

Official Control on Seafood Supply Chain of Bangladesh

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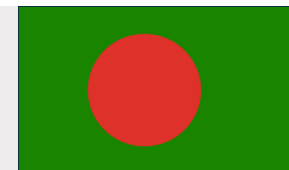
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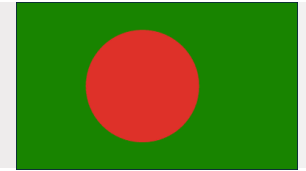
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Total Production of Fish (2013-14)	: 3,548,215 mt
Total Production of Shrimp (2013-14)	: 122,789 mt
Contribution in GDP (BER, 2014)	: 3.69%
Contribution in Agriculture commodity (BER, 2014)	: 22.60%
Per capita annual fish consumption (2013-14)	: 19.50 kg
Contribution to animal protein supply (2013-14)	: 60%
Total Export Volume (2013-14)	: 77,328 mt
Total Export Value (2013-14)	: 630.24 million USD
Contribution to National Export Earning (2013-14)	: 2.09%

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⊕ EU approved fish processing establishments	: 74
⊕ Freezing Vessels (for export)	: 46
⊕ Shrimp hatcheries	: 42
⊕ Registered farms (shrimp & prawn)	: 1,86,696
⊕ Registered fin fish farms	: 9,624
