



Product Impact Management prioritisation process Coversheet for Submissions

Overview

The Department of the Environment and Energy is working with States, Territories and local government to develop a strategic approach to prioritising national product stewardship action in response to product impact management issues.

As product types are changing and increasing, managing their impacts on the environment (from waste produced throughout their lifecycle) is becoming increasingly complex.

Two documents have been developed to guide how Australian Governments will decide which product impact issues will be prioritised and have resources allocated to them. This will be managed through the administrative arrangements of the Meetings of Environment Ministers.

These are the draft:

- **Assessment | Action | *Escalation* (AAE) Process**
- **2018-19 Work Plan**

The Department invites public submissions on the two documents.

Your contact details

Name of organisation (where applicable)	Centre for Air pollution, energy and health Research (CAR) and UNSW
Name of author	Ana Porta Cubas, Graeme Zosky (UTAS) and Guy Marks (UNSW) on behalf of the Centre for Air pollution, energy and health Research (CAR)
Contact person (If not the author)	Ana Porta Cubas
Phone number	9114 0477
Email	ana.porta@sydney.edu.au
Address	431 Glebe Point Rd, Glebe, 2037
Website (optional)	https://www.car-cre.org.au

Submission Guide

How to provide your comments

You are encouraged to provide comments on every stage of the AAE Process, keeping in mind that this process will be used by governments to prioritise action on product stewardship issues in your jurisdiction/s.

Please consider whether:



- there are any stages missing
- you would add/remove any core requirements of each stage
- you would add/remove any steps from the stages

Please also comment on whether the distinction between these priorities and the priorities set under the *Product Stewardship Act 2011* clear?

- If not, how would you clarify them?

2018-19 Priorities

- Were you aware that these are the current priorities?
- Do you agree that these should be the priorities?
- If yes, do you have recommendations for how action on the priorities could be progressed?
- If not, which issues do you think should be the priorities?
 - Please frame your response around the criteria set out in the Assessment phase of the document to demonstrate why it could be considered a priority.
- Is your industry/sector in a position to work with the lead jurisdiction on a current priority?
- Is your industry/sector in a position to take the lead on a current priority, in collaboration with a jurisdiction?
- Do you have examples of how similar issues have been managed in other countries/markets?

Presentation questions

- Is the way information is presented clear and easy to follow?
- Would you include more/less information?
- Would you categorise the information differently?

General

- Are the national priorities communicated enough/clearly enough/often enough?
 - If not, how, where and how often would you like to see information on national priorities communicated?

Submission instructions

Submissions are due by 5:00pm AEST, 4 May 2018. Any submissions received after this date will be considered at the Government's discretion.

Where possible, submissions should be sent electronically, preferably in Microsoft Word or other text-based formats, to the email address listed below.

All submissions must include this cover sheet.

Submissions can be forwarded to:

wastepolicy@environment.gov.au

Alternatively, submissions may be posted to the address below to arrive by the due date:

Attn: Nataša Jovanović



Environment Standards Division
Department of the Environment and Energy – Allara St Offices
GPO Box 787
Canberra ACT 2600

For further information, please call 02 6274 2131.

Confidentiality and privacy

The Department will treat all submissions as public documents, unless the author requests the submission be treated as confidential.

Public submissions will be published in full on the Department's website. The Department will publish the name of the individual or, name of the organisation (if applicable) and state or territory with your submission.

A request may be made under the *Freedom of Information Act 1982* (Commonwealth) for a submission marked 'confidential' to be made available. Such requests will be determined in accordance with provisions under that Act.

The Department will deal with personal information contained in, or provided in relation to, submissions in accordance with this cover sheet and its Privacy Policy (www.environment.gov.au/privacy-policy). Personal information is collected for the purposes of identifying authors of submissions. It may be used and disclosed within the Department and to other persons for the purposes of carrying out the review, and otherwise as required or permitted by law.

Do you want this submission to be treated as confidential? **Yes** **No**



Submission from the Centre for Air pollution, energy and health Research (CAR)

Date: 04 May 2018

Thank you for the opportunity to comment on the 'Proposed national approach to product stewardship action on environmental impacts of products' and in particular the 'Assessment | Action | *Escalation*' proposal.

