 million £ turnover and 430 staff	
Tuchel Maschinenbau GmbH	construction	possibly	around 70 employees	e-mail on 30/07/2009
ALMI Machines	construction	possibly	around 45 employees	e-mail on 30/07/2009
VARISCO S.p.A.	construction	no	acquired by Sovema, large international group	-
CIMA EUROPE	construction	possibly	Distributor of Tuchel machinery	e-mail on 30/07/2009
FAUN Umwelttechnik GmbH & Co. KG	construction	no	member of Kirchhoff Group with over 4000 employees	
Merlo Deutschland GmbH	construction	no	Merlo Group, Italian ownership with 395 million € turnover	
Schwarz Müller, W., Ges.m.b.H.	construction	no	+/- 2000 employees	
CASAGRANDE S.p.A.	construction	probably not	4 companies in the group.	e-mail on 30/07/2009
Messersi SpA	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Mastenbroek Ltd.	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
AMOG SRL	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
INTERMIX GmbH	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
HUSS Umwelttechnik	construction	not relevant	filters, exhaust after treatment not really object of NRMM and noise directive	
engcon Nordic AB	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Tünkers Maschinenbau GmbH	construction	no	still family owned but over 250 employees	

Company	Equipment group	SME?	Comments	Action
ENARCO	construction	possibly	108 employees, 20,5 million € turnover in 2007	e-mail on 30/07/2009
Braun Maschinenfabrik GmbH & Co. KG	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
GEKO Gesellschaft für Geräte Konstruktionen mbH	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
R.C. Srl	construction	not relevant	spare parts (brakes, cables etc)	
FIORI SpA	construction	possibly	indian subsidiary, Ajax fiori, has 104 employees. The italian site +/- 70 employees. Turover around 30 million €	e-mail on 30/07/2009
Ahlmann Baumaschinen GmbH	construction	no	merger with Mecalac France with over 400 employees	
Stehr Baumaschinen GmbH	construction	possibly	no sufficient info on internet - to contact	e-mail on 30/07/2009
Laverda	agricultural machinery	no	Member of Argo-group, together with Valdapana, McCormick, Landini, Fella-Werke. 2750 employees in the group	
Massey Ferguson	agricultural machinery	not relevant	member of US AGCO corporation	
LTS Systra	agricultural machinery	not relevant	LTS was former (state-owned?) company. Taken over by Doppstadt. Doppstadt website does not mention systra machines	
Mengele	agricultural machinery	no	Member of Bohnacker Gruppe. Already 200 co-workers at both Mengele-companies without Bohnacker (steel).	
Bargam	agricultural machinery	no	Bargam itself already employs around 200 people. It is also a member of Progroup which includes several other companies like Projet, Oma, Protek, Promak, Agricom and Monica Mist, covering brush cutters, shredders, harvesters, irrigation	
Carraro Agritalia	agricultural machinery	no	member of Carraro group with over 4000 employees	
Lindner	agricultural machinery	possibly	around 200 employees	mail 02/08/2009
Valpadana	agricultural machinery	no	Member of Argo-group, together with Valdapana, McCormick, Landini, Fella-Werke. 2750 employees in the group	
Eicher	agricultural machinery	possibly, no contact details	no company website + no e-mailaddress	

