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Agenda item 5(a)
**Implementation of the international drug control
treaties: changes in the scope of control of
substances**

**Notification from the President of the International
Narcotics Control Board to the Chair of the Commission on
Narcotic Drugs on its sixty-seventh session concerning the
scheduling of 4-piperidone and 1-boc-4-piperidone under
the United Nations Convention against Illicit Traffic in
Narcotic Drugs and Psychotropic Substances of 1988***

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Notification from the President of the International Narcotics Control Board to the Chair of the Commission on Narcotic Drugs on its sixty-seventh session concerning the scheduling of 4-piperidone and 1-boc-4-piperidone under the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988

The President of the International Narcotics Control Board presents his compliments to the Chair of the Commission on Narcotic Drugs and has the honour to inform him that the Board, in conformity with article 12, paragraphs 4 and 5, of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 (hereafter referred to as the 1988 Convention), has completed its assessment of 4-piperidone and 1-boc-4-piperidone for possible inclusion in the Tables of the 1988 Convention.

The Board finds that 4-piperidone and 1-boc-4-piperidone are frequently used and very suitable precursors for the illicit manufacture of fentanyl and a number of fentanyl analogues, and that the volume and extent of the illicit manufacture of fentanyl and fentanyl analogues pose serious public health or social problems so as to warrant international action. The Board is therefore recommending that 4-piperidone and 1-boc-4-piperidone be included in Table I of the 1988 Convention.

The assessment, findings and recommendations of the Board in respect of the substances are attached hereto, and have been prepared for submission to the Commission at its sixty-seventh session. Information about 4-piperidone and 1-boc-4-piperidone has also been published since 2020 and 2021, respectively in the reports¹ of the Board on the implementation of article 12 of the 1988 Convention, pursuant to paragraph 13 of that article.

Vienna, 23 November 2023

¹ *Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances: Report of the International Narcotics Control Board for 2020 on the Implementation of Article 12 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988* (United Nations publication, Sales No. E.10.XI.4), and subsequent years. The 2023 report on precursors will be launched on 5 March 2024.

Annex

Assessment of 4-piperidone and 1-boc-4-piperidone pursuant to article 12, paragraph 4, for inclusion in the Tables of the 1988 Convention

A. Background

1. On 5 July 2023, the Government of the United States of America notified the Secretary-General of its proposal to add two precursors of fentanyl and fentanyl-related substances in the Tables of the 1988 Convention. The two substances proposed were 4-piperidone and 1-boc-4-piperidone.
2. In accordance with the provisions of article 12, paragraph 3 of the 1988 Convention, the Secretary-General transmitted the information contained in the notification to all Parties and to other countries in the form of two questionnaires (NAR/CL.10/2023), requesting their comments concerning the notification and all supplementary information that might assist the Board in carrying out its assessment. The questionnaires were sent to Governments on 3 August 2023 with the request to submit any comments on the proposal before 29 September 2023. A reminder was circulated to Governments on 27 September 2023.

B. Assessment

3. Article 12, paragraph 4, of the 1988 Convention stipulates the factors which the Board is to consider when assessing a substance for possible control:

“If the Board, taking into account the extent, importance and diversity of the licit use of the substance, and the possibility and ease of using alternate substances both for licit purposes and for the illicit manufacture of narcotic drugs or psychotropic substances, finds:

(a) That the substance is frequently used in the illicit manufacture of a narcotic drug or psychotropic substance;

(b) That the volume and extent of the illicit manufacture of a narcotic drug or psychotropic substance creates serious public health or social problems, so as to warrant international action,

it shall communicate to the Commission an assessment of the substance, including the likely effect of adding the substance to either Table I or Table II on both licit use and illicit manufacture, together with recommendations of monitoring measures, if any, that would be appropriate in the light of its assessment.”

4. In making its assessment, in accordance with article 12, paragraph 4, of the 1988 Convention, the Board had at its disposal the information contained in the notification of the Government of the United States of America to the Secretary-General, as well as the comments and supplementary information received from Governments pursuant to article 12, paragraph 3. As at 10 November 2023, 60 and 61 Governments and the European Commission had responded to the questionnaire, respectively, for 4-piperidone and 1-boc-4-piperidone, sent out by the Secretary-General on 3 August

2023.² All Governments stated either direct support for, or registered no objection to, the proposals to schedule 4-piperidone and 1-boc-4-piperidone. The European Commission conveyed the non-objection to both proposals of three additional states members of the European Union, which did not submit individual responses to the questionnaires.