About CAR

The Centre for Air pollution, energy and health Research (CAR) is a Centre of Research Excellence funded by the National Health and Medical Research Council. CAR brings together over 30 researchers at the forefront of their fields to investigate how air pollution and new forms of energy affect our health. Our vision for a healthier community is the driving force behind our research.

CAR supports teams of researchers in the fields of epidemiology, exposure assessment, toxicology, chemistry, biostatistics and clinical respiratory medicine to pursue collaborative projects and to develop their capacity. We are based in seven of Australia's leading universities.

Overall comments

CAR supports a process that allows assessment of the impacts of products throughout their lifecycle and, if appropriate, the design and implementation of mitigation strategies to minimise these impacts. CAR also supports the cross-jurisdictional nature of the proposed process and industry engagement in impact mitigation.

We believe the lifecycle lens stated in the principles of the working group is crucial, as investigating just one phase of a product's life (e.g. use or disposal) paints an incomplete picture of its true environmental and health impacts. We note however that in the 'Assessment | Action | *Escalation*' process, emphasis is given to cross-jurisdictional and national, rather than international impacts. CAR proposes that if, as stated, the aims are to minimise the impacts of products throughout their lifecycle, then impacts caused by sourcing and manufacture undertaken in other countries cannot be ignored. Alternatively, if due to Australia's limited powers in the international arena, this cannot be done then it is essential to clarify that the 'Assessment | Action | *Escalation*' process is limited because it can only focus on part of a product's lifecycle, rather than in its entirety.

Furthermore, CAR feels the document is unclear whether the proposal focuses uniquely on the impacts derived from the waste stage of a product or from all stages of a product's lifecycle. While there are various instances where waste seems to be the main focus¹ this is intermixed with statements about product impacts more generally. Again if a true lifecycle analysis is the overall aim, then all elements of a products' life need to be addressed, not just waste defined as 'material,

¹ Submission page FAQs are focus on waste products. Pg9 of AAE doc 'Once a waste stream from a particular product issue has been characterised..', pg4 the Minister has portfolio responsibility over waste, pg6 defines waste, p10 International conventions dealing with waste are listed.



substance or by-product that is **discarded as no longer required**'. An example of where this sole focus may be inadequate could be noxious gases released during the manufacture of plastics. While these gases may not fall under the waste definition provided they could nonetheless have deleterious health and environmental impacts.

Within the element of societal impacts proposed in the 'Assessment | Action | Escalation' process, CAR strongly welcomes emphasis on a product's impact on health. Consideration of the health impacts should be proactive, rather than reactive, and rely on reputable sources including peer-reviewed scientific literature, reports produced by expert organisations (such as CAR) and scientific consensus documents (e.g. systematic reviews and meta-analyses).

CAR is in agreement with two of the 2018-19 priority areas (PVs and large battery storage), which are in alignment with our own research focus of understanding the health benefits and risks of renewable energies.

Stage 1 of 'Assessment | Action | Escalation'

CAR supports a process that allows all jurisdictions to bring concerns regarding the societal impact(s), including health impacts, of products to the attention of governments.

- *Identifying a product impact issue could be more proactive*

Currently the proposal states that "product impact issue needs to be identified, brought to the attention of government". CAR instead proposes a more proactive approach via government monitoring of scientific literature (in particular literature reviews), noting scientific consensus statements, and proactively engaging with scientific groups with expertise in environmental exposures.

- *The ways to determine credibility of claims could include scientific expertise*

CAR welcomes those criteria to be used for determining credibility of impact issues, including published and peer-reviewed scientific data. An additional source could include position statements from scientific groups and bodies with specific expertise in the field (e.g. CAR).

