



## ABSTRACT

A review of legislation and policies was undertaken to understand the role of national legislation in the interpretation and practice of salt iodization standards to achieve optimal iodine intake in the population. The review included published and unpublished literature and reports, data and/or information from national salt iodization programmes. The analysis considered whether iodization was mandatory or simply permitted and, where information was available, how iodization standards were determined.

The review indicates variation in the interpretation of normative guidance, often outside the range recommended (20-40ppm). True USI (iodized salt for all human and animal consumption) is not always mandated or implemented. There are numerous examples of changes in legislation in response to national contexts including natural water iodine and shifts in salt and processed foods consumption. Strict adherence to the normative guidance for iodization standards is not a pre-requisite for the achievement of the goal of optimal iodine intake. Adjustments in iodine standards should be informed by urinary concentrations in different population groups and consider other national contexts.

## BACKGROUND

- The ICCIDD-GN Iodine Task Force was established in response to maturity of salt iodization programmes and strategies in the context of a changing environment.
- The aim of the Iodine Task Force is to improve the quality and effectiveness of iodine nutrition programmes and strategies, and contribute to updating programme guidance.
- During the past 20 years as universal salt iodization programmes have been scaled up, new evidence has become available, and advances in evidence-informed-programme development, including legislation governing these programmes, have been implemented.
- This review of national legislation and practice was undertaken as part of the work under the Iodine Task Force.

## OBJECTIVES

- To assess the role of national legislation in the interpretation and practice of salt iodization standards to achieve optimal iodine intake in the population.



