



Recent efforts towards consolidation of the salt industry to support USI

Technical Session 2A: Salt and Iodine 1

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The Structure of presentation

- The Problem of IDD and its solution
- Status of Success of USI progress worldwide
- Challenges to achieving the last mile
- Salt industry consolidation
- What has happened?
- What is needed?

Iodine and Iodine Deficiency

- Essential component of thyroid hormones (T4 and T3)
- Critical for **brain development and optimal neurological function**
- Goiter – **enlarged thyroid** occurs when there is a chronic lack of iodine in diet
- Severe iodine deficiency causes irreversible **mental retardation and cretinism**



Iodine deficiency is the world's greatest cause of preventable brain damage and mental retardation in newborns.

- **Severe deficiency = 10-15 fewer I.Q. points**
- **Moderate/mild deficiency = 3-4 fewer I.Q. points**
- **Children with iodine deficiency are at increased risk of:**
 - Impaired motor development at 24 months
 - Lower I.Q. at age 8
 - Poorer reading ability at age 9
 - Poorer spelling at age 9

Universal Salt Iodization

- Addition of a small amount of iodine to all edible salt
- Salt – universally consumed at home, in condiments and processed foods, ideal vehicle
- Salt iodization is **safe, affordable,** and **effective** to assure children can have optimal brain development
- No increased consumption of salt, therefore compatible with salt reduction

