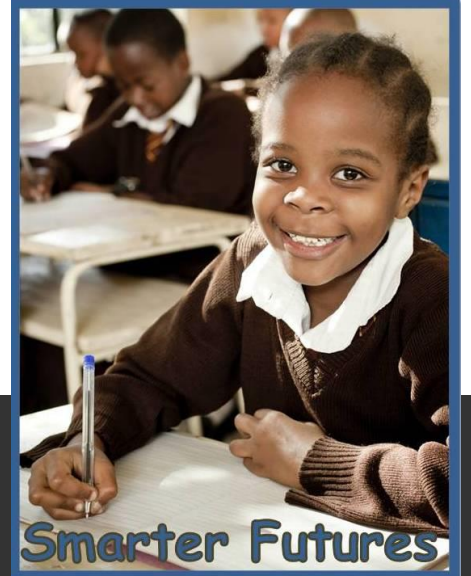


# Smarter Futures

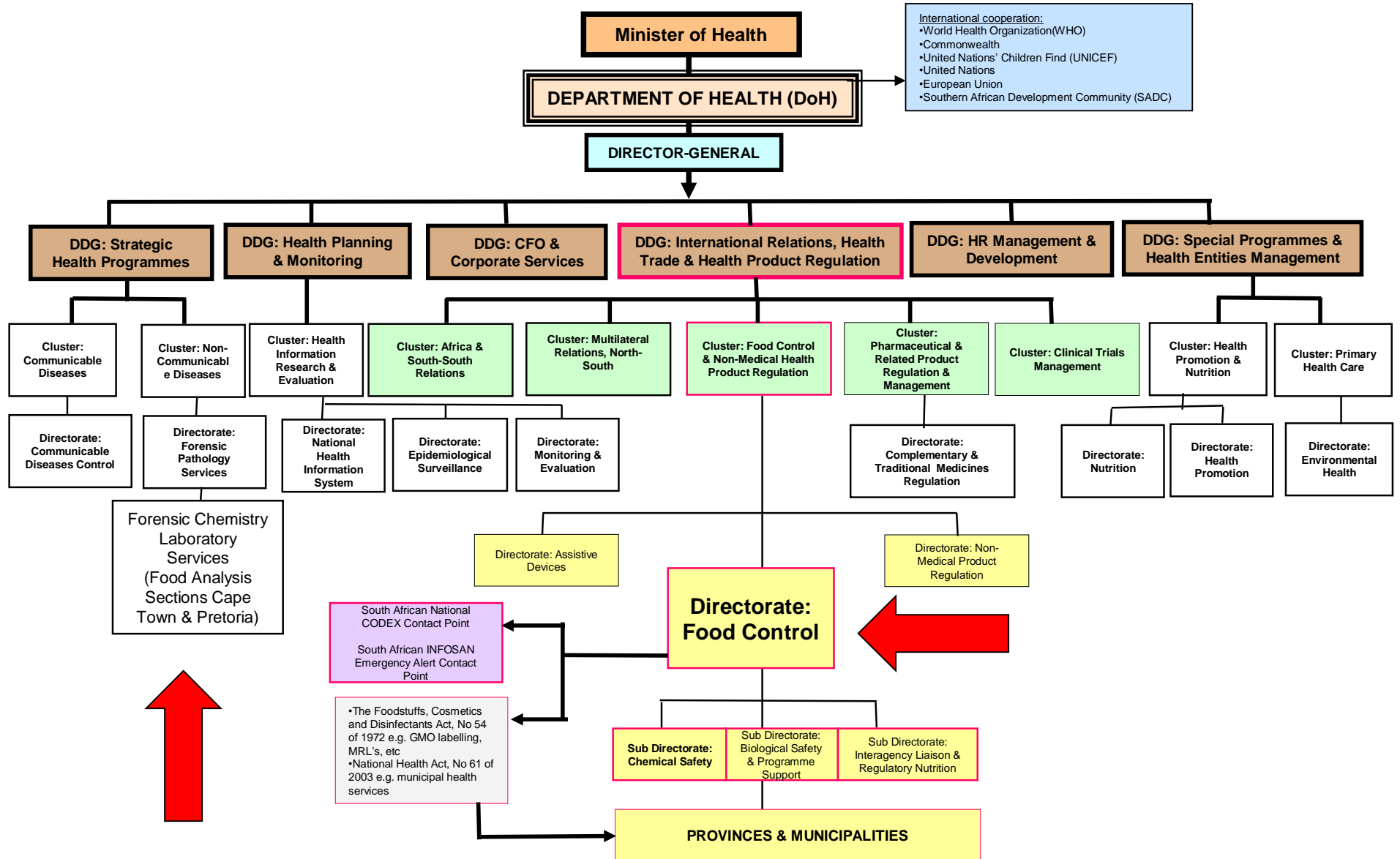


## National Food Control Systems - Laboratory requirements for external monitoring

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Zimbabwe May 2015

# Organogram

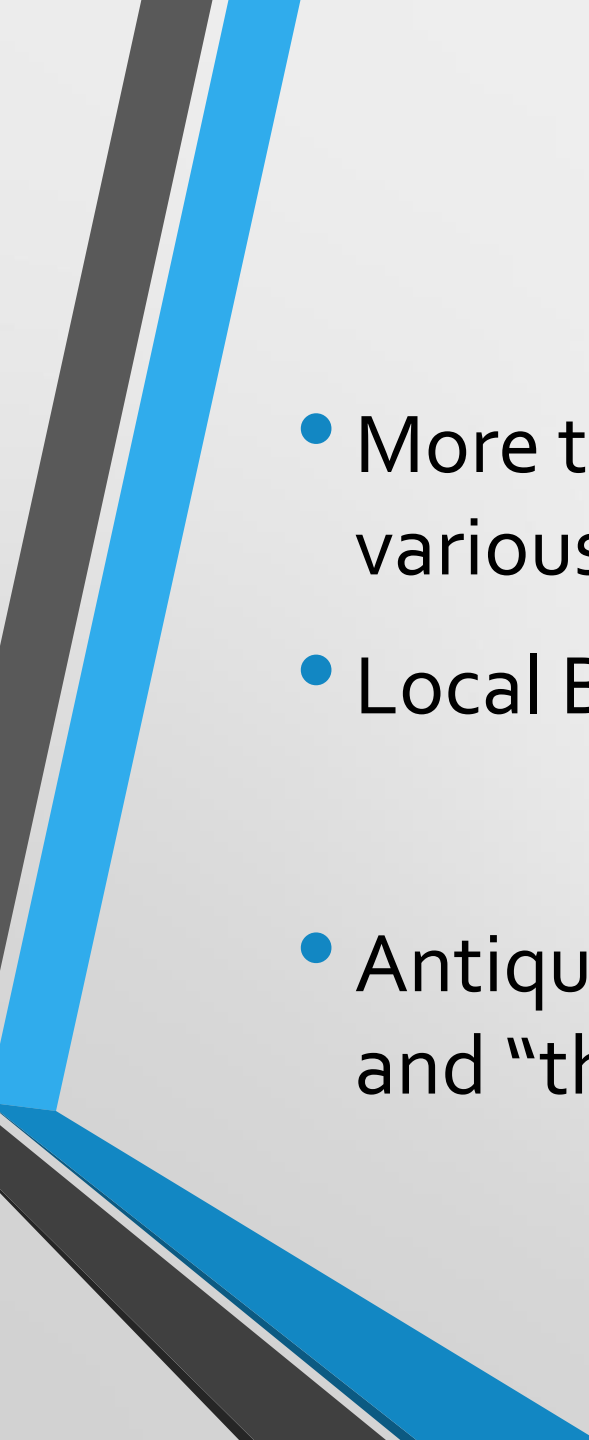


# Food laboratories

- Only 2 laboratories in country
- Equipment old
- Severe understaffing
- Chronic skills shortage
- Salaries not market related
- Poor turnaround time on analysis


# Multiple regulatory authorities, multiple regulations

- Ministry of Agriculture – Grain, Livestock, Fish etc – “Unprocessed”
- Ministry of Health – any “processed” foods
- Water and Forestry – under Min of Agriculture
- Parastatals – SABS – canned fish; PPECB – exports
- Provincial, Metropolitan and District Authorities

- 
- More than 16 different food regulations enacted under various Acts of Parliament
  - Local By-laws still exist
  - Antique laws permit “any sealed package” to be a sample and “the Government Chemist” is always right

# Three Spheres of Government

- National – responsible for overall coordination and organising National Sampling Plans, Emergency Response to food borne illness etc
- Provincial – responsible within own province; some very active some very weak
- Municipal – as above
- National can not tell Provincial or Municipal Authorities to do anything – only “request”

- 
- Food Control Laboratories report back to “client” i.e. Provincial or Municipal but do not copy National.
  - Port Health now report to Provincial Government not National Government (only border authority not to do so)