- *A national focus means lifecycle impact analysis is unlikely*

The proposal states that to assess a product, impacts should be cross-jurisdictional and have national consequences. At the same time the principles of the working group state that "*Australian governments will promote and support industry led action to minimise the negative impacts from products throughout their lifecycle*". Considering that most products in Australia are imported, focusing only on national impacts will miss at least half of a product's potential impacts (namely sourcing, manufacture and transport) which will affect overseas nations and populations. CAR instead proposes that all stages of a product's lifecycle be assessed for impacts or alternatively that limitations to lifecycle analysis be appropriately acknowledged in the proposal.



Stage 2 of 'Assessment | Action | Escalation'

- *CAR welcomes the focus on health impacts of Stage 2a*

CAR strongly agrees that health impacts of products should be a key consideration in assessing the overall impact of a product as seen in Stage 2a. Negative health impacts not only affect people individually through reduced quality of life but also the economy through increased health care burden and costs.

CAR believes that health impacts should be analysed throughout a product's lifecycle rather than individual stages. As stated before, this could be hindered if, as proposed, analysis is restricted to national, rather than international impacts.

- *All possible mitigation strategies should be investigated in Stage 2b*

CAR welcomes a stage in the process which addresses ways to mitigate a product's adverse impacts. However, it is concerned that assessment of action feasibility in Stage 2b includes a strong emphasis on whether product stewardship can be modified to mitigate these impacts. This implies that action feasibility is given stronger weighting than impact itself. In turn this may mean that if mitigation strategies are deemed too difficult by industry then product manufacture, transport, use and disposal will continue as per *status quo*.

CAR instead advocates for a process whereby, if the societal impacts are large but product stewardship is likely to remain unchanged, then all alternative mitigations strategies should be thoroughly investigated.

2018-19 Priorities

- *Photovoltaics (PVs) and large energy storage batteries*

CAR welcomes those identified priorities which relate to Australia's transition to renewable energies. CAR has a strong interest in this area through its newest research theme "energy transitions and health". We believe that while the imperative is to move towards new forms of energy, we also need to consider the impacts (both positive and negative) that new technologies could have on our health. And this analysis needs to be done in a 'cradle to grave' fashion. The ultimate aim is to mitigate any health risks that could arise as we transition to renewable forms of energy. To our knowledge we are the first to do this in Australia and CAR's interest aligns strongly with the aims of the 'Assessment | Action | Escalation' process.

- *PV health impacts are still not clear*

A PV stewardship scheme can only be fully effective if all known health impacts, throughout the lifecycle of PVs are understood. There are varying reports which detail potential health impacts of PVs associated with manufacture, use and disposal. These include silicosis associated with glass production [1, 2] exposure to lead during the production of lead-acid batteries used in PV systems [3] and exposure to heavy metals such as lead, cadmium and chromium during end-of-life disposal of PV cells [4]. On the other hand, non-peer reviewed reports have suggest that solar energy has



minimal health and environmental impacts, especially since health risks are experienced by overseas workers during the manufacturing process and not the “general population” [5]. As mentioned previously, a solely national, rather than international focus is of concern to CAR, because it ignores the health impacts associated with the sourcing, manufacture and transportation of PV panels that people are exposed to, regardless of their nationality, and which may occur in vulnerable populations in low-income settings. CAR welcomes further research into the health impacts of all stages of the PV lifecycle.

References

1. Qi, L. and Y. Zhang, *Effects of solar photovoltaic technology on the environment in China*. Environmental Science and Pollution Research, 2017. **24**(28): p. 22133-22142.
2. Wang, Z. and W. Wei, *External cost of photovoltaic oriented silicon production: A case in China*. Energy Policy, 2017. **107**: p. 437-447.
3. van der Kuijp, T.J., L. Huang, and C.R. Cherry, *Health hazards of China’s lead-acid battery industry: a review of its market drivers, production processes, and health impacts*. Environmental Health, 2013. **12**: p. 61-61.
4. Dubey, S., N.Y. Jadhav, and B. Zakirova, *Socio-Economic and Environmental Impacts of Silicon Based Photovoltaic (PV) Technologies*. Energy Procedia, 2013. **33**: p. 322-334.
5. Moss, J., A. Coram, and G. Blashki, *Solar Energy in Australia: Health and Environmental Costs and Benefits*. 2014, The Australia Institute: Canberra.