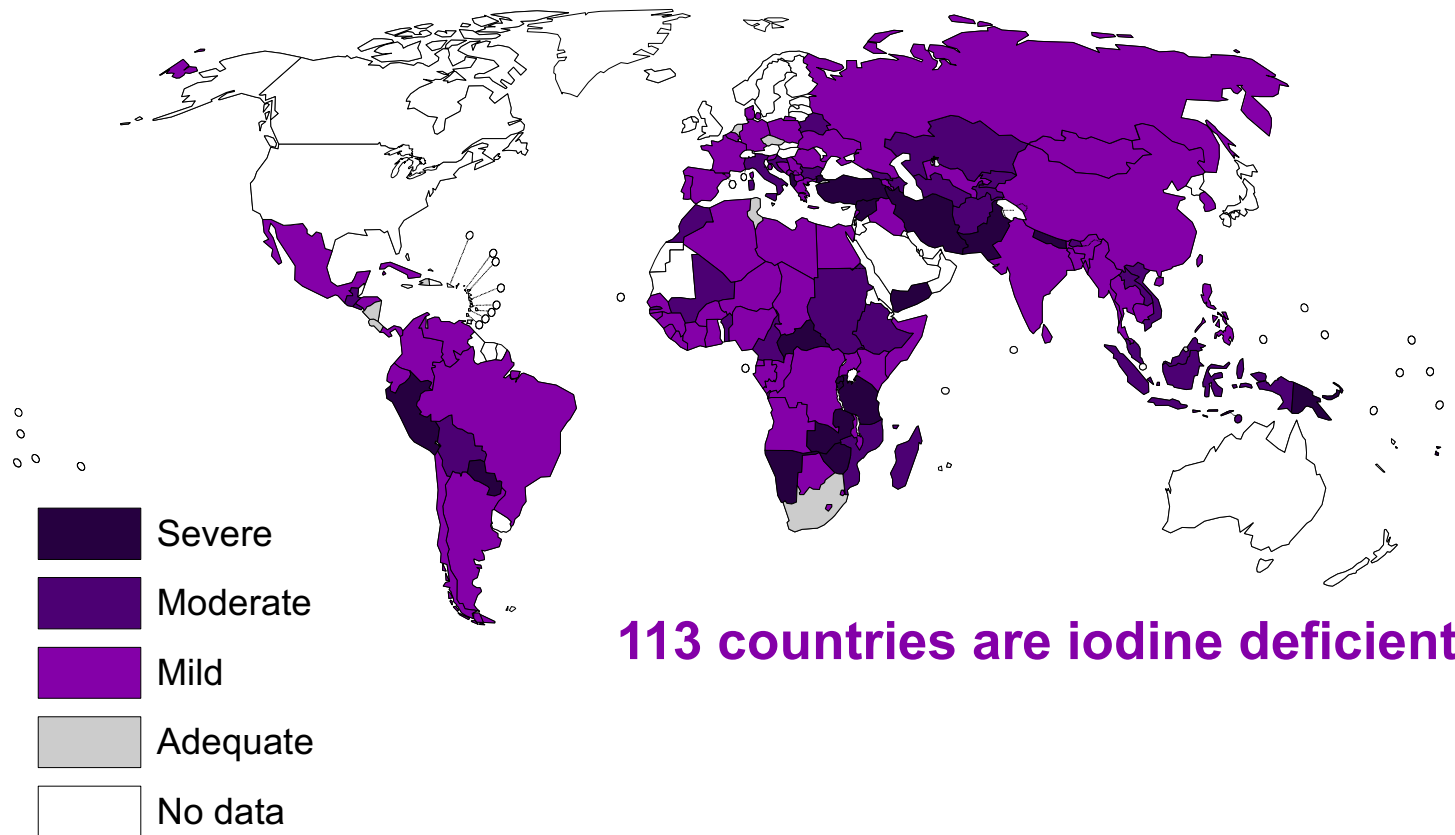




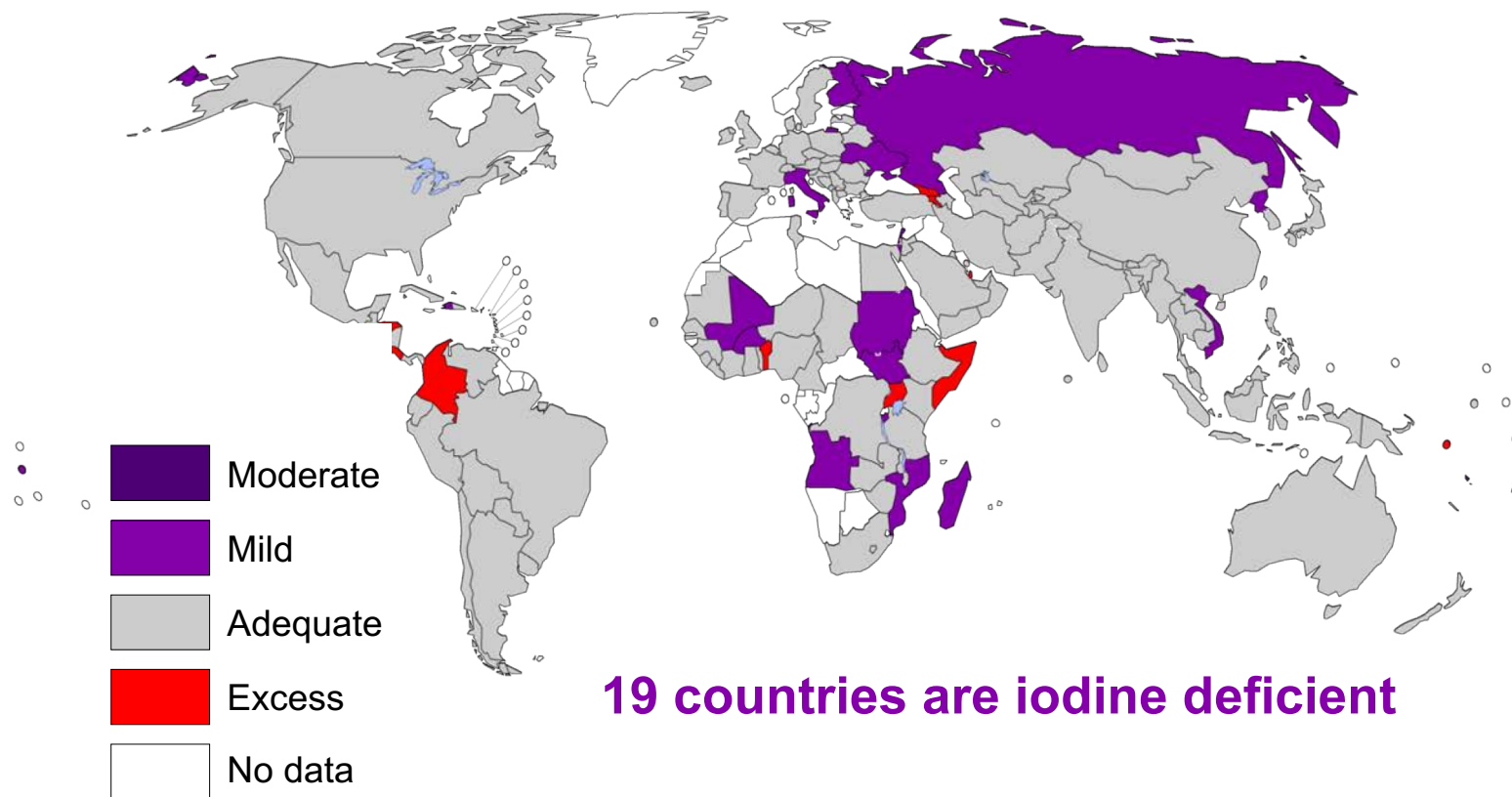
Remarkable Global Progress Related to USI

