

## CLA FINAL COMMENTS ON THE EU ROADMAP

### 2. Options for criteria for determination of endocrine disrupting properties

The roadmap defines 4 different options for the establishment of criteria for determination of endocrine disrupting properties.

#### **2.1. Questions regarding option 1 (No policy change (baseline). The interim criteria set in the plant protection products and biocidal products regulations continue to apply. No other criteria are specified).**

**2.1.1. Have you conducted or are you aware of an assessment of substances which would be identified as endocrine disruptors according to option 1?**

**If yes, please describe the methodologies (4000 characters)**

[CropLife America](#) (CLA) represents manufacturers, formulators and distributors of plant protection products (PPP) in the United States (US). CLA supports a rigorous scientific, risk-based approach to regulating PPP as conducted by the US Environmental Protection Agency (EPA). In the US, product safety is re-evaluated when registrants petition for use expansions or label changes. All PPP must be reviewed at regular intervals through a rigorous process. In the US both biocidal and PPP uses of an active substance are regulated by the same statute, which allows exposure considerations across the full range of uses. CLA members support this robust regulatory approach.

CLA cites assessments conducted in the EU which identify compounds as ED using hazard based criteria; European Crop protection Association's (ECPA) response to this Public Consultation (PC) provides [links](#) to those studies:

CLA members do not support Option 1 for many reasons. The vast array of data required by the EU regulatory authorities is not utilized; the identification of ED using Option 1 is scientifically and factually incorrect, being based solely on cancer and reproductive toxicity classification decisions rather than scientific evidence indicating a substance causes an adverse endocrine effect; Option 1 is inconsistent with the WHO/IPCS (2002) definition which requires a causal link between observed effects and endocrine activity and does not take into account relevant exposures and risk mitigation measures. Thus Option 1 is inappropriate for regulatory purposes.

CLA members do not support identifying ED based solely on *any* of the 4 options presented in the Roadmap because they are all based on incomplete hazard identification/characterization. The proposed hazard based approach, with no consideration of exposure and Risk Assessment (RA), does not meet the requirements of a "science-based approach to regulatory decision making" as noted in the Roadmap (RM) because substances identified as ED using any of the 4 options outlined in the RM are precluded by Reg. 1107/2009 from further evaluation using RA. This places [Reg. 1107/2009](#) in breach of the [World Trade Organization \(WTO\) Sanitary and Phytosanitary \(SPS\) Agreement](#), specifically Article 5 which requires *"that Members shall ensure that their sanitary or phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations."*

Nor can any of the 4 options be considered a correct application of the [EU Precautionary Principle](#), which is meant to enable precautionary decisions provided data is insufficient for conducting a full risk assessment. *"The precautionary principle enables rapid response in the face of a possible danger to*

*human, animal or plant health, or to protect the environment. In particular, where scientific data do not permit a complete evaluation of the risk, recourse to this principle may, for example, be used to stop distribution or order withdrawal from the market of products likely to be hazardous.”*

There is a wealth of test data generated for PPP in accordance with internationally recognized protocols that is available to thoroughly assess hazards and exposures. Procedures are in place to account for uncertainties, to conduct sound RAs and to mitigate potential risks. All this information should be considered when evaluating PPP; as failure to do so will inevitably lead to incorrect conclusions and actions which do not confer additional protections. The vast array of hazard and exposure data required by law by the EU authorities must be used when evaluating compounds for ED properties.

**If yes, please describe the outcomes of the assessments (4000 characters)**

**Option 1**, which relies on the interim criteria, will result in compounds classified as carcinogenic or toxic to reproduction to also be categorized as ED, regardless of whether or not they have an ED Mode of Action (MoA). An assessment based on **Option 1** will therefore incorrectly capture and list many compounds as ED, when they are not. The following points identify the shortcomings of this approach:

- From a **practical** sense, this approach is redundant because the adverse effects are already captured through the existing classifications. It does not improve the protection of human or environmental health.
- From a **scientific** standpoint, the interim criteria are not a credible basis upon which to regulate ED. Tumor induction and reproductive effects are influenced by many factors, and adverse effects may arise through a variety of MoA. Because cancers and reproductive effects may not be driven by an interaction with the endocrine system, this will incorrectly categorize substances as ED.
- From a **regulatory** perspective it is a very simplistic and disproportional approach. It causes compounds to be incorrectly labelled as ED for no other reason than the regulatory requirements fail to provide an appropriate alternative.
- From a **market** perspective, the labelling of any compound as an ED opens up the possibility of black listing in countries outside the EU and market bans within the EU and other countries, which go beyond regulatory requirements. None of the assessments can address this impact, which although highly likely is also unpredictable. It should also be recognized that once a substance is identified as an ED, it is highly unlikely the substance will recover its market value in the event the interim criteria are replaced with credible criteria that overturn interim ED decisions.

Finally, Option 1 may discourage the development of exposure and other data to better understand the probable effect. Failure to incorporate this scientific knowledge will cause regulators to implement actions which do not confer additional protection to human health or the environment. Understanding margins of exposure and the MoA by which an effect occurs and can be important to understanding how our health may be influenced by the environment we live in. This is one of the objectives of [international work under way at the OECD](#).

Additionally, please see the [link](#) to the ECPA public comment citations which provide back ground material and references.

## 2.1.2 Are you aware of any assessments of substitutability of the identified substances?

### **If yes, please describe the methodology (4000 characters)**

Please see the ECPA comments regarding substitutability assessments for the EU and how this negatively impacts EU agriculture. Substitution reduces the number of compounds available for use by farmers, yet the needs for retaining a range of PPP are many. They include the ability to manage food production costs with a variety of crop protection tools that enable the effective management of pest resistance.

The EU is the only jurisdiction which allows substitution based on relative ‘safety’. Substitution is not a concept enshrined in the US PPP Regulations because in the US PPP are regulated based on risk and the use of risk mitigation practices and not on whether or not there is a less hazardous PPP available. US EPA examines the hazard characteristics of the PPP, plus conservative estimates of “real life” exposures to establish whether they may be used without unreasonable risk to human health or the environment. If PPP cannot be used safely, they are not registered. If PPP can be used safely, then use conditions demonstrated by RA as safe for consumers and the environment are clearly stipulated on the label, which is a legally binding document and is periodically updated as new information becomes available. Providing our compounds meet these strict requirements, we believe that farmers are the best judge of which compounds are safe and effective for their farming enterprise.

To ensure the label and personal protective equipment (PPE) requirements are being met, the US Worker Protection Standards regulate the safe handling and use of PPP. They require PPE training and use for operators that are specified on product labels, as well as clear directions and warnings. Infractions are prosecuted. In addition, the US monitors the [safe and appropriate use of PPP](#) through inspections and reporting mechanisms which are enforced at both a State and Federal level. The success of the EPA regulatory approach is tracked and demonstrated by pesticide exposure data collected by the [Bureau of Labor](#), [Centers for Disease Control and Prevention](#), [California Pesticide Illness Surveillance Program](#) and [National Poison Data System](#) pesticide poisoning databases and by the [US Department of Agriculture Pesticide Data Program](#), which monitors PPP residues in agricultural commodities. In addition, the [US Food and Drug Administration](#) (FDA) monitors and enforces pesticide residues in food.