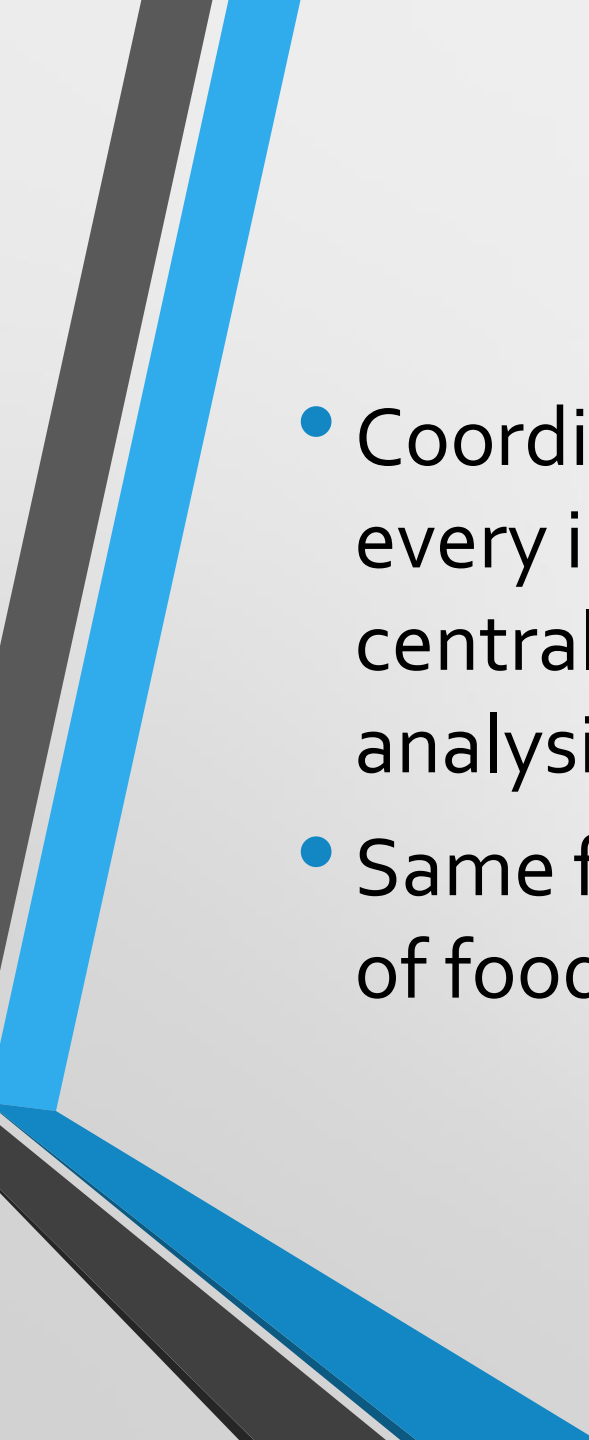
# Fortification Consequences


- Inspectors focus on “easy” targets i.e. Big mills so compliance amongst (smaller rural mills) those feeding the most vulnerable groups is viewed as low.
- Food Control not monitoring pre-mix



# Changes

- Organisation revamp to allow direct line of communication and responsibility
- Port hopping to be monitored through linkage of Customs & Excise into system
- Strengthen “extended detention” system and prosecutions for non-compliance – currently prosecuted under “failure to comply with revenue requirements”

- 
- Coordinate analysis results and analyse centrally – any and every investigation, complaint or analysis to be copied to a central facility charged with data compilation, trend analysis and data mapping plus disseminating results.
  - Same facility to “look over the horizon” i.e. Early warning of food borne threats in other countries


- 
- Establish “elite unit” for rapid response, method development etc
  - Look to ISO 17025 compliance using “technique” accreditation

# Information Resources

- Sample size, storage and transportation requirements
- Analysis time, sample tracking and interpretation of results against legislation
- Possible reasons for non-compliance
- Media response
- FAQ section for consumers – especially during/after media blitz

# Specific Plans in RSA

- Additives
- Contaminants
- MRL's
- Mycotoxins
- Nutrition

- 
- Of those 5 plans only nutrition is not a safety issue
  - Monitoring for public safety is vastly different – and easier – than monitoring for compliance

# Specify Sampling Parameters

- Specific commodity i.e. Fruits, grains etc
- Specific point in food chain i.e. Farm, market, retailer
- For fortification only at the mill
- Do not let inspectors work on random basis