Company	Equipment group	SME?	Comments	Action
Goldoni	agricultural machinery	no	400 person staff	
Landini	agricultural machinery	no	Member of Argo-group, together with Valdapana, McCormick, Landini, Fella-Werke. 2750 employees in the group	
Zetor	agricultural machinery	no	over 1000 employees. Owned for 98% by HTC-holding	
Camisa (Barbieri?)	agricultural machinery	possibly	no sufficient info on internet - to contact	mail 02/08/2009
SAME	agricultural machinery	no	Member of group SAME-Deutz Fahr with around 2700 employees and over 1 billion € turnover	-
Carratu Leonardo	agricultural machinery	possibly	no sufficient info on internet - to contact	mail 02/08/2009
Tonutti Farm Machinery Industries	agricultural machinery	no	employs approximately 300 people	
Bourgoin S.A	agricultural machinery	possibly	no sufficient info on internet - to contact	mail 02/08/2009
Agostini Meccanica	agricultural machinery	possibly	no sufficient info on internet - to contact	mail 02/08/2009
Alvan Blanch Development Co Ltd	agricultural machinery	possibly	around 60 employees	mail 02/08/2009
Agrihold Farm Machinery UK Ltd	agricultural machinery	possibly	no sufficient info on internet - to contact	mail 02/08/2009
Holmer Maschinenbau GmbH	agricultural machinery	no	over 260 employees	
Matrot France	agricultural machinery	no	Also member of Exel industries Group with over 2700 employees	
MAZZOTTI di Mazzotti Gianfranco & C. Snc, Italy	agricultural machinery	possibly	connection with Kverneland group?	mail 02/08/2009
Cummins Engine Co. Ltd	agricultural machinery	no	40.000 employees worldwide	
Hatz Motorenfabrik GmbH & Co	agricultural machinery	no	1465 employees worldwide	

Company	Equipment group	SME?	Comments	Action
LOMBARDINI Srl	agricultural machinery	no	Member of the US Kohler Group with more than 32.000 employees	
Spearhead Machinery Ltd	agricultural and garden	no	Acquired by the Alamo group in 2005 with nearly 2000 employees	
Euromark	agricultural and garden	possibly	no sufficient info on internet - to contact	mail 02/08/2009
Ferri	agricultural and garden	possibly	no sufficient info on internet - to contact	mail 02/08/2009
Pellenc	agricultural and garden	no	600 employees in 2007	
Mc Culloch	agricultural and garden	no	brand within the Swedish Husqvarna group with over 15.000 employees	
Castelgarden	agricultural and garden	no	Member of Global Garden Products (GGP group) with brands like Stiga. One production site in Castelfranco Veneto already has over 600 employees	
MAB Snc	agricultural and garden	possibly	no sufficient info on internet - to contact	mail 02/08/2009
Spaldings (UK) Ltd	agricultural and garden	not relevant	distributor + spare parts	
Solo Kleinmotoren GmbH	agricultural and garden	probably not	between 200 and 300 employees and turnover between 60 and 70 million € (balance sheet total?)	mail 02/08/2009
HOPEM Srl	agricultural and garden	possibly	no sufficient info on internet - to contact	mail 02/08/2009
Hurlimanni	agricultural and garden	no	Member of group SAME-Deutz Fahr with around 2700 employees and over 1 billion € turnover	
Tecnomat	agricultural and garden	no	Member of Exel group, world leader in spraying (2700 employees)	-
Toro Europe NV	agricultural and garden	not relevant	US company	
Andreas Stihl NV	agricultural and garden	no	German group counts almost 10.000 employees and annual turnover over 2000 million € (2007)	
Tigercat	Forest machinery	not relevant	Canadian company	

Company	Equipment group	SME?	Comments	Action
Ecolog	Forest machinery	no	member of Swedish Logmax Global Inc. with 15 companies (merger of canadian Rocan forestry and Log max AB from Sweden). Approximately 300 persons staff	
Gremo	Forest machinery	no	Gremo AB is part of the family-owned Weland group with approximately 900 employees	-
Ponsse	Forest machinery	no	the entire group employs approximately 800 persons	
Holzhäuer	Forest machinery	possibly	around 25 persons	mail 05/08/2009
SERRA	Forest machinery	possibly	around 35 employees	mail 05/08/2009
Pfanzelt	Forest machinery	possibly	no sufficient info on internet - to contact	mail 05/08/2009
Werner	Forest machinery	possibly	no sufficient info on internet - to contact	mail 05/08/2009
Agritec	agricultural machinery	no	member of WAM-group with around 1400 employees worldwide	
Fischer	agricultural machinery	possibly	no sufficient info on internet - to contact	mail 05/08/2009
Gödde	agricultural machinery	possibly	no sufficient info on internet - to contact	mail 05/08/2009
Bergmeister-Hieble	agricultural machinery	possibly	no sufficient info on internet - to contact	mail 05/08/2009
Hako	agricultural machinery	no	over 2400 employees in the Group	-
Bugnot	Waste disposal and recycling	possibly	no sufficient info on internet - to contact	mail 05/08/2009
JBM	Waste disposal and recycling	possibly	no sufficient info on internet - to contact	mail 05/08/2009
Junkkari	Waste disposal and recycling	no	Member of MSK group with 545 employees today	
Kesla	Waste disposal and recycling	no	company employs 320 persons	-
Farwick	Waste disposal and recycling	possibly	around 100 employees	mail 05/08/2009

