



Dikerogammarus villosus –

National Task Group position statement

May 2012

Issue:

1. This paper summarises the rationale behind the current response to *Dikerogammarus villosus* (Dv) (also known as the “killer shrimp”) and considers how might change in future in broad policy terms, taking into account resource issues and decision-making.

Background:

2. *D. villosus* is known to be a highly invasive non-native (alien) species, introduced to at least 4 sites in GB (at April 2012). If allowed to spread and firmly establish as a general presence in our waterways, biodiversity impacts in areas of suitable habitat are expected to be significant in their adverse effects on the composition and relative abundance of invertebrate species and may include harm to fish eggs (specifically, bullheads) and very young fish. Potentially long-term impacts at higher trophic levels are unclear at this stage. Experience in Europe of its invasive impacts has shown loss of native populations and studies have focussed on its behaviour and impacts and none that we know of on any real effort to control it. Economic impacts are not well documented but initial advice suggested that the public would place a very high value on the benefits of preventing or slowing-down its spread.
3. Its impact in GB would have implications for the Water Framework Directive objective of preventing deterioration in Ecological Status, and also for biodiversity and INNS policy objectives (both for individual species and ecosystem functioning).

Response rationale:

4. As Dv is already here, the success of the current policy approach and the management response depends on three crucially inter-linked objectives and these are to:
 - a. manage the risk of new introductions into the wild;
 - b. manage the risk of human-mediated spread from any undetected populations already in the wild; and,

- c. contain detected populations - preventing human-mediated as well as natural spread as far as practically possible.
5. The extent to which we achieve these objectives depends on certain key response measures for which there is likely to be continued need in the foreseeable future, these are:
 - a. Raise awareness and promote bio-security practices, e.g. the “Stop the Spread - Check, Clean, Dry” campaign (both for Dv in particular but also for INNS in general) – *all water users/stakeholders, special focus on important vulnerable sites;*
 - b. Implement and maintain a programme of surveillance and monitoring to detect new populations and any spread of current known populations - *primarily Environment Agency (EA), Countryside Council for Wales (CCW), Natural England (NE); key stakeholders at affected sites; key supportive non-Govt stakeholders and the general public contributing to general surveillance/detection;*
 - c. Take measures to contain populations in the water bodies in which they are found – *primarily landowners, local user organisations and businesses and individual users of the sites - supported by EA, CCW and NE advice;*
 - d. Research new or better techniques for: detection, effective bio-security measures, population control/eradication etc – *a range of Government, non-Government and academic bodies.*
6. Realistically, bio-security failure remains a risk and the success of the measures cannot be guaranteed on a permanent basis but currently, over a year and a half on from first detection, with the initial surveillance work completed and only one further population detected, there is at least a reasonable degree of optimism that further expansion of the problem could be slowed down through the combined efforts of all stakeholders. We therefore aim to maintain a ‘locate and contain’ approach for the time being; supported by aiming to make bio-security practices second nature as far as possible and by sharing knowledge and ensuring that appropriate tools (e.g. generic risk assessments and best practice guidance) are available to all.
7. Given the absence of any documented control experience elsewhere on the continent, adding a dimension of control or actively reducing or removing populations depends on further research which we have begun. However, even with suitable tools, the scenarios presented pose considerably challenging additional factors to be considered before any control action could be undertaken. It is likely therefore that in the immediate to medium-term future, we will have no effective means to control populations on a large scale or prospects of doing so only in smaller, contained water bodies.

8. If in time Dv was to spread and establish more widely in our waterways a tipping point may be reached where the costs of containment effort are no longer cost-effective or economic relative to spread/damage likely to be done by Dv. Determining this point precisely may be extremely difficult but monitoring it is a key function of the national Task Group in its overview role, and that includes advising Government on how the policy response might adapt to a changing national picture.

Significant knowledge about Dv is being gathered through the combined research effort of many bodies. Taking all that into account, the national Task Group will keep the current response rationale under review but considers that the approach set out in this paper is sensible, practical and justified; and is reflected in significant achievement to date with the crucial support of many stakeholders. The experience gained from this response will also be fed into further development of our approach to reducing the threats posed by invasive non-native species.

***Dikerogammarus villosus* Task Group, May 2012.**