### **If yes, please describe the Outcome of the assessment (4000 characters)**

The studies cited by ECPA demonstrate that removing compounds from the market in favor of others reduces the pesticidal modes of action available to farmers to control diseases and weeds, even though retaining a diverse portfolio of PPP options for varying agronomic conditions is critical to resistance control. PPP are not only used to kill weeds or invertebrate pests, but to fight fungal and bacterial diseases in crops. Insects, weeds and microorganisms adapt and reproduce rapidly to resist chemistries which are utilized frequently. Thus, and as with human or animal medicines, preventing the development of resistance requires a suite of compounds with different modes of action against pests/pathogens that can be used rotationally to minimize the chances of target organisms developing resistance. Ensuring a variety of crop protection tools is therefore essential to maintaining a competitive and viable agricultural system. Again, the most important consideration is not the “relative” hazard or safety of the products on the market, but whether they can be used safely and whether or not conditions of use are adequately enforced.

### 2.1.3 Are you aware of assessments of Socio economic impact if the identified substances were regulated without further RA?

#### **If yes, please describe the methodologies (4000 characters)**

The ECPA comments relate primarily to impacts on EU agriculture, yet the EU regulation has broader effects within the EU and to its trading partners. Reg. 1107/2009 will likely impact €65 billion of imports into the EU, many of which are commodities which cannot be grown in the EU but which are essential to its food processing industry: [Potential Trade Effects on World Agricultural Exporters of European Union Regulations on Endocrine Disruptors](#) . The trade impacts would be a direct result of banning PPP considered to have ED properties from the EU market using hazard based cut offs, and of implementing a default, de facto zero Maximum Residue Limit (MRL) of 0.01mg/kg for that PPP. Maximum Residue Limits (MRL) are set to ensure pesticide use is as prescribed, in accordance with the label. A dietary RA is required for setting an MRL, but Reg. 1107/2009 precludes an RA for substances considered to have endocrine disrupting properties (i.e. based on hazard alone). A dietary RA ensures that MRL are congruent with the protection of human health. MRL are not a safety standard per se, but the allowable use pattern and quantity is based upon a risk assessment which identifies the reference dose.

Based on our experience as trading partners, CLA is concerned that regardless of whether Option 1,2,3 or 4 is selected, PPP will be banned and the default MRL value (0.01mg/kg) referenced in both the MRL and PPP Regs will be set for compounds classified as ED. This is neither practical, nor science based, but without an RA it is entirely unclear how this can be addressed, or a non-default MRL established.

The use of the default MRL is also problematic because it is arbitrary - without an RA it is impossible to know whether 0.01mg/kg is sufficiently protective while also meeting the WTO obligation of *“not going beyond what is necessary to protect human health and the environment”*.

It is important to ensure an objective, scientific and proportional approach to regulating ED and setting MRL that are not so arbitrary that developing new products becomes unviable, or using existing products results in food commodities being blocked at the port of entry. US farmers cannot be expected meet such a low threshold for all uses of all PPPs subject to cut-off and still produce high quality, safe food no more than EU farmers can. Food safety, including the control of fungal aflatoxins in grain should be a consideration.

The European Commissions' [Rapid Alert System for Food and Feed](#) (RASFF) has reported 10 notifications of aflatoxin B1 in maize of European origin since the last maize harvest in autumn 2012. In 2013 several European countries, including Romania, Serbia and Croatia reported nation-wide contamination of milk for human consumption with [aflatoxins](#). It was reported in March that animal feed originating from Serbia and imported in the Netherlands and Germany was contaminated. Russia implemented trade bans in response.

Finally, using a hazard based regulatory approach and particularly Option 1 will likely impact the ability of exports to the EU to comply with EU food safety regulations. PPP are necessary to ensure food commodities meet the quality and safety standards required in other EU Regs. Applying hazard based criteria for EDs will remove many PPP from use - PPP that fight crop disease, prevent destructive species from damaging crops, stored grains and other post-harvest treated commodities and eliminate noxious weeds such as *Ambrosia artemisiifolia*, and *Heracleum mantegazzianum* which are harmful to humans or



animals. As an example, the EU sets limits for mycotoxins in nuts and grains in [COMMISSION REG. \(EU\) No 165/2010](#) which cannot be met without using fungicides and insecticides that will likely be lost through hazard based cut-offs.

**If yes, please describe the Outcome of the assessment (4000 characters)**

The [EU is the world's biggest importer of agricultural goods](#), with 2014 imports at €101.5 billion, well ahead of the US (€84 billion).

The EU approach to regulating PPP using hazard based cut-off for ED, coupled with a default MRL of 0.01mg/kg could block **over €4 billion in US agricultural trade, or 40% of total US food and agricultural commodity exports to the EU**. The potential impact of this regulation on global trade - €65bn - will have a massive socioeconomic impact and represents the largest potential agricultural trade disruption of any EU Regulation since the WTO SPS Agreement was ratified.

CLA is therefore deeply concerned about the trade impact of Reg. 1107/2009 and the use of a default MRL on US farmers – our members' customers – because of its likely effect of skewing PPP selection by US farmers away from those which have been banned by the EU, even if those PPP have been registered for use in the US by the US EPA's rigorous, conservative, and highly protective risk based regulatory process. These PPP are developed, manufactured and formulated by our member companies, and their use in the US (and other markets) should not be restricted because of EU regulatory requirements that are not based on the full complement of scientific data, and a robust determination of risk.

EU market bans and complying with a de facto zero default MRL will act to limit the number and type of products US farmers will feel confident to use if their crops are to be predictably accepted at port by EU importers. As most commodities are comingled from multiple sources prior to shipment and farmers do not know where the commodities may ultimately be shipped, farmers must therefore meet the lowest MRL requirements for those products – in this case the EU default MRL. Therefore the default MRL not only represents a barrier to trade but a barrier to technology use in the US – technology which has already been approved by the US EPA for use under US agronomic conditions. Further, by meeting EU market requirements, farmers may not be able to use the tools they need for agronomic conditions which may differ considerably from those in the EU – and this could impact both the quantity and quality of the crop they harvest. Thus EU Reg. 1107/2009 and Reg. 396/2005 put US farmers in an incredibly difficult position of having to choose between appropriate protection of their crops versus accessing a valuable market in the EU.