Company	Equipment group	SME?	Comments	Action
Dücker	Waste disposal and recycling	possibly	no sufficient info on internet - to contact	mail 05/08/2009
Reinex	Waste disposal and recycling	possibly	no sufficient info on internet - to contact	mail 05/08/2009
Kleemann	Waste disposal and recycling	no	member of Wirtgen group with 4500 employees	
Sandvik Rock processing	Waste disposal and recycling	no	member of Sandvik Group with around 50.000 employees	
Extec	Waste disposal and recycling	not relevant	New England supplier = north east region of United states	-
KHD Humbold Wedag	Waste disposal and recycling	no	Largest subsidiary of the KHD-group with around 900 employees	
Terex Pegson	Waste disposal and recycling	not relevant	Terex Pegson website is powerscreen, which is a Terex brand. Terex employs around 18.000 people. US-company	
Beringer	Waste disposal and recycling	possibly	no sufficient info on internet - to contact	mail 05/08/2009
Pöttinger	Waste disposal and recycling	possibly	Pöttinger agricultural machinery counts +/- 1100 employees. Pöttinger Entsorgung is founded in 2003 as an independent company and could possibly be categorized as an SME. It has a 80 staff strong subsidiary in Czech republic.	mail 05/08/2009

Company	Equipment type	SME?	comments	Action 1	Action 2
Bomag GmbH & Co. OHG	Compaction machines	no	2,000 employees world-wide. 634 million Euros turnover within the group in 2007		
Caterpillar	Compaction machines	no			
STA Stavostroj, a.s.	Compaction machines	no	is now part of Amman Group (3200 employees worldwide)		
RAMMAX Maschinenbau GmbH	Compaction machines (only non-vibrating rollers)	no	is now part of Amman Group (3200 employees worldwide)		
Dynapac Compaction Equipment	Compaction machines (only non-vibrating rollers)				
BOART LONGYEAR GmbH & Co.	Compaction machines (only non-vibrating rollers)	no	7,000 Boart Longyear employees		
PERLINI INTERNATIONAL S.p.A.	Compaction machines (only non-vibrating rollers)	no			
ALBA plc Head Office	High pressure flushers	no	has changed of name: Harvard International plc is a leading distributor in the UK of consumer electrical goods for the digital markets.		
Andreas Stihl AG & Co.	High pressure flushers	no	2008 turnover: 817,9 employees: 3.750		
GARDENA Kress Kastner GmbH	High pressure flushers	no	GARDENA GmbH (member of Husqvarna Gruppe - number of employees:15.720)		
Interpump Group SPA	High pressure flushers	no	INTERPUMP GROUP is the largest manufacturer of professional high pressure piston pumps in the world and one of the leading groups operating on an international basis in the hydraulic sector.		
JUROP s.p.a.	High pressure flushers	possibly		e-mail on 26 May	e-mail on 10 August (undeliverable - also tried through website)
Kroll Fahrzeugbau-Umwelttechnik GmbH	High pressure flushers	no	Rothenbergergroup		
Mira Ltd	High pressure flushers	no	Staff 395 (2007) and turnover 28,384,000 £ (2007)		
RAMMAX Maschinenbau GmbH	High pressure flushers	no	is now part of Amman Group (3200 employees worldwide)		