# For Fortification

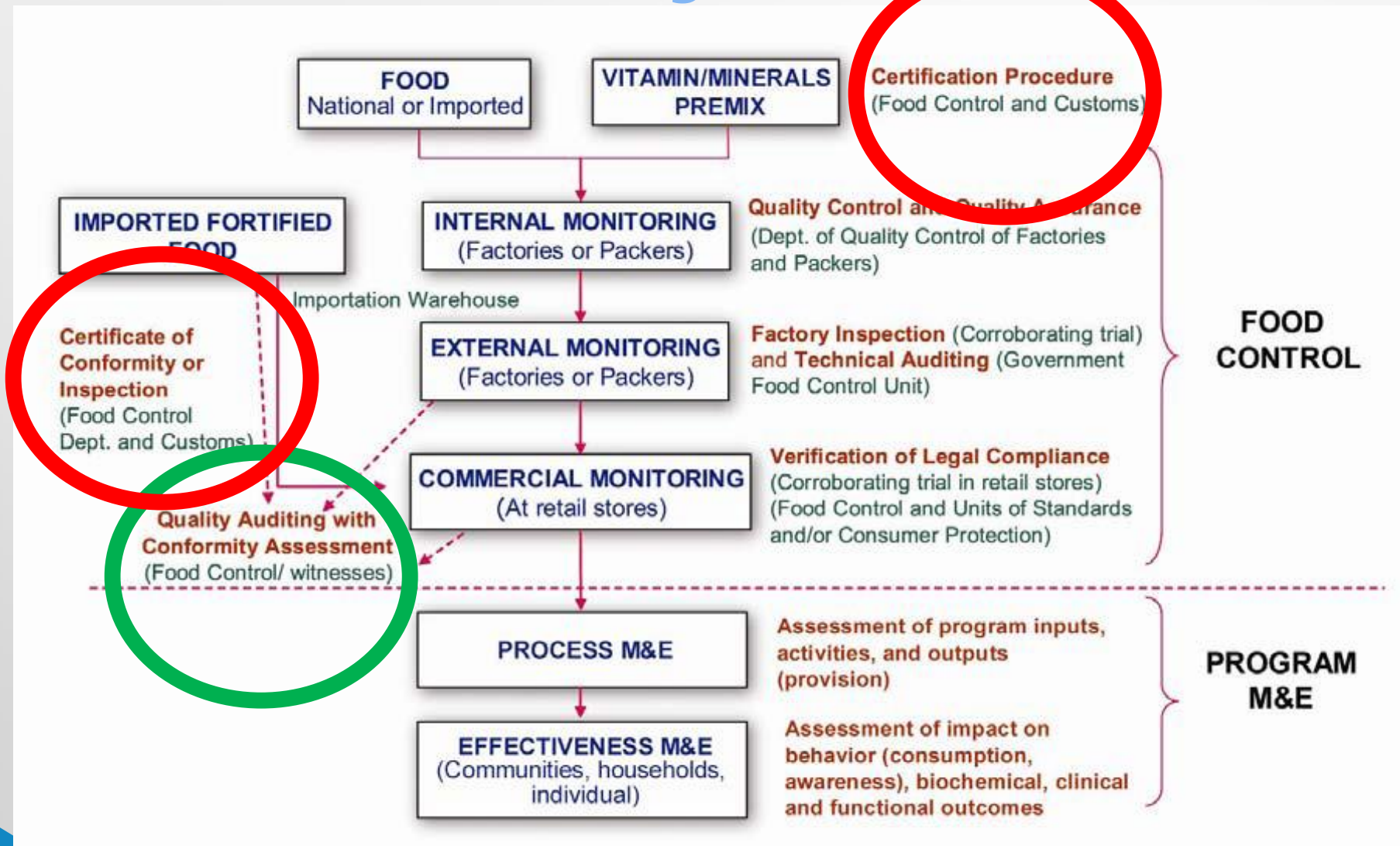
- Food Control, therefore, need to ensure major mills are not “over monitored” due to ease of access
- Question of “risk analysis” – not only to the public from non-compliance but to the fortification programme *per se* because larger millers perceive smaller millers are non-compliant and threaten to pull out in protest



# Folic acid and Iron


- Spinach extract and iron filings will conform to specification – analysis will indicate both micronutrients are present and in sufficient quantity - but that is not “fit for purpose”
- Is specifying the iron type a TBT??
- Is specifying a maximum value necessary??

# Framework for Monitoring of Flour Fortification Programs



# Work Smarter

- Check the pre-mix as “fit for purpose”
- Check pre-mix consumption
- Check production output
- **Compliance established in hours not days/weeks**
- **Low cost, low technology, high level of confidence**



Why is checking pre-mix is  
better?

## Next Slide shows

- Coefficient of Variation – Reproducibility 95% confidence
- 14 laboratories
- 7 samples
- Differing levels of analyte (Vitamin A – comparable in difficulty of analysis to Folic acid)
- Concentration decreases  
Error increases

# AACC Ring Trail 2010 Reproducibility