**Commodities potentially impacted by the EU hazard-based regulation of ED, based on triggering the default MRL, 0.01mg/kg (impact will vary depending on option used)**

Commodities	Imports into the EU
	€ Million Jan-Dec 2012
Fruit and Nuts	€ 13,795
Animal Feed Ingredients	€ 9,780
Oilseeds and Groundnuts	€ 9,574
Coffee, Tea and Spices	€ 9,470
Vegetable Oil	€ 8,222
Cereals	€ 4,613
Cocoa	€ 4,336
Vegetables	€ 3,525
Sugar	€ 2,046
<b>Total</b>	<b>€ 65,362</b>

In addition to US considerations, CLA members would like to point out impacts on other EU major trading partners:

COUNTRY	IMPACT (€ million)	COUNTRY	IMPACT (€ million)
<b>South and Central America</b>		<b>NAFTA COUNTRIES</b>	
Brazil	10,346	USA	4,292
Argentina	5,022	Canada	1,490
Chile	1,150	Mexico	409
Columbia	1,316		
Peru	1,265		
Costa Rica	1,104		
Ecuador	1,031		
<b>South East Asia</b>		<b>East and South Asia</b>	
Indonesia	3,303	India	1,812
Malaysia	2,065	China	1,796
Vietnam	1,789	Pakistan	154
		Japan	46
<b>Sub-Saharan Africa</b>		<b>North Africa and Middle East</b>	
Cote d'Ivoire	1,981	Morocco	933
Ghana	1,349	Israel	611
South Africa	1,285	Egypt	583
Cameroon	532	Tunisia	316
Kenya	521	Iran	241

Nigeria	393		
Ethiopia	374		
<b>Non EU / EFTA</b>		<b>Oceania</b>	
Ukraine	3,890	Australia	1,221
Turkey	1,811	Papua New Guinea	667
Serbia	766	New Zealand	387
<b>Central Asia</b>			
Russia	1,556		

#### **2.1.4. Please, provide us with any other comments you may have regarding option 1:**

Option 1 fails to provide the information necessary to apply the WHO/IPCS 2002 definition of an ED. It has no scientific basis and will result in misleading and potentially damaging identification of substances that are not endocrine disruptors. To summarize, it does not provide for a complete hazard characterization, nor are exposure and ultimately risk considered. It has potentially massive socioeconomic ramifications without advancing the protection of human health or the environment. Option 1 should not be implemented even on an interim basis.

Because the EU is moving to an entirely different regulatory framework based on a hazard only paradigm for assessing PPP, it will make regulatory coherence very difficult, particularly between trading partners and their regulatory authorities which use a risk based paradigm for evaluating PPP, including our North America Free Trade Agreement (NAFTA) partners Canada and Mexico. Canada has signed a Free Trade Agreement (FTA) with the EU, and it is thus unclear how Canada can meet the regulatory coherence needed to facilitate trade under NAFTA and at the same time meet the conflicting EU requirements based on hazard. We are concerned that these different paradigms will serve to disrupt the current and extensive efforts by US EPA and Canada's Pest Management Regulatory Agency (PMRA) to develop a harmonized approach to regulating PPP under NAFTA.

A major objective of CLA members is to enable the predictable supply of high quality and safe food in a sustainable manner by controlling pests, weeds and diseases that infest crops across the world. CLA members are committed to ensuring that their products can be used without unacceptable risk to human health and the environment while meeting the needs of customers and society. Our members and their export markets are global, and regulatory coherence is an important factor to consider when facilitating international trade. The lack of regulatory harmonization is therefore a key consideration. From a US perspective, we oppose the development of a regulatory process in the EU which diverges from other countries with advanced risk based regulatory systems, including US EPA. The EU approach will force producers towards using compounds based on what the EU market allows regardless of whether or not they are considered safe to use by the exporting country's regulatory approach. The EU regulatory process for registering PPP runs counter to internationally accepted guidances (OECD) and the use of a default MRL runs counter to the CODEX process for developing MRL.

#### ***2.2. Questions regarding option 2 (WHO/IPCS definition to identify endocrine disruptors (hazard identification))***

### 2.2.1 Are you aware of an assessment of substances that would be identified as endocrine disrupting substances according to option 2?

CLA is aware of a number of assessments conducted in the EU which identify compounds as ED using hazard based criteria required by Reg 1107/2009. However, these evaluations are not a definitive assessment of what is or is not an ED, as they are based on incomplete hazard identification and do not consider exposure. Under Option 2, compounds would be precluded by Reg. 1107/2009 from any further evaluation using an RA. This places Reg. 1107/2009 in breach of the WTO SPS Agreement.

CLA does not support Option 2 as it is limited to hazard identification only: Option 2 of the RM references the “general consensus on the WHO/IPCS (2002) definition of an ED”. It is defined as “*an exogenous substance or mixture that alters function(s) of the endocrine system and consequently causes adverse health effects in an intact organism, or its progeny, or (sub)populations.*” The Commission sets forth to develop “criteria” to identify ED using this definition. The proposal to use the WHO/IPCS definition of ED, in that it requires an alteration of the endocrine system causing an adverse effect makes sense, but using this definition implies an assessment of environmental exposures, which Option 2 does not include. Furthermore, exactly what data will be used to satisfy Option 2 is unclear. Option 2 does not discern between substances of high and low concern, because concern cannot always be presumed following identification of a hazard, because harm requires sufficient exposure to the hazard. Thus, based on the RM description of Option 2 as “hazard identification”, and on the description provided in document “The Community Strategy for Endocrine Disruptors Ad Hoc meeting of Commission services, EU Agencies and Member States”. ED-AD-HOC-6/2013/02 Brussels, Feb 19, Option 2 criteria -

(i) only allow for data sufficient to identify the hazard. It does not consider all the critical elements of a full hazard characterization and does not discern between substances that could differ markedly in their toxicological potency.

(ii) provide no consideration of environmental exposures, which is an important predictor of actual adverse effects i.e. “real life” situations, or normal circumstances.

The criteria defined for Option 2 preclude consideration of exposure, despite the fact that Part (d) of Option 2 states that “*where there is (e.g. mechanistic) information demonstrating that the effects are clearly not relevant for humans and not relevant at population level to animal species living in the environment, then the substance should not be considered an ED.*” Because “real life” exposure (level, duration, timing) must be sufficient to trigger a molecular initiating event sufficiently strong to override the cells’ adaptive responses and cause a consequential adverse effect, it is not possible to identify a compound using the definition in Part (d) without considering exposure, or to determine whether or not the effects are “relevant” to humans or at the population levels to animal species living in the environment. PPP are data rich compounds for which exposure has been well characterized. This data is required by and readily available to the regulatory agencies in Europe and should be used in decision making.

For data rich compounds such as PPP, Option 2 fails to utilize the full extent of scientific data available for characterizing a hazard. There have been considerable advances in knowledge generated through the ongoing development of internationally accepted, validated test methodologies, advanced mathematical modelling techniques, exposure assessment methodologies and exploratory science which provide insights into the impact of chemicals from receptor binding, cellular responses, through to the intact live animal. The rationale for taking a limited, hazard based approach considering the extent of scientific knowledge now available is unclear, other than it serves to remove compounds from the market.