Company	Equipment type	SME?	comments	Action 1	Action 2
Comac S.p.a.	Power sweepers	possibly		e-mail on 26 May	e-mail on 10 August
Fimap S.p.a.	Power sweepers	possibly		e-mail on 26 May	e-mail on 10 August
Johnston-Beam	Power sweepers	no	Three factories in the UK, over 200 distributors world wide		
Scarab Sales Limited	Power sweepers	SME	for over 240 employees /an annual expected turnover of over £27m	request sent through website on 10 August	
Tennant N.V.	Power sweepers	no	Tennant has factories in Mineapolis, Minnesota; Holland, Minneapolis (USA); Uden, Nederland; Northampton, UK and Shangai, China and sells there products directly in 15 countries.		
CIFA SpA	Power sweepers	no	CIFA USA		
Caterpillar EAST Peoria Plant	Power sweepers	no	Caterpillar : more than 30,000 employees		
Sampierana s.p.a.	Dozers (< 500 kW)	possibly		e-mail on 26 May	e-mail on 10 August
IKRA Mogatec Moderne	Dozers (< 500 kW)	no	2002 Employment of 385 persons in the group. Total turnover: 62 million Euro on an output of 1.8 million units p.a..		
Liebherr-Werk Telfs GmbH	Dozers (< 500 kW)	no	group: 2007 employees 29,660 turnover: 7.491 Mio. Euro		
CAMS Machine s.r.l.	Excavators	possibly		e-mail on 26 May	e-mail on 10 August
FIORI S.p.A.	Excavators		fiorigroup		
JC Bamford Excavators Ltd	Excavators	no	8,000 people in 4 continents		
CASE France S.A.	Excavators	no	Created in 1999 through the merger of New Holland N.V. and Case Corporation, CNH is a global company, 28,100 employees		
FIAT KOBELCO CONSTRUCCION MACHINERY S.p.a.	Excavators	no	Fiat Kobelco is now part of Case New Holland.		
HITACHI Construction Machinery (Europe) NV Mini factory	Excavators	no	Hitachi Construction Machinery Europe (NV) the subsidiary company of the Hitachi Construction Machinery Group (HCM) for Europe, Africa, Russia and the Middle East,		

Company	Equipment type	SME?	comments	Action 1	Action 2
Terex / Schaeff GmbH	Excavators	no	TEREX-SCHAEFF Group		
Volvo Compact Equipment	Excavators	no	Volvo group		
Caterpillar (U.K.) Limited	Excavators	no	caterpillar: more than 30,000 employees		
JCB Compact Limited	Excavators	no	JCB is one of the world's top three manufacturers of construction equipment. We employ over 8,000 people on 4 continents		
KUBOTA Baumaschinen GmbH	Excavators	no	28.000 employees		
O. & K. Orenstein	Excavators	no	Case New Holland		
Schaeff-Terex GmbH & Co. KG	Excavators	no	TEREX-SCHAEFF Group		
Terex / Atlas	Excavators	no	TEREX-SCHAEFF Group		
NEW HOLLAND KOBELCO CONSTRUCTION MACHINERY S.p.A	Excavators	no	Case New Holland		
MECALAC S.A.S	Excavators	no	The Mecalac Ahlmann Group is comprised of 400 men and women who work with dedication ...		
LIEBHERR FRANCE SAS	Excavators	no	group: 2007: employees 29,660 turnover: 7.491 Mio. Euro		
DOOSAN Infracore Europe S.A.	Excavators	no	Doosan group		
NEW HOLLAND KOBELCO CONSTRUCTION MACHINERY	Excavators	no	Case New Holland		
DAEWOO HEAVY INDUSTRIES AND MACHINERY LTD	Excavators	no			
Fiat-Hitachi Excavators S.p.A.	Excavators	no	Fiat is part of Case New Holland		
Case France Usine de Crépy-en-Valois	Excavators	no	Case New Holland		
KOMATSU UK Ltd	Excavators	no	Komatsu Group consists of Komatsu Ltd., and 208 other companies		