- In 1990, less than 20% of the world's salt was iodized
- Now, more than 140 countries have salt iodization programs – both industrialized and developing nations, **including the United States**

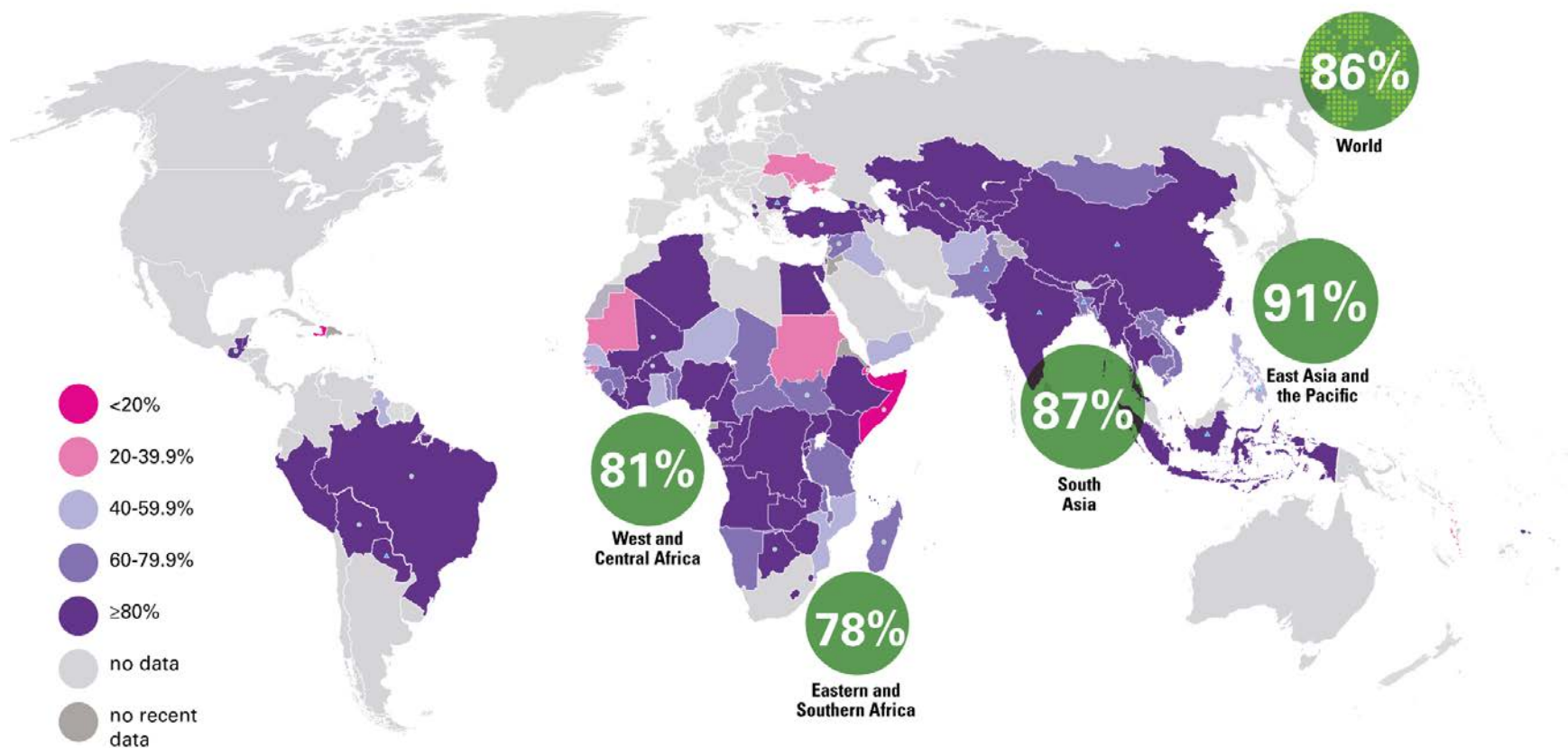
1993



2017



2018: Globally, 86% of the population has access to iodized salt



SOURCE: UNICEF 2018

The Challenge remains

- Salt industry has contributed hugely in the last 3 decades in IDD control through iodation of salt for human and animal consumption.
- A major challenge - Reaching the last mile and sustaining the same
- Unconsolidated salt industry remains a challenge to USI
- Many countries face difficulty in achieving USI as many are SSSP, scattered, whose salt production is seasonal, lacks quality and often becomes the main source of un-iodized salt
- Attempts at iodation by SSSPs lacks quality control, uses knap-sack technology, difficult to monitor and dependent on external support.