### **2.2.1 Outcomes of the assessments:**

CLA references the EU studies provided in the ECPA response which identify varying numbers of compounds because they were conducted before the RM criteria were released and thus are based on different assumptions about the ED criteria. For example, in the 2013 study conducted by the UK CRD, 98 crop protection active ingredients were evaluated according to criteria proposed in Option 2 for the identification of ED. This study showed that 14% to 40% of all substances would be considered ED. This study demonstrates the far reaching ramifications of such broad-based criteria in the absence of including all the elements of a full hazard characterization and RA.

The definition provided in Option 2 (a)-(d) would also capture substances such as coffee, wine, ibuprofen and many other compounds which, depending on the dose or exposure can either be wholly beneficial – or lethal. *“The screening of everyday life chemicals in validated assays targeting the pituitary-gonadal axis”*, [Tinwell et al 2013, Regulatory Toxicology and Pharmacology](#)

CLA conducted an independent review of the trade impact of the EU regulatory approach based on the PSD/CRD impact assessment of 2009. Of the compounds identified by PSD/CRD, 22 are registered for use in the United States; most are critical components in the farmer’s arsenal for fighting pests. They represent a variety of pesticidal MoA which are necessary for combatting resistance and widely used on agricultural crops. If US farmers cannot use the products because of the EU default MRL, there will be a significant disruption in US agricultural practices.

Agronomic impacts for the UK are outlined in the October 2014 Report by The Andersons Centre on [“The Effect of the Loss of Plant Protection Products on UK Agriculture and Horticulture and the Wider Economy”](#). The concerns of UK farmers are similar to those of US farmers, because Reg. 1107/2009 curtails the use of valuable PPP without science based decision making.

CLA is concerned that the EU approach will negatively impact Europe’s trading partners in sub-Saharan Africa, Asia and Latin America. In the past the EU PPP regulatory process has allowed the protection of the European farmer, consumer, and environment at a local level without significantly restricting other countries’ growers’ ability to manage their plant protection needs with a full portfolio of PPP. With hazard based cut offs Reg. 1107/2009 has become a very real threat to farmers in emerging and developed nations. Many of the impacted countries have preferential trading agreements with the EU, and agricultural exports are their most important source of direct foreign earnings. CLA is concerned that the regulatory authorities of these trading partners may also opt to follow the EU regulatory approach as the simplest means of guaranteeing their products access to the EU market, yet the EU approach is not science based and conflicts with the globally accepted regulatory approach which uses RA, considering both hazard and exposure in line with [OECD guidance](#).

Production of many emerging country cash crops such as coffee, tea, spices, tropical fruits and nuts and cocoa are vulnerable to diseases and pests different to the EU which need to be managed using different products and application parameters. If particular substances cannot be used on exported crops because they have been banned from the EU market, it could increase production costs (and yield and quality) because producers would be precluded from using the most cost effective and agronomically efficient

combination of PPP for their particular growing conditions. This could negatively impact consumer food prices, and our multinational member companies market for pesticide products in these regions.

### **2.2.2. Are you aware of any assessment(s) of substitutability of the identified substances?**

The Andersons Center report previously cited evaluates the potential impact of Reg. EC 1107/2009. This report provides strong evidence why the EU cannot look to R&D companies to rapidly replace “cut-off” substances with new active ingredients. We also reference the ECPA, [EPPPO](#), [Teagasc](#), [DEFRA](#), [ADAS](#), [IAB](#) and [Nomisna](#) studies

### **2.2.2 If yes, please describe the outcome(s) of the assessment(s):**

The Andersons Report provides evidence collated on a worldwide basis since 1950 which indicates a steady decline in the number of new active substances introduced since 1997. More recently, new active substances in development fell from 70 in 2000 to just 28 in 2012. The share of investment in global crop protection for products used in Europe has fallen from 33.3% in the 1980s to only 7.7% for the period of 2005-2014. Thus European farmers can no longer draw on the same amount of new technology to drive agricultural production as their competitors in other parts of the world. This competitive disadvantage sets them at odds with trade agreements which seek to open the EU market. It can also give rise to trade disrupting EU measures (i.e. subsidies) to offset increased exports from other countries, or actions to prevent the exports from entering the EU (i.e. tariffs/quotas). Nor are alternative technologies such as organic farming, Integrated Pest Management (IPM), precision agriculture, or biopesticides suitable replacements for PPP at this time. In other words, the EU has reduced the number of products available in the market to a point where substitution is no longer feasible and has limited the capacity for innovation to develop new products to replace them.

The EU has specific [policies](#) in place to support small to medium sized business enterprises (SMEs). The [more than 20 million SMEs](#) in the EU represent 99% of businesses, and are “*a key driver for economic growth, innovation, employment and social integration*”. The European Commission aims to “*promote successful entrepreneurship and improve the business environment for SMEs*” however, the high costs and uncertainty built into the EU approval process creates a high barrier to entry to the sector. Worldwide, the number of companies involved in the research of new active substances has fallen from 35 in 1995 to 18 in 2012. In Europe specifically, the number of EU based companies involved in new product development has fallen from 8 to 4 during this time. This concentration has clearly affected levels of competition in the new product area and the diversity of products being developed. For small start-up companies - often responsible for technology development - the associated costs and risks have escalated, and thus this source of innovation is far less common. The cost of the approval process is also discouraging ‘generic’ manufacturers. Thus data indicate that the EU PPP Reg. has increased concentration in the marketplace and favored large companies over SMEs. When our members face increasing regulatory barriers in the EU, which go beyond what are necessary to protect human health and the environment, it also becomes harder for our smaller members to grow and expand out of the US market.

### 2.2.3. Are you aware of any assessment(s) of the socio-economic impact if the identified substances were regulated without further RA?\*

CLA refers to the assessments and comments presented in the [ECPA response to the PC](#). In addition, CLA cites the 2013 Philips McDougall report “[R&D trends for chemical crop protection products and the position of the European Market](#)”

In general the EU regulatory regime impacts CLA multinational member companies’ **investment decisions** which directly support high paying jobs in science and technology. Regulations which do not allow for an objective, predictable and risk-based decision making are not conducive to the type of predictability in the market necessary to underpin investment. Commercial PPP R&D is moving away from the EU to other countries where regulatory systems are more objective and predictable. Two of CLA’s multinational member companies have relocated their R&D from the EU to other countries. Ultimately investment, jobs, and economic growth on both sides of the Atlantic can become compromised.

Regulations which remove technologies and technology development from the market can impact food security by preventing existing agronomic practices to evolve to meet new challenges and needs. By 2050, the [United Nations](#) predicts there is likely to be 2.4 billion more people to feed worldwide. Agricultural output must double in the next 20-30 years in order to meet the demands for food; thus, farmers must have access to PPP to grow more food per acre. The following two case studies ([potatoes](#) and [chili-peppers](#)) provide examples of the impact of PPP on specific crop yields in the United States.