⊕ Feed Mills	: 118

Type of Aquaculture

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- Total area of shrimp farming: 275,274 ha
 - Extensive: 274,593 ha
 - Semi-Intensive: 681 ha
- Shrimp farming mostly **extensive depending on natural food.**
- Average production (shrimp & prawn): **446 kg/ha/year**
- Main source of water for shrimp farming is tidal brackish water and rain fall
- **GAP protocol** is being practiced





Inland waters capture: major producer countries

2012 Ranking	Country	Continent	2003	2011	2012
			<i>(Tonnes)</i>		
1	China	Asia	2 135 086	2 232 221	2 297 839
2	India	Asia	757 353	1 061 033	1 460 456
3	Myanmar	Asia	290 140	1 163 159	1 246 460
4	Bangladesh	Asia	709 333	1 054 585	957 095

Source: The state of World Fisheries and Aquaculture 2014. www.fao.org

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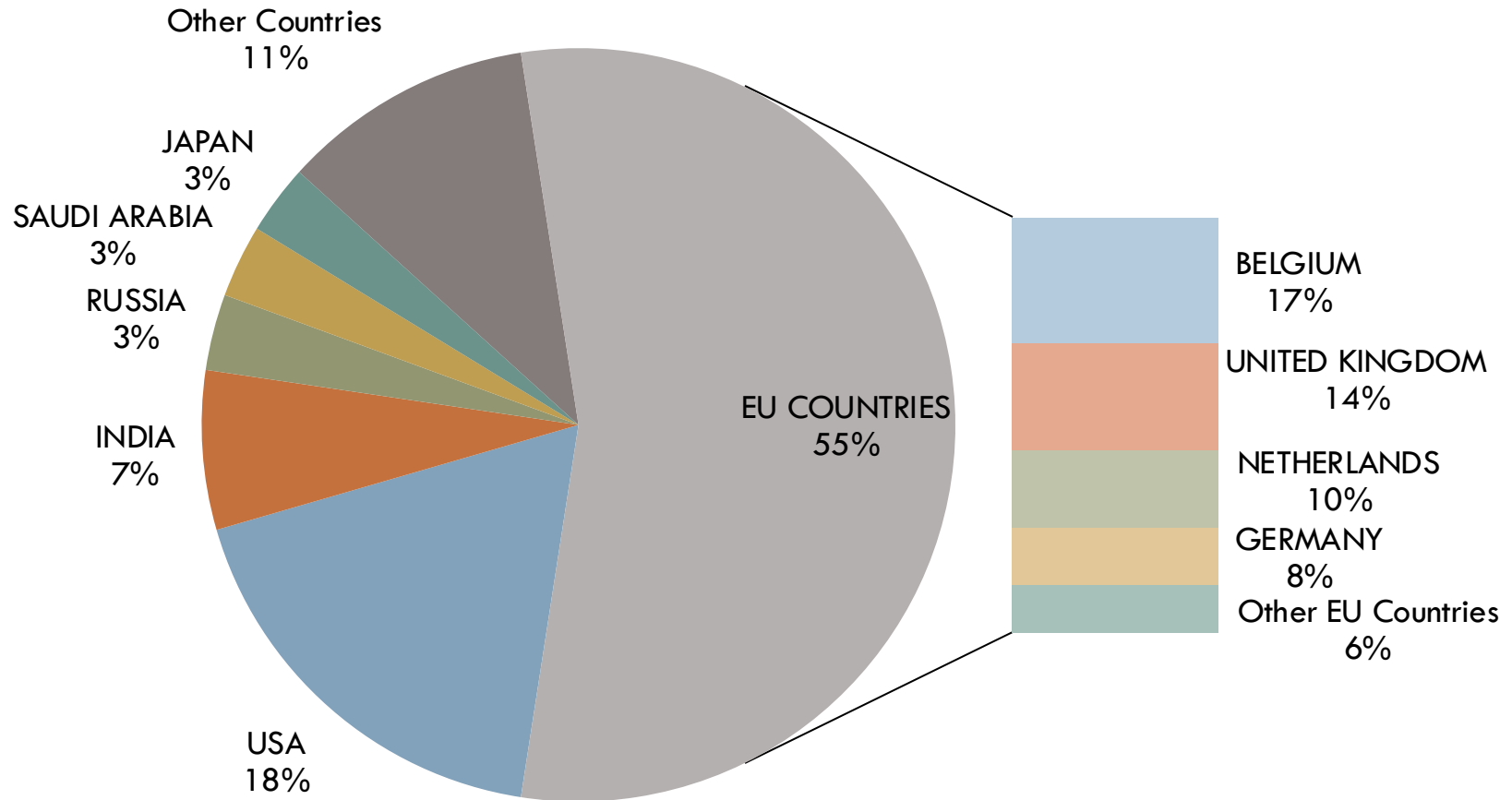
Farmed food fish production by top 15 producers and main groups of farmed species in 2012