Company	Equipment type	SME?	comments	Action 1	Action 2
ATLAS TEREX	Excavators	no	Terex Corporation is a diversified global manufacturer with 2008 net sales of \$9.9 billion		
HITACHI Construction Machinery (Europe) N.V. Amsterdam Factory	Excavators	no	Hitachi Construction Machinery Europe (NV) the subsidiary company of the Hitachi Construction Machinery Group (HCM) for Europe, Africa, Russia and the Middle East		
KUBOTA Baumaschinen GmbH	Excavators	no	Die Kubota Baumaschinen GmbH ist Teil eines weltweiten Konzerns mit 28.000 Mitarbeitern		
IHIMER S.p.A.	Excavators	no	60 employees- joint venture IHI-group and MER		
ALBA plc Head Office	Grass trimmers / Grass edge trimmers	no	2004: turnover 16,7 million £ /average number of persons employed by the Group 864		
AL-KO Geraete GmbH	Grass trimmers / Grass edge trimmers	no	AL-KO Kober Groep		
ARGOS Limited	Grass trimmers / Grass edge trimmers	no	Argos (part of homeretailgroup) sales grew 8% to £4.2 billion and it employed some 34,000 people across the business.		
B&Q Plc	Grass trimmers / Grass edge trimmers	no	Retail sales of £3.8 billion. Over 34,000 employees		
DOLMAR GmbH	Grass trimmers / Grass edge trimmers	no	650 employees		
Electrolux Outdoor Products	Grass trimmers / Grass edge trimmers	no	2008: Electrolux had sales of sek 105 billion and 55,000 employees		
IKRA GmbH	Grass trimmers / Grass edge trimmers	no	2002 Employment of 385 persons in the group. Total turnover: 62 million Euro on an output of 1.8 million units p.a..		
IKRA Mogatec Moderne Gartentechnik GmbH	Grass trimmers / Grass edge trimmers	no	2002 Employment of 385 persons in the group. Total turnover: 62 million Euro on an output of 1.8 million units p.a..		
JCB Power Products	Grass trimmers / Grass edge trimmers	no	Today, JCB is still a family-run business but now we employ over 8,000 people and sell our machines in over 150 countries		
Power Base Homebase Ltd	Grass trimmers / Grass edge trimmers	no	Homebase, part of Home Retail Group.		

Company	Equipment type	SME?	comments	Action 1	Action 2
Neill Tools Ltd (Spears & Jackson Group)	Grass trimmers / Grass edge trimmers	no	Spears & Jackson Group		
Screwfix Direct Ltd	Grass trimmers / Grass edge trimmers	no	Employs 921 people at its head office and contact centre, plus a further 2,398 more employees at its Trade Counters (134 sites as of end October, 2008)		
Viking GmbH	Grass trimmers / Grass edge trimmers	no	VIKING, part of the STIHL group		
EMAK	Lawnmowers, lawn trimmers and lawn edge trimmers	no	Today Emak is a major international business with four premier brands renowned the world over: Efco, Oleo-Mac, Bertolini, Nibbi. With 4 production sites, 8 branches and 126 distributors, Emak maintains a presence in more than 70 countries.		
ALKO Gerate GmbH	Lawnmowers, lawn trimmers and lawn edge trimmers	no	Al-ko group		
COUNTAX Ltd.	Lawnmowers, lawn trimmers and lawn edge trimmers	possibly		countax had been invited to EGMF round table	
VARI , a.s.	Lawnmowers, lawn trimmers and lawn edge trimmers	possibly		e-mail on 26 May	e-mail on 10 August
Brill Gartengerate GmbH	Lawnmowers, lawn trimmers and lawn edge trimmers				
CAMINEL	Lawnmowers, lawn trimmers and lawn edge trimmers				
Einhell AG	Lawnmowers, lawn trimmers and lawn edge trimmers	no	Einhell currently has approximately 1050 employees worldwide.		
ISC GmbH	Lawnmowers, lawn trimmers and lawn edge trimmers				

Company	Equipment type	SME?	comments	Action 1	Action 2
Nutool Holdings UK	Lawnmowers, lawn trimmers and lawn edge trimmers				