The International Food Policy Research Institute (IFPRI) report, *Food Security in a World of Natural Resource Scarcity: The Role of Agricultural Technologies* clearly demonstrates the importance of agricultural technologies – including PPP - for feeding populations in the various regions around the world.

Sustainable agricultural production demands efficient use of a scarce resource, land, in order to limit land being drawn into agricultural production at the expense of natural habitat. It demands the stewardship of existing farmland to protect against soil erosion, loss of fertility and disease/pest build up. Efficiency is achieved through the use of a variety of agricultural technologies, one of the oldest being that of PPP. The US has millions of acres dedicated to conservation and natural habitat. [Encroaching further on that habitat is neither desirable nor necessary if current acreage can become more productive.](#)

There is also the perception that organic agriculture (OA), or IPM are viable and sustainable alternatives to conventional food production and do not necessitate pesticide use, but both organic agriculture and IPM require the use of pesticidal chemicals. There are many reports which conclude that organic agriculture yields are significantly lower than those from conventional agricultural production (see attached reference document).

The IFPRI report cites a number of publications which demonstrate that OA can make a substantial contribution to the global food supply **but only at the cost of expanding the global cropped area**; the same conclusion applies to using legumes to substitute for nitrogen fertilizer (Kirchmann, Kaetterer, and Bergstroem 2008). Two recent metastudies showed that yields from OA average 20–25 percent less than those from conventional agriculture, but with large variations (de Ponti, Rijk, and Ittersum 2012; Seufert, *et al.* 2012). Seufert *et al.* (2012) show that although yields of organic fruit and oilseed are only 3 and 11 percent less, respectively, than those of conventional agriculture, yields of organic cereals and vegetables are 26 and 33 percent less, respectively.

### 2.2.3 Outcomes of the assessments

R&D for new PPP needed by European farmers is in decline, as are the number of active ingredients being developed and introduced in the EU. In particular:

- The number of companies involved in the R&D of new agrochemical active ingredients worldwide has declined by 50%, from 35 companies in 1995 to 18 in 2012.
- The global share of new agrochemicals focused on the European market has steadily fallen from 33.3% in the 1980s to 21.3% in the 1990s and to 16.4% in the period from 2005-14.
- The share of crop protection R&D investment attributable to products being developed for the European market has fallen from 33.3% in the 1980s to 25.0% in the 1990s and to 7.7% in the 2005-14 period.

The key reasons behind the reduction in R&D investment in PPP for the European market are the:

- Mature nature of the EU-15
- Non-acceptance of GM technology
- Harsh regulatory environment

Thus European farmers have far less new technology to drive agricultural production than their competitors around the world.

Crop protection products increase crop productivity by 20 – 50%. Farmers must have access to crop protection solutions to grow more food per acre. According to the IFPRI report *Food Security in a World of Natural Resource Scarcity: The Role of Agricultural Technologies*:

*“Crop production increases stemming from greater access to resources, increased inputs, or many types of improved management practices generally go hand in hand with increased potential for losses due to pathogens, animal pests, and weeds (collectively referred to as “pests”) (Oerke et al. 1994; Oerke 2006). Denser crop canopies, shorter intervals between crops, monoculture, and increased fertilizer use often result in higher pest populations. Efforts to intensify agricultural production are therefore incomplete without addressing the concurrent need to invest in crop protection.*

*Although grain production has also doubled over the past 40–50 years, partially as a consequence of changes in crop protection, the overall proportion of crop losses has actually increased (Oerke et al. 1994; Oerke 2006). Depending on the crop, pests are responsible for 25–50 percent or more of global crop losses (Oerke 2006). Losses are particularly devastating in poorer regions of the world, where climates are relatively wet and warm, crops are grown nearly all year or without rotation, crop varieties or landraces are susceptible, and crop protection is absent or of low efficacy (Oerke et al. 1994). Indeed, severe pest outbreaks can be the main cause of starvation in developing countries, especially in areas dominated by subsistence agriculture (Chakraborty, Tiedemann, and Teng 2000; Strange and Scott 2005).”*

As stated in the 2014 UK Andersons report *“there is a moral question of imposing rich-world production standards when some 842 million people globally do not have enough to eat”* and *“Europe, with its favorable soils and climate, should be optimizing output (sustainable intensification)”*. The Andersons report further states that *“The overall conclusion must be that the current direction of policy in the area*

*of PPP is likely to lead to considerable economic and social loss with the gains, at best, uncertain or minimal. Any policies should be science-led, and the assessment of risk has to be undertaken on a proportionate basis. A less precautionary approach with more realistic assessment of risks (rather than hazards) is essential if the UK wants to continue to benefit from having a thriving agricultural and horticultural sector, which protects the environment and provides a safe, affordable and sufficient supply of food for UK consumers.”* The same applies to all EU countries and to the US.

The impact on our global ability to feed a growing world population is dependent on these technologies. Restraints should therefore be based on full consideration of the **risks**, and should recognize that hazardous compounds can still be used in a safe manner to the benefit of the users and consumers.

#### **2.2.4. Please, provide us with any other comments you may have regarding option 2:**

The language of Reg 1107/2009 requires the Commission to present “...*specific scientific **criteria** for the determination of endocrine disrupting **properties***”. Thus neither Reg. 1107/2009 nor the Council or the European Parliament (EP) requests the Commission to demand classification of PPP as ED, but rather to put forth a single set of criteria to determine whether or not a substance has endocrine disrupting properties. This is a subtle but important difference to what the RM is proposing.

For the purposes of regulatory decision making on specific active ingredients, these criteria should include *all* of the elements of hazard characterization (i.e. potency, lead toxicity, severity of the effect, as well as reversibility of the effect) to ensure that all relevant scientific data on the hazard of a specific substance are considered for regulatory purposes.

Additionally however, and because the Reg 1107/2009 specifically states that regulatory consequences will exist for substances having “*endocrine disrupting properties **which may cause adverse effects***”, a determination must be made on whether the anticipated human and/or environmental exposure to a substance with ED properties is sufficient to result in an adverse effect.

Reg. 1107/2009 states “*An active substance, safener or synergist shall only be approved if, on the basis of the assessment of Community or internationally agreed test guidelines or other available data and information, including a review of the scientific literature, reviewed by the Authority, it is not considered to have endocrine disrupting properties that may cause adverse effect in humans, unless the exposure of humans to that active substance, safener or synergist in a plant protection product, under realistic proposed conditions of use, is negligible.*” However, with only hazard identification and no consideration of exposure and ultimately RA, it is entirely unclear how “negligible exposure” can be determined. As “negligible” depends on the nature of the compound and the endpoint to which it is regulated – which may not be an ED related endpoint - legislation must allow for a risk based decision making process to define “negligible”.