Producer	Finfish		Crustaceans	Molluscs	Other species	National total
	Inland aquaculture	Mariculture				
	(Tonnes)					
China	23 341 134	1 028 399	3 592 588	12 343 169	803 016	41 108 306
India	3 812 420	84 164	299 926	12 905	...	4 209 415
Viet Nam	2 091 200	51 000	513 100	400 000	30 200	3 085 500
Indonesia	2 097 407	582 077	387 698	...	477	3 067 660
Bangladesh	1 525 672	63 220	137 174	1 726 066
Norway	85	1 319 033	...	2 001	...	1 321 119
Thailand	380 986	19 994	623 660	205 192	4 045	1 233 877
...						

Source: The state of World Fisheries and Aquaculture 2014. www.fao.org

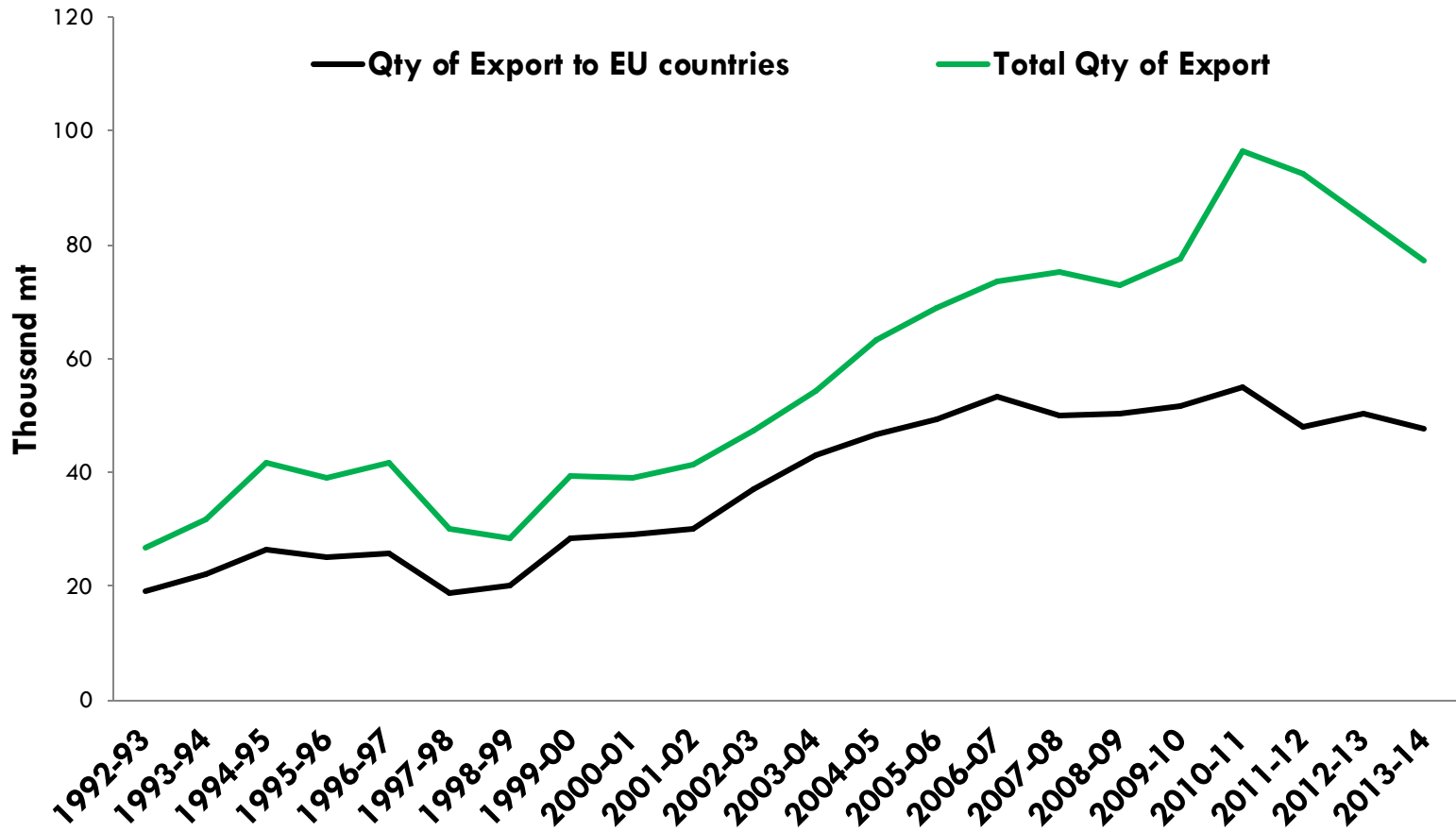
Seafood Export

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Seafood Export

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Competent Authorities

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Department of Fisheries (DOF)

- Director General of DOF as Central Competent Authority (CCA)
- Deputy Directors (FIQC) as Regional Competent Authority (RCA)
- Divisional Deputy Directors, DFO and SUFO/UFOs as Local Competent Authority(LCA)

Directorate General of Drug Administration (DG-DA) Controls drugs including VMPs

Department of Livestock Services (DLS) prescribes for use of VMPs.

DOF Staff Involved in Official Control

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Level	Number of staff
Central CCA	6
Regional RCA	78
Local LCA	1188
Total	1272

Legislations

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- The Fish and Fish Product (Inspection and Quality Control) Ordinance, 1983
- The Marine Fisheries Ordinance, 1983
- The Marine Fisheries Rules, 1983
- The Fish and Fish Product (Inspection and quality control) Rules, 1997 (amended in 2008 and 2014)
- The Fish Feed and Animal Feed Act, 2010
- The Fish Hatchery Act, 2010
- The Fish Feed Rules, 2011
- The Fish Hatchery Rules, 2011