Company	Questionnaire answered?	Action 1	Action 2	Action 3
AGRINOVA Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
AGRIS - BRUMI Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
CAMPAGNOLA Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
CAMS MACCHINE S.a		sent on 28 May 2009	on 29/06 + phone contact	Sent on 10 August
CANGINIBENNE Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
CARAVAGGI Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
CASELLA MACCHINE AGRICOLE Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
COGEM Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
COMER		sent on 28 May 2009	on 30/07	
FIORI SpA		sent on 28 May 2009	on 30/07	
GANDINI GROUP Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
GENMAC Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
GIANNI FERRARI Srl	yes	sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
GREEN TECHNIK by GREEN PRODUZIONE Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
HINOWA SpA	yes	sent on 28 May 2009		
INDECO IND. SpA	yes	sent on 28 May 2009		
IRRIMEC Srl		sent on 28 May 2009	on 29/06 + phone contact	Sent on 05 August
MESSERSI' SpA	does not want to cooperate. Asks tot contact CECE for further information	sent on 28 May 2009	on 30/06 + phone contact	

Company	Questionnaire answered?	Action 1	Action 2	Action 3
MITTERER E. Sas di A.Mitterer & C.		sent on 28 May 2009	on 30/06 + phone contact	Sent on 05 August
NEGRISOLO COSTRUZIONI Snc di Negrisola Modesto & C.		sent on 28 May 2009	on 30/06 + phone contact	Sent on 05 August
OCMIS IRRIGAZIONE SpA		sent on 28 May 2009	on 30/06 + phone contact	Sent on 05 August
PALAZZANI INDUSTRIE SpA		sent on 28 May 2009	on 30/06 + phone contact	Sent on 10 August
PATERLINI Srl		sent on 28 May 2009	on 10/07/2009	Sent on 10 August
PEZZOLATO SpA Officine Costruzioni Meccaniche		sent on 28 May 2009	on 10/07/2009	Sent on 10 August
UDOR SpA		sent on 28 May 2009	on 10/07/2009	Sent on 10 August
V F VENIERI SpA		sent on 28 May 2009	on 10/07/2009	Sent on 10 August
ROVATTI A. & Figli Pompe SpA		sent on 28 May 2009	on 10/07/2009	Sent on 10 August

Company	Equipment type	SME?	Comments	Action 1	Action 2	Action 3
Rotair	Compressors	possible		e-mail 10/7	e-mail 7/09	phone 09/09
Bottarini	Compressors	No	Member of the Gardner-Denver group			
Betico	Compressors	possibly		internet form + e-mails 10/07	e-mail 7/09	phone 09/09
Mattei	Compressors	possibly		e-mail 10/7	e-mail 7/09	phone 09/09
Atmos	Compressors	possibly		e-mail 10/7	e-mail 7/09	phone 09/09

Company	SME?	Comments	Action 1	Action 2
CLEPA	possibly	List received from respondent to the questionnaire	e-mail on 31/08	e-mail on 14/09
Piquersa	possibly	List received from respondent to the questionnaire	e-mail on 31/08	e-mail on 14/09
Mecanocontinental	possibly	List received from respondent to the questionnaire	e-mail on 31/08	e-mail on 14/09
Uromac	possibly	List received from respondent to the questionnaire	e-mail on 31/08	e-mail on 14/09
Agria	possibly	List received from respondent to the questionnaire	e-mail on 31/08	e-mail on 14/09
Combilift	possibly	From AGT verlag World ranking	e-mail on 16/09	
commacchio	possibly	List received from CECE	e-mail sent on 16 September	
fraste	possibly	List received from CECE	e-mail sent on 16 September	
interoc	possibly	List received from CECE	e-mail sent on 16 September	
nordmeyer	possibly	List received from CECE	e-mail sent on 16 September	
mcdriil	possibly	List received from CECE	contacted per website	
egt	possibly	List received from CECE	e-mail sent on 16 September	
beretta	possibly	List received from CECE	e-mail sent on 16 September	
Dando	possibly	List received from CECE	contacted per website	



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