### 2.3. Questions regarding option 3 (*WHO/IPCS definition to identify endocrine disruptors and introduction of additional categories based on the different strength of evidence for fulfilling the WHO/IPCS definition*)

#### 2.3.1. Have you conducted or are you aware of an assessment of substances which would be identified as EDs according to option 3?\*

CLA references the assessments provided in the ECPA response to the PC. CLA members do not support Option 3 for identifying ED. Option 3 will inevitably lead to a larger proportion of the substances being categorized, especially into Category III, a “potential ED”. It will lead to blacklisting of compounds and the implementation of market based standards which may reflect public concern, but not real risk. Using categorization as a means of identifying compounds and then coupling this with market bans is also an inappropriate use of the non-binding The Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

#### If yes, please describe the outcome(s) of the assessment(s):\*

It is not clear how compounds will transition in and out of the categories without further testing, neither is there an option for “not an ED”. Pesticide active ingredients already have extensive data packages which include reproductive, developmental, sub-chronic, and chronic testing in intact animals; therefore, the potential need for more data could lead to unnecessary use of animals and resources which are unlikely to provide any additional understanding of the toxicological impact of active ingredients, or the understanding of potential risks.

While Option 3 tries to discriminate categorization based on “strength of evidence”, it is yet unclear as to how and why categories II “suspected” and III “potential” are significantly different. ED is a generic term which force fits into a single group or category a collection of different MoA which can manifest as different sets of adverse effects of various severities. There is a lack of clarification for the necessity of categories in the context of Reg. 1107/2009 as the language specifically requires the Commission to present “...*specific scientific criteria for the determination of endocrine disrupting properties*”.

#### 2.3.2. Are you aware of any assessment(s) of substitutability of the identified substances?\*

#### If yes, please describe the methodology(ies):\*

CLA refers to the assessments and comments presented in the ECPA response to the Public Consultation:

[PSD/CRD Summary Impact assessment \(2009\)](#) -

[Extended impact assessment study of the human health and environmental criteria for endocrine disrupting substances proposed by HSE, CRD; © WRc plc 2013](#) -

CLA also flags the previous reference to the October 2014 report by The Andersons Centre “The Effect of the Loss of Plant Protection Products on UK Agriculture and Horticulture and the Wider Economy”

#### If yes, please describe the outcome(s) of the assessment(s):\*

See section 2.2.2 above.

### 2.3.3. Are you aware of any assessment(s) of the socio-economic impact if the identified substances were regulated without further RA?\*

See section 2.2.3 above

### 2.3.4. Please, provide us with any other comments you may have regarding option 3:

Under Reg. 1107/2009, the Commission is required to present “...*specific scientific criteria for the determination of endocrine disrupting properties*”. CLA therefore understands that neither Reg 1107/2009 nor the Council and EP requests to the Commission demand categorization of PPP as ED and CLA opposes the concept of categorization.

Categorization is a process developed through GHS, and which has been adopted by the [US Occupational Safety and Health Administration for labelling acute chemical hazards](#). It is an **optional** and **voluntary** system which countries can use according to their needs. ED is not a hazard class within the GHS because ED *per se* is not an adverse effect, but a MoA, which may or may not lead to an adverse effect.

GHS is meant to provide a uniform and scientific approach to **labelling** used to protect workers and handlers. Using a GHS-like system of categorizing compounds and then using those categories to remove them from the market is an entirely inappropriate use of the GHS system. Therefore the EU has taken GHS beyond its original intent (hazard communication and labelling / SDS) and is using it to make regulatory decisions. The three proposed categories in Option 3 are ED, suspected ED and endocrine active substances. It is obvious how this approach will lead to blacklisting and market place deselection.

The US Occupational Safety & Health Administration (OSHA) has implemented GHS labelling for chemicals. US EPA Office of Pesticide Products (OPP) has not, because PPP undergo an RA and the label effectively substitutes for GHS labelling by specifying the nature of the compound and the personal protective equipment required to handle it safely. US EPA also has its own classification system for certain hazards which differ from GHS classes, because the testing PPP undergo is sufficient to allow for more differentiated classes.

According to US EPA “*It is important to note that the GHS is aimed at harmonizing classification/hazard identification for hazard communication purposes, not RA, management or mitigation measures. (GHS 1.1.2.6) ... Consistency with the GHS does not require continued linkage of classification with measures beyond hazard communication in labeling and safety data sheets.*”

## 2.4. Questions regarding option 4 (*WHO/IPCS definition to identify endocrine disruptors and inclusion of potency as element of hazard characterisation (hazard identification and characterisation)*)

### 2.4.1. Have you conducted or are you aware of an assessment of substances which would be identified as endocrine disruptors according to option 4?\*

CLA is aware of a number of assessments conducted in the EU which identify compounds as ED using hazard based criteria, and references the ECPA comments. As noted earlier these evaluations should not be considered a definitive assessment of what is or is not an ED because they are based on incomplete hazard identification/ characterization. Additionally, there is no consideration of exposure, nor any reference to RA.

CLA members do not support identifying ED based on Option 4 unless it is expanded to include all aspects of hazard characterization, and additionally to include an exposure assessment, in line with the [EFSA Opinion](#) which concludes that *“Risk Assessment (taking into account hazard and exposure data / predictions) makes the best use of available information”*. CLA members are concerned that compounds identified as ED using Option 4 are still precluded by Reg. 1107/2009 from any further evaluation using an RA because Annex II 3.6.5 clearly states that a PPP cannot be approved unless exposure is *“negligible”* and *“is used in closed systems or in other conditions excluding contact with humans and where residues do not exceed the default value”*. Using the default MRL also bypasses the dietary RA required in Reg. 396/2005.

This places Reg. 1107/2009 in breach of the WTO SPS Agreement, specifically Article 5 which requires *“that Members shall ensure that their sanitary or phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account RA techniques developed by the relevant international organizations.”*

#### If yes, please describe the outcome(s) of the assessment(s):\*

Option 4, while containing one element of hazard characterization, potency, is still flawed because it fails to include all the aspects required for a full hazard characterization – such as severity, irreversibility, lead toxic effect etc.

Furthermore Option 4 fails to include a consideration of exposure, or the option of conducting an RA. It remains a hazard based approach to regulating compounds.

The inclusion of potency as part of the criteria is none-the-less welcomed, because potency is an important determinant of a compound’s ability to interact with the cell. The biology of endocrine activity is such that potency allows the cell to discern between relevant and irrelevant chemicals it is in contact with every day. These include exogenous and endogenous compounds, including metabolic by-products and precursors of hormone synthesis. If the potency of the exogenous chemical is less than that of an endogenous hormone precursor then it begs the question whether the exogenous chemical can interact with the endocrine system of an intact animal. *“Potency matters: Thresholds govern endocrine activity”*, [Borghert et al 2013, Regulatory Toxicology and Pharmacology](#).