Guiding Documents

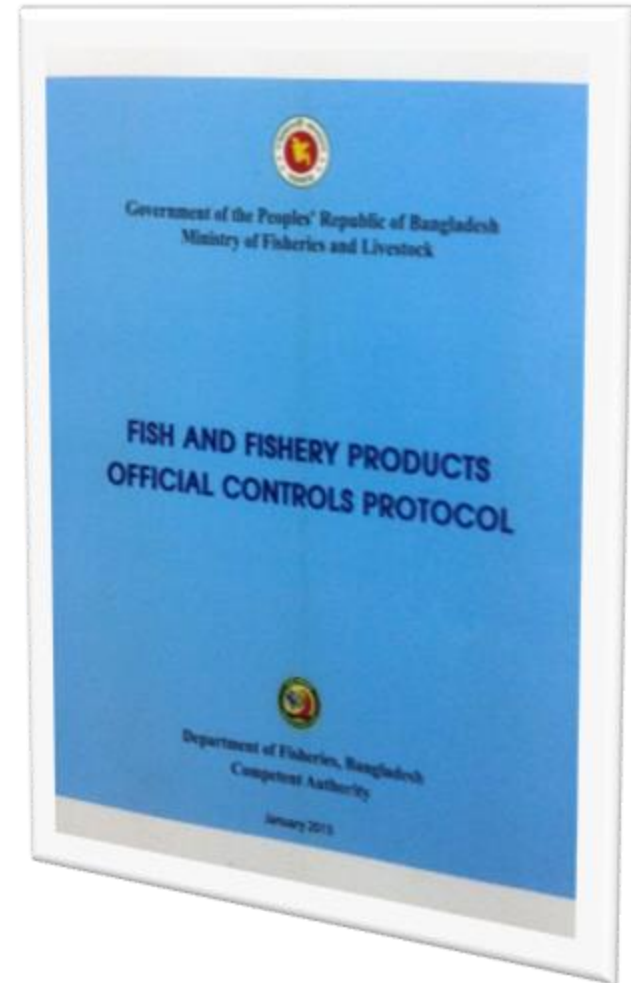
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- **National Fisheries Policy-1998**
- **National Residue Control Plan Policy Guidelines, 2011 (amended in 2012)**
- **National Shrimp Policy, 2014**
- **Fish and Fishery Products Official Control Protocols, 2015**
- **Guidelines for the Control of Aquaculture Medicinal Products-AMPs, 2015**
- **Manual on Good Aquaculture Practice- Trainer Guide**
- **Compliance Guidelines for Fish Feed Production, Import & Marketing**
- **Guidebook on Waste Management in Fish and Fishery Industries**
- **Good Aquaculture Practice – A Farmer’s Guide**
- **Compliance Guidelines for Shrimp Hatchery**

Official Control Protocol

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- Documentation on Fish and Fishery Products Inspection & Quality Control Service.
- Official Control Protocol has been organized and developed systematically to ensure full compliance of different establishments.
- Transparent, integrated & effective control operations for both Local & Foreign Markets



Control at Hatchery

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The Fish Hatchery Act, 2010
The Fish Hatchery Rules, 2011

- **Good Aquaculture Practice – A Farmer's Guide**
- **Compliance Guidelines for Shrimp Hatchery**

Control on Aquaculture

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- Farm Registration
- No use of Medicated Feed
- Use of SPF Seeds
- Feed rules
- GAqP
- Traceability
- Voluntary Certification



Control on Feed Supply

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- Feed Act and rules
- No use of antibiotics in Feed
- Licensing for Feed production
- Laboratory analysis before marketing
- Laboratory test before import
- GAqP
- Traceability

Control on Industry

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FIQC Rules
Evaluation and licensing
Official inspection
Salubrity/ Health certificate