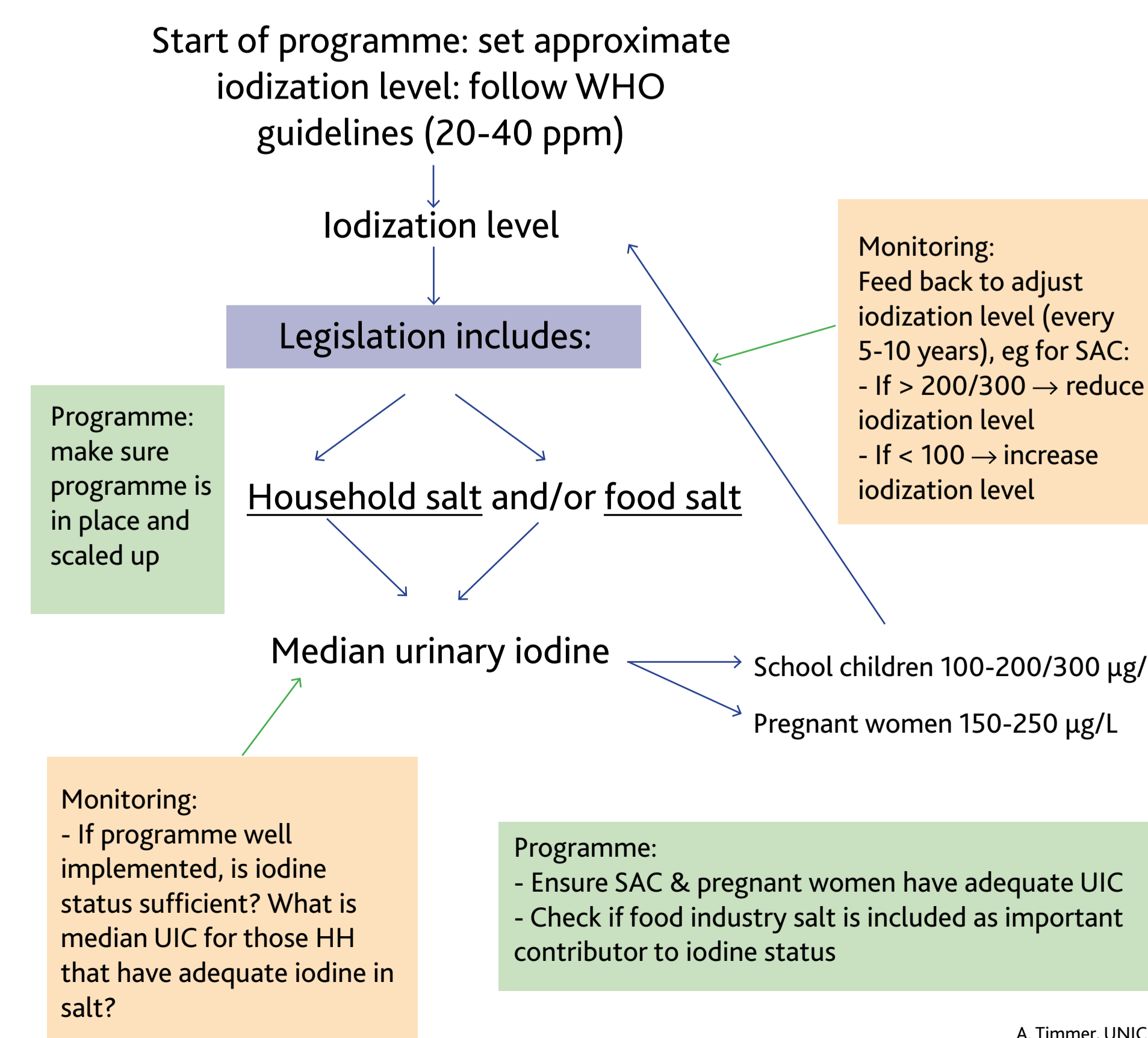
## METHODS

- A desk review of published and unpublished literature and reports, data and/or information from national iodine deficiency elimination/ salt iodization programmes was conducted to gather both knowledge and programme experience.
- The review included:
  - legislation and policies regarding salt iodization,
  - information regarding main sources of iodine intake in the diet: iodized table salt, iodized salt in processed foods and from other dietary sources.
- Information was synthesized in a table of current salt iodization legislation and standards, with data for 55 countries.
- Analysis of legislation and policies considered whether iodization was mandatory or simply permitted and how iodization standards were determined.

TABLE 1: SELECTED EXAMPLES OF LEGISLATION AND CONSIDERATIONS

COUNTRY	LEGISLATION	YEAR	TYPE(S) OF SALT SPECIFIED	IODIZATION STANDARD (mg iodine/kg salt or ppm)	FACTORS CONSIDERED
AUSTRALIA	Mandatory in bread; otherwise voluntary	2008	Bread salt (organic products exempt)	25-65mg/kg (ave. 45 mg/kg)	Suitability of bread salt: <ul style="list-style-type: none"> <li>Short shelf life means less iodine loss</li> <li>Trade considerations – bread destined for local markets</li> <li>No organoleptic effects of adding iodized salt</li> </ul>
CANADA	Mandatory	1945	Human: Table salt only. <ul style="list-style-type: none"> <li>Iodized salt in processed foods not permitted</li> <li>some baby formulations permitted</li> </ul>	100ppm	No changes since inception. <ul style="list-style-type: none"> <li>2009-2011 survey indicates median UIC 144 ug/L and 22% of Canadians aged 3-79 with low urinary iodine.</li> </ul>
SOUTH AFRICA	Voluntary Revised to Mandatory	1972 2001 2006	Human: Table salt only. <ul style="list-style-type: none"> <li>No iodized salt in processed foods</li> <li>No agricultural salt</li> </ul>	10-20ppm 40-60ppm 35-65ppm	Considerations include: <ul style="list-style-type: none"> <li>Urinary iodine status</li> <li>Natural water iodine</li> <li>Increased consumption of salt via processed foods</li> </ul>
CHINA	Mandatory Revised Revised 2010	1995 2000 2010	Human, including processed foods	20-60ppm 20-50ppm Regionally Varying levels of 20, 25 and 30 mg/kg	Required level is regionally based in consideration of: <ul style="list-style-type: none"> <li>Urinary iodine status in different population groups</li> <li>Natural water iodine</li> </ul>

## CHART 1: STEPS IN SETTING IODIZATION LEVELS



## RESULTS

- Chart 1 shows that while the goal of setting iodization standards is to achieve a level of iodine in salt so as to achieve optimal iodine status in the population, legislation is not the sole influencing factor is determining standards. (Chart 1)
- Review of legislation governing iodization indicates variation in the interpretation of normative guidance (20-40ppm) on standards, often outside the range recommended. Some legislation was not based on normative guidance. Nevertheless, countries are able to achieve optimal iodine status. (Table 1)
- There are numerous examples of changes in legislation regarding salt iodization in response to population urinary iodine concentrations and national contexts including natural water iodine and shifts in salt and processed foods consumption.
- True USI (iodized salt for all human and animal consumption) is not always mandated or implemented; some countries chose a specific food in which to use iodized salt while other countries specifically forbid the use of iodized salt in processed foods. (Table 1)
- When iodization is voluntary, information gaps often exist regarding the application of standards and the extent to which iodized salt is used in processed foods.

## CONCLUSIONS

Strict adherence to the normative guidance for iodization standards is not a pre-requisite for the achievement of the goal of optimal iodine intake; normative guidance is a point of departure, adjustments in iodine standards should be informed by urinary concentrations in different population groups and consider other national contexts (e.g. consumption patterns, sources of iodine).

Legislation governing iodization should preferably be mandatory and support the use of iodized salt for all human consumption in order to facilitate an evidence based approach to setting and adjustment of iodization standards in a dynamic national context.

Varied standards and legislation between countries may complicate regional approaches to standards setting and create trade barriers.

This review was limited by the lack of data from some countries regarding national legislation and limited information regarding national food consumption.

## ACKNOWLEDGEMENTS

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