Without consideration of exposure, Option 4 is still insufficient to identify a compound as an ED **with adverse effects**, and an RA should be the default approach for all data rich PPP as the most appropriate way of regulating such compounds and protecting human health and the environment.

#### **2.4.2. Are you aware of any assessment(s) of substitutability of the identified substances?\***

##### **If yes, please describe the methodology(ies):\***

CLA refers to the assessments and comments presented in the ECPA response to the PC. CLA also draws attention to the October 2014 report by The Andersons Centre “The Effect of the Loss of Plant Protection Products on UK Agriculture and Horticulture and the Wider Economy”

##### **If yes, please describe the outcome(s) of the assessment(s):\***

See section 2.2.2 above.

#### **2.4.3. Are you aware of any assessment(s) of the socio-economic impact if the identified substances were regulated without further RA?\***

See section 2.2.3 above

#### **2.4.4. Please, provide us with any other comments you may have regarding option 4.**

##### ***4,000 character(s) maximum***

For regulatory evaluations of active ingredients, it is of utmost importance to include robust elements of hazard characterization (i.e. potency, lead toxicity, severity of the effect, as well as potential reversibility of the effect). In order to identify “substances of regulatory concern” or “adverse effects” consideration of exposure is essential. There exists a dose range for exposures which trigger a series of repair and adaptive responses, in which no adverse biological effects or responses are observed. Biological activity at cellular level – be it a repair, adaptive or stress response, must be correlated with an external and/or internal dose in the intact animal. To discern between compounds which may or may not cause an adverse effect, either human or environmental, requires an understanding of how the dose used in toxicity studies and exposures under realistic use conditions relates to endocrine relevant endpoints.

Another factor which requires consideration is that in many toxicological studies in animals, hormone levels may be perturbed by stress, or other stimuli that induce various adaptive changes that are secondary or even separate to the chemical treatment. At low exposure levels of chemicals, early changes may represent “normal defensive” biological responses below a certain threshold, for which only homeostatic changes, altered physiological changes, or adaptive changes occur. At higher treatment or exposure level, those adaptive responses may become overwhelmed, resulting in adverse effects, including microscopic, pathological changes and/or loss of biological function. However, the early stages between an endocrine-mediated hormonal change may involve various molecular interactions, cellular responses and organ & tissue response, prior to reaching the actual threshold at which adversity occurs. [Patlewicz G et al. 2013](#)

Thus transient perturbation is not necessarily adverse and studies need to reflect internal of external dose based on exposures under realistic use conditions.

CLA recommends that any policy implementation should be science-based and that RA should be an integral part of criteria used to regulate ED, specifically including up-to-date, realistic exposure estimates.

Consideration of exposure in its proper context of risk is essential to protect humans & the environment, while at the same time to provide the necessary tools to ensure a thriving agricultural sector within the Member States and outside of the European Union. RA is the internationally accepted approach to regulating data rich chemicals such as pesticides. Using an RA also ensures that regulatory decision making is in line with international guidances, and international, legally binding agreements to which the US and EU are signatories.

CLA members propose an augmented “Option 4” which includes full hazard characterization, and an exposure assessment which is then used to underpin a risk assessment that takes account of all relevant adverse endpoints.

### 3. Options for approaches to regulatory decision making

The roadmap defines 3 different options for approaches to regulatory decision making. Option A (no changes of the existing provisions in BPR and PPPR), Option B (introduction of further elements of risk assessment) where necessary and desirable to reduce potential socio-economic impacts, and Option C (introduction of further socio-economic considerations) where necessary and desirable to prevent adverse socio-economic impacts.

#### **3.1. Have you conducted or are you aware of an assessment applying any of the 3 different options for regulatory approaches to decision making (option A-C) to substances identified as EDs by any of the options for defining criteria (option 1-4)?\***

Yes, “[Assessment of three approaches for regulatory decision making on PPP with endocrine disrupting properties](#)” Marx-Stoelting *et al.* Regulatory Toxicology and Pharmacology April 2014

#### **If yes, please describe the methodology(ies)\***

The publication cites three options, (i) pure hazard identification (c.f. Option 2 in the Roadmap); (ii) hazard identification with additional elements of hazard characterization (severity and potency) (c.f. Option 4 in the Roadmap and (iii) Interim Criteria (c.f. Option 1 in the Roadmap). The study examined the impact of the three options on the regulatory status of 39 compounds currently approved for use in the EU. It found Options 1 and 3 to be insufficient for identifying compounds of regulatory concern. Option (ii) (c.f. Option 4 in the roadmap) presented the most valid option. We concur with this conclusion for these three options, however Option 4 remains insufficient based on our comments already articulated

CLA believes that ED can be treated like other substances of potential concern, and be subject to RA, where both hazard and exposure are considered in regulatory decision making. This is also the conclusion reached by the EFSA Scientific Committee [Scientific Opinion](#) in March 2013. This is also the approach taken by the US EPA. **CLA therefore believe that an important policy option has been omitted from the Commission’s RM document and this public consultation: it consists of evaluating and regulating substances with ED properties using a full RA.**

It is important to highlight that there has been no demonstration of meaningful benefits to the protection of human health or the environment from hazard based cut-off criteria beyond those provided by the existing RA process. Using cut-offs based simply on hazard fails to take into account all relevant scientific information and does not provide a suitable basis for regularly decision making. In fact, there is no

compelling evidence in the [epidemiological literature](#) to suggest that endocrine disrupting compounds are resulting in harmful effects at population levels, including the [EFSA External Scientific Report](#).

In fact the only report which suggests adverse effects at population levels due to ED chemicals – the WHO UNEP Report of 2012 – has been found to be considerably flawed both in the manner in which the literature was reviewed and the conclusions drawn as a result ([Lamb et al. 2014](#)). The conclusions of the WHO/UNEP 2012 report differ considerably from those derived in the [WHO 2002 report](#), which states “*This assessment has clearly identified that there is little information on linkages between exposures to putative EDCs and health outcomes in both humans and wildlife*” even though the 2012 report relied heavily on the same publications as the 2002 report.

A full RA option would take into account all the available information of sufficiently good quality on adverse effects, MoA and exposure, and this should be integrated using a structured weight of evidence (WoE) approach. RA would also limit the need for additional, unnecessary animal testing (see response to point 2.3.4 above).

Adding RA elements and socio-economic considerations as options for regulatory decision making as described in options B and C in the roadmap document would represent an improvement over the current hazard based cut-off criteria under Reg 1107/2009. However, CLA believes that a full RA approach which also takes benefits into consideration on a case by case basis is the most protective and scientifically robust approach. Managing ED with a combination of hazard based cut-offs and derogations as suggested in the example described in options B and C in the RM is not an appropriate substitute for risk-based regulation.