5. In conducting the assessment, the Board has taken the following factors into consideration:

(a) 4-Piperidone [chemical name: piperidin-4-one] and 1-boc-4-piperidone [chemical name: *tert*-butyl 4-oxopiperidine-1-carboxylate] are very suitable precursors for the illicit manufacture of fentanyl and a number of fentanyl analogues, several of which are included in Schedule I of the 1961 Convention, some are also included in Schedule IV of that Convention;

(b) 4-Piperidone and 1-boc-4-piperidone are alternative chemicals for other fentanyl precursors under international control;

(c) Specifically:

- 4-Piperidone is an early-stage precursor involved in most synthetic routes to fentanyl and some fentanyl analogues. It can be used to make NPP, ANPP, 4-AP and norfentanyl (all four are listed in Table I of the 1988 Convention);
- 1-Boc-4-piperidone is a chemically protected derivative of 4-piperidone and can be used to make 1-boc-4-AP and subsequently norfentanyl (both listed in Table I of the 1988 Convention). 1-Boc-4-piperidone may also be converted back into 4-piperidone;

(d) Fentanyl and fentanyl analogues are very potent narcotic drugs, typically 10-100 times stronger than heroin. Consequently, small amounts of 4-piperidone and 1-boc-4-piperidone (kg range) are sufficient to manufacture millions of doses of end-products (fentanyls). The high potency of the end-products has resulted not only in overdose deaths in users, but also in inadvertent exposure of law enforcement personnel and other personnel along the distribution chain (e.g. employees of courier and postal services); and

(e) The number, size and frequency of seizures and other incidents involving 4-piperidone and 1-boc-4-piperidone have to be seen in the context of the potency and potential lethality of the end-products.

C. Findings

6. In view of the above-mentioned factors, the Board finds that:

(a) The volume and extent of public health or social problems caused by illicitly manufactured fentanyl and fentanyl analogues are issues that warrant international action;

(b) 4-Piperidone and 1-boc-4-piperidone are substances which are very suitable for the illicit manufacture of fentanyl and a number of fentanyl analogues. Incidents involving the two substances have been reported from North America and Europe. Given the limited experience with, and capacity related to the identification

² Australia, Austria, Azerbaijan, Belarus, Belgium, Bhutan, Bolivia (Plurinational State of), Brazil, Brunei Darussalam, Bulgaria, Canada, Cote d'Ivoire, Cyprus, Czechia, Denmark, Dominican Republic, Egypt, El Salvador, Estonia, Finland, France, Georgia, Germany, Ghana, Greece, Guatemala, Holy See, Hungary, Ireland, Japan, Jordan, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Mexico, Montenegro, Morocco, Myanmar, Netherlands (Kingdom of the), Panama, Poland, Portugal, Republic of Moldova (reply for 1-boc-4-piperidone only), Romania, Saudi Arabia, Serbia, Singapore, Slovenia, Spain, Sweden, Tajikistan, Thailand, United Arab Emirates, United States of America and Uruguay.

and forensic analysis of, these chemicals, the extent of their trafficking and illicit use may be larger;

(c) There is limited known legitimate manufacture of and trade in 4-piperidone and 1-boc-4-piperidone. The majority of Governments that responded to the questionnaires were unable to identify and quantify legitimate uses of 4-piperidone and 1-boc-4-piperidone. With a few exceptions, the majority of reported trade involved very small amounts for research and development purposes;

(d) No Government foresaw difficulties in supporting the scheduling of 4-piperidone and 1-boc-4-piperidone under the 1988 Convention. The availability of the two chemicals for limited research and development purposes is determined by the controls implemented by Governments at the national level. Those controls should be structured in a manner that ensures their availability and distribution for relevant legitimate uses.

D. Recommendation

7. The Board is of the opinion that the international control of 4-piperidone and 1-boc-4-piperidone is required to limit their availability to traffickers with a view to reducing the quantity of fentanyl and other fentanyl analogues illicitly manufactured from these substances and trafficked internationally. Given the versatility of 4-piperidone and 1-boc-4-piperidone as precursors in most synthetic routes to fentanyl, placing them under control of the 1988 Convention may also serve as a preventive measure in the synthesis of existing, and of potentially new, fentanyl analogues in the future. Those controls would have no adverse effect on the availability of 4-piperidone and 1-boc-4-piperidone for any legitimate uses. In view of the above, the Board recommends that both 4-piperidone and 1-boc-4-piperidone be placed under control of the 1988 Convention.

8. Currently, the only difference between Table I and Table II of the 1988 Convention is the possibility for Governments to invoke article 12, paragraph 10 (a), of that Convention to request pre-export notifications for substances in Table I. The inclusion of 4-piperidone and 1-boc-4-piperidone in Table I of the 1988 Convention would therefore provide Governments with the possibility to request pre-export notifications, which would in turn allow the monitoring of manufacture of and trade in the substances.

9. In light of the above, the Board recommends that 4-piperidone and 1-boc-4-piperidone be added to Table I of the 1988 Convention.