

Criteria for listing – *Gunnera tinctoria*. Submitted by Ireland, April 2016

As indicated in Article 4(4) of the R.1143/2014, Member states requesting inclusion of invasive alien species on the Union list should include:

- (a) the name of the species;
- (b) a risk assessment carried out in accordance with Article 5(1);
- (c) evidence that the criteria set out in paragraph 3 of this Article are

This document provides the supporting information needed for *Gunnera tinctoria* in addition to the completed risk assessment submitted separately.

Article 4(4)(a) Species name: *Gunnera tinctoria* (Molina) Mirbel

Article 4(4)(b) a risk assessment carried out in accordance with Article 5(1) as further elaborated in the minimum standards set out in *Invasive alien species – framework for the identification of invasive alien species of EU concern* (ENV.B.2/ETU/2013/0026).

Minimum standard	Standard met?	Most relevant risk assessment section
1. Description (Taxonomy, invasion history, distribution range (native and introduced), geographic scope, socio-economic benefits)	Yes	Stage 1, Questions: 1 to 3, 6 to 8, 10
2. Includes the likelihood of entry, establishment, spread and magnitude of impact	Yes	Sections A, B, C and D
3. Includes description of the actual and potential distribution, spread and magnitude of impact	Yes	Sections A, B, C and D
4. Has the capacity to assess multiple pathways of entry and spread in the assessment, both intentional and unintentional	Yes	Section A. For this assessment only one intentional pathway is assessed.
5. Can broadly assess environmental impact with respect to biodiversity and ecosystem patterns and processes	Yes	Section A and C
6. Can broadly assess environmental impact with respect to ecosystem services	Yes	Section B particularly questions: 4.07 to 4.10
7. Broadly assesses adverse socio-economic impact	Yes	Section A, particularly questions: 4.01 to 4.05
8. Includes status (threatened or protected) of species or habitat under threat	Yes	Most specifically question 4.12 but also 4.07
9. Includes possible effects of climate change in the foreseeable future	Yes	Section F, questions 6.01 to 6.03

10. Can be completed even when there is a lack of data or associated information	Yes	
11. Documents information sources	Yes	References section
12. Provides a summary of the different components of the assessment in a consistent and interpretable form and an overall summary	Yes	Section E
13. Includes uncertainty	Yes	
14. Includes quality assurance	Yes	
Additional criteria from the Scientific Forum		
15. Description of available management measures	Yes	
16. Description of cost efficiency of management measures	Partial	While there is a paucity of information available on cost efficiency of measures, the efficiency of different control measures to suit level of infestation and site conditions is detailed along with costs of control (Section B 2.09 and 2.11, Section D 4.01).
17. Shows relevance of management for impacts in multiple EU Member states	Yes	

Article 4(4)(c) evidence that the criteria set out in paragraph 3 of this Article are met are set out in Table 2 below.

Article 4(3) criteria	Criteria met?	Note	Most relevant risk assessment section
(a) they are found, based on available scientific evidence, to be alien to the territory of the Union excluding the outermost regions	Yes	<i>Gunnera tinctoria</i> is native to South America, predominantly in Chile, from Coquimbo to Magallanes. It is also considered to be native to parts of Argentina, and in the Andean region of Colombia, Venezuela, Peru and Ecuador.	Stage 1, Q6
(b) they are found, based on available scientific evidence, to be capable of establishing a viable population and spreading in the environment under current conditions and in foreseeable climate change conditions in one biogeographical region shared by more than two Member States or one marine subregion excluding their outermost regions	Yes	<i>Gunnera tinctoria</i> is established in France, Ireland, Portugal (only recorded in the Azores archipelago (São Miguel island)) and the United Kingdom. It has already shown evidence of being capable of spread under current conditions and is likely to continue to do so with foreseeable climate change.	2.01, 2.02, 2.18, 3.04, 3.08, 3.09, 6.01
(c) they are, based on available scientific evidence, likely to have a		The most significant adverse impacts are for biodiversity where it significantly reduce the number of native species where it has colonised	4.07, 4.09, 4.19

<p>significant adverse impact on biodiversity or the related ecosystem services, and may also have an adverse impact on human health or the economy</p>		<p>and can alter natural successional processes and change vegetation structure. It may also cause changes in water and biogeochemical cycles including the diversion of water in drainage and can block drain and streams, consequently enhance flooding.</p>	
<p>(d) it is demonstrated by a risk assessment carried out pursuant to Article 5(1) that concerted action at Union level is required to prevent their introduction, establishment or spread</p>		<p>If control and eradication measures of existing populations combined with biosecurity measures (such as not using aggregate from infested quarries on road building or inappropriately discarding un-wanted <i>Gunnera tinctoria</i> plants) and trade restrictions on import into Europe and within Europe are implemented, then significant further introductions and spread would be reduced.</p>	<p>3.06</p>
<p>(e) it is likely that the inclusion on the Union list will effectively prevent, minimise or mitigate their adverse impact.</p>		<p><i>Gunnera tinctoria</i> still has a limited distribution in Europe but there is potential for it to establish and invade further areas. Introduction of the plant to sites for ornamental use with consequent escape, remains superior to natural spread to new sites. As the species is available for import into Europe, is traded within Europe and remains a desirable plant, trade restrictions will along with efforts to eradicate, control and prevent further spread of existing populations, effectively prevent, minimise or mitigate their adverse impact.</p>	<p>1.02, 1.03, 1.04, 1.08, 1.09, 1.11, 2.11</p>