The criteria for endocrine disrupting properties should not be developed based on an assumption that changes to regulatory decision making will actually occur simultaneously, as such changes would require legislative amendments to Reg 1107/2009 via formal co-decision procedure. **Thus the implementation of any criteria should only be initiated in parallel with a return to a complete legislated risk assessment framework.**

### **3.2. Have you conducted or are you aware of an assessment of the socio-economic impact of the 3 different options for regulatory approaches to decision making (option A-C) for substances identified as EDs by any of the options for defining criteria (option 1-4)?\***

#### **If yes, please describe the methodology(ies):\***

CLA members have conducted their own assessment of these regulatory decision making options and find them insufficient for regulating PPP for ED.

#### **If yes, please describe the outcome(s) of the assessment(s):\***

CLA references the text of the RM regarding “regulatory decision making” and the **Proportionality Principle** which states that “*Defining scientific criteria for the determination of ED is the only way to ensure a harmonized and coherent approach when dealing with EDs and to achieve legal coherence and certainty, regulatory consistence and predictability to all players...*”

The Proportionality Principle further states that within the RM, “*The considered options do not go beyond what is necessary to achieve the objectives satisfactorily*”. CLA members disagree. **Option A** has been covered in our comments in Section 2 above. **Option B** refers to the inclusion of further elements of RA for the PPP similar to those in the Biocidal Product Regulation (BPR). However, such exemptions are provided through a process of derogation, which is an inherently subjective and therefore unpredictable and inconsistent approach to regulating. Proportional and predictable Reg. requires an objective, science based RA to be the standard approach for all compounds, as the only scientifically valid way of protecting human health and the environment.

**Option C** considers the introduction of further socio economic considerations including a risk/benefit analysis. Such an approach runs counter to regulating compounds in a manner that is protective to human health and the environment: conducting a risk/benefit analysis to enable use under certain conditions, without understanding how the use change would impact exposure, or what the consequences of that exposure would be, is inadequate for regulatory decision making. Furthermore, and as stated previously, registration of a PPP should not be primarily based on socioeconomic considerations but on whether or not the compound can be used safely and without unreasonable risk to human health or the environment.

EPA acknowledges the conservatism of their risk assessments and therefore will consider a risk/benefit analysis in the final regulatory decision making, purely on a case by case basis. They will not consider a risk/benefit analysis at all however, if they feel the product poses too much risk to human health and the environment based on the RA and after risk mitigation efforts.

**As mentioned above in Section 2.2.4**, Reg. 1107/2009 states “An active substance, safener or synergist shall only be approved if .... **it is not considered to have endocrine disrupting properties that may cause adverse effect in humans, unless the exposure of humans to that active substance, safener or synergist in a plant protection product, under realistic proposed conditions of use, is negligible.**” However, CLA members know that with only hazard identification and no consideration of exposure or an RA, it is not clear how “negligible” can be properly defined. Thus it is not enough to define criteria; legislation must allow for a risk based decision making process.

Therefore, CLA members also recommend with respect to the RM **Aspect II: Approaches to regulatory decision making** that the option be added for amending Reg. 1107/2009 to allow for substances determined to meet ED criteria a stepwise decision making process comprised of

1. Full hazard Characterization
2. Assessment of human and environmental exposure levels,
3. Assessment of human and environmental risk,
4. If necessary, consideration of risk mitigation measures before proceeding to the
5. Introduction of further socio-economic considerations, including a risk/benefit analysis (“Option C”)

Cut-off decisions should be based on consideration of all of the above, and not on the hazard characteristics alone.

## 4. Other information

---

4.1. Please provide any other data or information that could help the Commission to conduct its impact assessment.

*4,000 character(s) maximum*

**4.1. Please provide any other data or information that could help the Commission to conduct its impact assessment.**

*4,000 character(s) maximum*

**PPP in the US are regulated first and foremost to protect human health and the environment.** US EPA does not “classify” compounds as ED because ED is a MoA, not an endpoint or adverse effect. EPA incorporate relevant data into a full hazard, exposure and RA which ensures that compounds are regulated to the most sensitive endpoint, at the lowest dose at which NO observable adverse effect occurs in the most sensitive species, at the most sensitive developmental stage. Exposure is a critical component of the [US EPA EDSP approach to prioritizing and screening compounds](#) for further testing precisely because it is exposure which determines whether a hazardous compound represents a risk. US EPA regulates based on RA and as needed risk mitigation to define the conditions of safe use for PPP. The US EPA EDSP, which is aligned with the OECD conceptual framework, allows prioritization of compounds for further testing, so that compounds of the greatest concern are identified for testing and regulation in a timely manner.

CLA members have extensive experience with testing PPP for ED properties through [Part 158 EPA test requirements](#) and as a result of their participation in the [US EPA EDSP](#). The EDSP has advanced the science and understanding of ED. It has identified new and robust approaches to screening and prioritizing compounds for testing using non animal based test methodologies. EPA has had the various stages of this program critiqued by independent Scientific Advisory Panels in [2013](#) and [2014](#). CLA members concur with the EPA’s approach: That the only scientifically sound way to identify an ED *which has an adverse effect* is to consider both hazard and exposure, and the most appropriate way to regulate compounds is to use an RA. This is a far more time consuming, resource intense, complex and multidisciplinary task than conducting a simple hazard assessment, and it remains the most robust approach to protecting human health and the environment, including vulnerable sub populations and sensitive species

The EPA approach is also reflected in the approach recommended by EFSA, it is congruent with the OECD approach and with other regulatory agencies around the world where RA is routinely used for making regulatory decisions. A risk based approach also complies with international binding agreements at the WTO. The Commission proposal is an anomalous approach to regulating PPP, and it is out of synch with the opinion of EFSA and internationally accepted guidance setting bodies.

In addition, an RA allows flexibility in regulatory decision making as new data become available and as product uses or application technologies change. Consideration of exposure in the context of risk is essential to protecting the environment while at the same time providing the necessary tools to ensure a thriving agricultural sector and trade in safe food and agriculture commodities.

**CLA recommends an approach similar to the US EPA model for screening and assessing compounds for ED properties.** The program in place can serve as an example for identifying and regulating PPP with ED activity. The US EPA EDSP also enables the EPA to prioritize testing of chemicals, including PPP.



Prioritization is based on [bioactivity and exposure](#) using an RAnking system based on [“IBER” scores](#). Prioritized chemicals will move forward for screening ([Tier 1](#)), a [WoE](#), testing if required ([Tier 2](#)) and ultimately an RA and regulatory decision making. There are over 10,000 chemicals in commerce which US EPA have defined as “within the EDSP chemical universe”. If regulatory agencies are to protect human health and the environment in a timely manner then they need to be able to identify and focus on priority compounds first, as is done by the EDSP. The EU lacks a prioritization approach and thus it could be many years before “substances of concern” get evaluated. **We also recommend a return to a complete legislated risk assessment framework.**

These comments have been submitted to the EU comments portal  
Case Id: 149b6a37-d712-49f1-b999-3debfd90975