

DRINKING WATER SAFETY ADVISORY COMMITTEE

**Proposed Framework for Reviewing Parameters in the Hong Kong
Drinking Water Standards, Surveillance List and Watch List**

PURPOSE

This paper aims to seek views from the Drinking Water Safety Advisory Committee (“the Committee”) on the proposed framework for reviewing the parameters in the Hong Kong Drinking Water Standards (“HKDWS”), Surveillance List and Watch List. This paper should be read in conjunction with DWSAC Papers No. 6/2018 and 10/2018 entitled “Interim Endorsement Mechanism for Hong Kong Drinking Water Standards” and “Review of the Hong Kong Drinking Water Standards Parameters and Standard Values” respectively.

BACKGROUND

2. The interim endorsement mechanism as outlined in DWSAC Paper No. 6/2018 for the HKDWS was discussed and endorsed by the Committee in the second Committee meeting held on 31 July 2018. According to the interim endorsement mechanism, a review of the parameters in the HKDWS will be triggered under the following circumstances:-

- (a) The World Health Organization’s Guidelines for Drinking-water Quality (“WHO Guidelines”) or the drinking water standards commonly adopted by other leading jurisdictions are updated;
- (b) New waterborne pathogens or contaminants emerge;
- (c) New scientific research findings of significance on the drinking water standards and/or the parameter(s) are published;
- (d) There are public health concerns or complaints on the parameter(s); or
- (e) Recommendations are made by the Committee, or other circumstances deemed appropriate.

3. In the third Committee meeting held on 5 December 2018, the Committee endorsed the proposed parameters for the Recommended List (for inclusion in the HKDWS), Surveillance List and Watch List as set out in DWSAC Paper No. 10/2018.

4. In 2018, the Water Supplies Department (“WSD”) commissioned the Water Research Centre of the United Kingdom (“UK”) to conduct a consultancy study (“the Study”) to review the overseas practices¹ in selecting parameters for inclusion in or removal from the drinking water standards. Based on the findings in the Study, a framework for reviewing the parameters for inclusion in and removal from the HKDWS, Surveillance List and Watch List is proposed. The details of the framework are given in the ensuing paragraphs.

TRIGGER FOR REVIEW

5. As mentioned in paragraph 2 above, review of the parameters in the HKDWS shall be triggered under the circumstances listed in the paragraph in accordance with the interim endorsement mechanism for HKDWS.

6. Besides, for parameters in the Surveillance List and Watch List, modelling on overseas jurisdictions, which maintain similar lists of parameters in addition to their drinking water standards, the review of the parameters in the Lists shall be triggered if there is any abnormal change in their levels in drinking water in Hong Kong and/or under the circumstances listed in paragraph 2 above.

7. WSD has established its Radar System for keeping abreast of, inter alia, the latest international development on drinking water quality and standards. Moreover, WSD carries out surveillance monitoring and snapshot monitoring for the parameters in the Surveillance List and Watch List.

8. WSD will advise the Drinking Water Safety Unit (“DWSU”) of the Development Bureau (“DEVB”) when any of the circumstances mentioned in paragraph 2 arises and/or when abnormal change in the levels of the parameters in the Surveillance List or Watch List in drinking water in Hong Kong is detected in the surveillance monitoring and snapshot monitoring respectively. DWSU will then initiate the review for the concerned parameters and advise the Committee accordingly. In addition, DWSU itself will also initiate review on the parameters in the three lists on regular or needed basis.

¹ Including two international organisations viz. WHO and the European Union (“EU”) and seven nations viz. the UK, the United States of America (“USA”), Canada, Australia, New Zealand, Singapore and Japan.

PROPOSED FRAMEWORK FOR REVIEWING THE PARAMETERS

9. There are two key steps for carrying out the review of the parameters in the HKDWS, Surveillance List and Watch List, namely information collection and assessment criteria.

(a) Information Collection

10. Once a review is initiated, information or data related to the parameter(s) shall be collected. The information to be collected may include parameter-specific data such as physico-chemical properties including water solubility, chemical partition coefficients, toxicological data, and local-specific data such as usage data in Hong Kong, removal or occurrence of the parameter(s) in water treatment processes in Hong Kong. The information shall be collected through the following channels including but not limited to: -

- (a) Literature review on the latest scientific development of the parameter(s);
- (b) Radar search of any incident occurring in places over the world relating to the parameter(s), and development by the WHO and leading jurisdictions regarding the monitoring, standard, treatment etc. of the parameter(s); and
- (c) Local monitoring data of the parameter(s) in Hong Kong.

11. In general, the above information shall provide the necessary reference for assessing the potential health risk of the concerned parameter(s) through the consumption of drinking water, and the likelihood and level of occurrence of the parameter(s) in the drinking water in Hong Kong. If local occurrence data of the parameter(s) are unavailable, the occurrence data for the parameter(s) in drinking water in other jurisdictions may be used for the assessment for Hong Kong as far as possible by collating their situations with those in Hong Kong.

12. If required, further information shall be gathered, for example, by snapshot monitoring to collect background level of the parameter(s) in the drinking water in Hong Kong. Consultancy study may also be commissioned for collection of information for the parameter(s) if required.

(b) Assessment Criteria

13. Assessment for the parameter(s) shall be conducted for categorising the

parameter(s) into the corresponding list (or excluding it from the list) in accordance with the criteria laid down in DWSAC Paper No. 10/2018. For ease of reference, the criteria are summarised below and in **Annex 1**.

14. The parameter(s) shall be evaluated based on whether its potential to cause adverse health risk through consumption of drinking water in Hong Kong has been established scientifically or not. If affirmative, the inclusion of the parameter(s) into the HKDWS, Surveillance List and Watch List shall be based on the criteria as follows: -

- (a) The parameter(s) will be included into the Recommended List for inclusion in the HKDWS if it has been detected in the drinking water of Hong Kong and may occur at such level that would cause adverse health risk; or it has not been detected in the drinking water of Hong Kong but may occur at such level that would cause adverse health risk in future.
- (b) The parameter(s) will be included into the Surveillance List if it does not occur at level to cause adverse health risk currently, but the chance of occurring at such level that would cause adverse health risk in future could not be completely excluded; or it is a microbial parameter which serves to indicate the microbial quality of drinking water.
- (c) For case other than (a) or (b) above, the parameter(s) will be included in the Watch List.

15. If the potential health risk through consumption of drinking water in Hong Kong has yet to be established scientifically, the parameter(s) will be included in the Watch List if there are increasing concerns of such risk. Also, if the parameter(s) is a pesticide that has been approved for use in Hong Kong or the Mainland and its occurrence in drinking water of Hong Kong needs to be kept under review, it will be included in the Watch List.

16. For case other than those mentioned in paragraph 13 to 15, the parameter shall be excluded from the three lists.

ACTION AFTER REVIEW

17. After the review, DWSU/WSD will seek the views of the Committee on the proposed change (if any) for the parameter(s) in the HKDWS, Surveillance

List and Watch List as well as the monitoring programme including monitoring location, monitoring frequency and sampling protocol for the concerned parameter(s) as appropriate.

ADVICE SOUGHT

18. Members are invited to offer views on the proposed framework for reviewing parameters for inclusion in or removal from the HKDWS, Surveillance List and Watch List.

**Development Bureau
Water Supplies Department
June 2019**

Assessment Criteria of a Parameter under the Proposed Framework