Why unconsolidated salt industry a challenge

- Primitive and manual Salt production technology
- Dependent on manual (knapsack) salt iodization technique
- Weak enforcement of the USI legislation due to weak coordination of various government stakeholder, lab network and poor QAQC
- SSSPs often very resistant to change fearing negatively impact on profit
- The large number of SS makes developing and maintaining a consistent approach to iodization and QA extremely difficult



Large and Small Scale SPs Comparison

	Large Producers	Small Producers
Product	More refined product with higher profit margins	Raw salt with low profit margin
Iodization and QC	High quality relatively easy to QC	None or poor iodization and hard to QC
Marketing	Able to sell direct to wholesalers at consistent margin	Sell to traders who are able to control purchase thus making small producers vulnerable to price fluctuations
Security of income	Maintain storage capacity to cover production failure; able to generate income all year round and hold stocks at times of low price	Produce for direct sale and generate income for part of year only; vulnerable to climate and market forces
Cash flow	Maintain all-year round cash flow and have access to capital	Season subsistence production with little or no access to capital
Skills	Higher level of understanding of salt production process and supporting skills (mechanics etc)	Basic level of knowledge of production process; no supporting skills

Industry Consolidation – A viable option

- To addressing the challenge, and enhance the viability of the small-scale producers, recent developments are emphasizing an approach towards:
 - ✓ consolidation, where SSSPs salt is sold to a central investor, quality improved, iodized, packaged and then marketed.
- Consolidation of industry is a viable option where there are many small scale producers – has worked in India and Cambodia etc.

Working of a Consolidated Industry

- New business entities formation to consolidate the salt produced by small-scale producers. by:
 - ✓ To achieve enough economy of scale, the investor purchases the salt centrally at a consistent price and stores it in bulk.
 - ✓ Improves its quality (through further processing such as washing, grinding and packaging)
 - ✓ Iodize it adequately and consistently using improved technology
 - ✓ Sells the adequately iodized salt at optimum price.
- Alter the role of the current SSSPs to focus exclusively on raw salt production
- Provides a guaranteed market to SSSP's for raw salt, reliable and stable revenue (as long as a minimum standard is met)
- Has robust technical/management feasibility study to determine what is appropriate for market.

Status of Industry Consolidation in some countries

- China: Highly consolidated and controlled salt industry (High HH coverage maintained)
- Senegal: Many small scale farmers - getting organized into business interest groups
- Pakistan: Around 1300 processors with >80% market 10 years ago and now the volume is shrinking
- India: Industry is getting increasingly consolidated but around 24% market share still SS. Gujarat experiencing the largest transition
- Indonesia: A sizeable portion is from small scale
- Ethiopia, Cambodia, Uzbekistan and many other countries has successful consolidation experience.

Supporting the process of consolidation

- Address key issues: Transportation, price increase, investor and ownership type.
- Feasibility studies and consultation among all stakeholders
- Strengthen the existing salt industry by focus on medium and large-scale SP.
- Explore the downstream technical and business viability of an industry transformation through the consolidation of salt processing
- Improve overall management, oversight and coordination of USI to improve the production and supply of adequately iodized salt and population iodine status.
- Strengthen government leadership and engagement for modernizing the salt industry and addressing the issues facing producers.
- Provide TA to assess and improve the quality of raw salt produced by coastal small solar producers and inland salt producers.
- Establish the feasibility of industry consolidation that provides a market for all raw salt while allowing a sustainable business to process (and iodize) all edible salt

Recommended steps for consolidation

1. *Generation of Basic Data:*
 - a) Supply and Demand
 - b) *Raw Salt Quality (purity, moisture)*
 - c) *Understanding the salt market*
2. *Undertake a Feasibility assessment:*
3. identify potential investors and agree an ownership model with all stakeholders *(if feasibility study indicates viability)*
4. Value and supply chain assessment

Recommended steps for consolidation

Role of government and policy makers:

- Provide training to improve production quality of small producers
- Support the consolidation of small producers into associations
- Where necessary commit to provide centralised services such as testing and even iodisation itself to all producers
- Provide clear and consistently applied regulatory environment
- Provide iodisation equipment and initial supplies of iodate and spares to associations, to kick start iodisation process
- Provide training in business skills and support producers in the production of sustainable business plans that include iodisation
- Support the establishment of supplies chains for commodities (KIO₃, supplies etc.)
- Support SSP to grow into medium level SPs through loans and financial services

Conclusion

- Salt iodization is one of the biggest public health success stories in the last three and highly relevant despite the achievements

AND

- IDD prevention efforts need to remain a cornerstone of global nutrition agenda

**A consolidated salt industry is a key driver
of
successful salt iodization programs**



Thank you