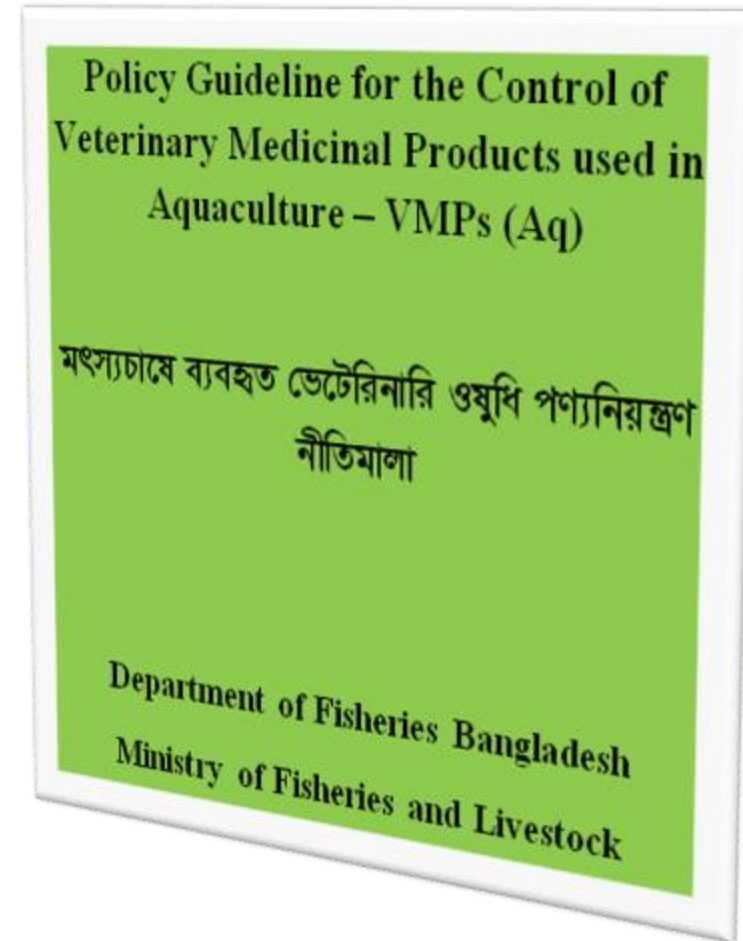


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Control on VMP/AMP

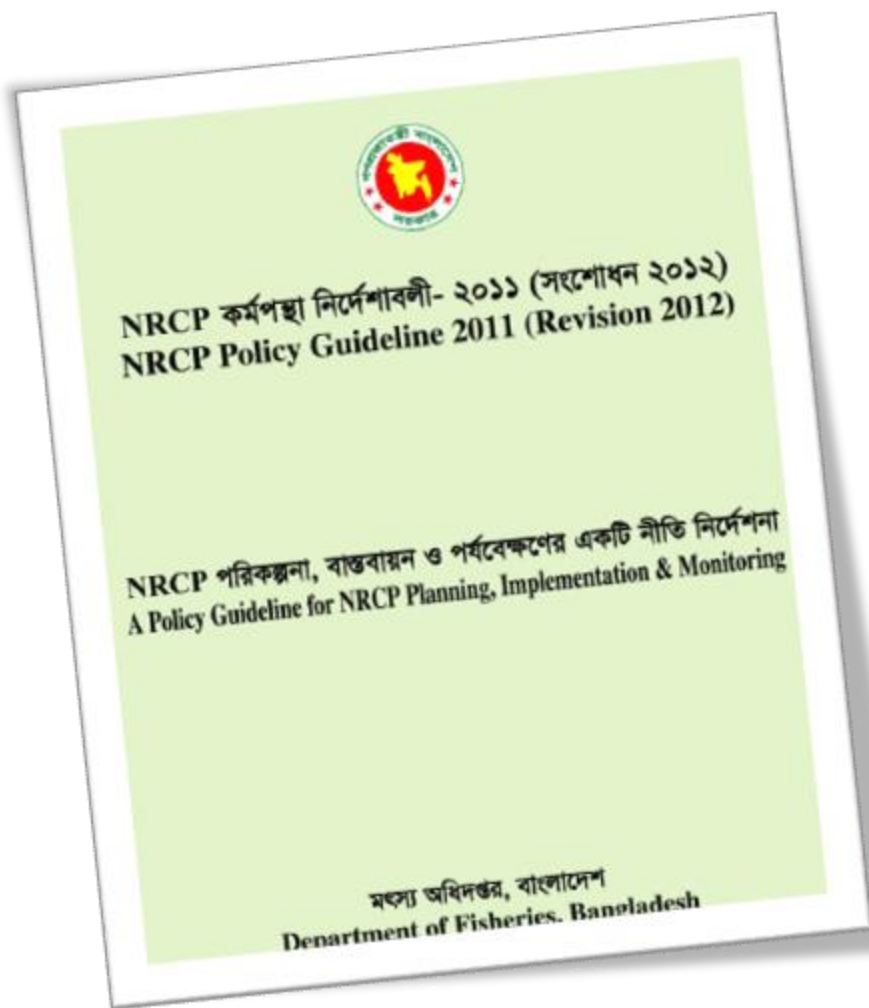
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Target: Control the VMP residues
Drugs (control) ordinance, 1982
(ordinance no. VIII of 1982)
National Drug Policy 2005
AMP/VMP Guidelines
Laboratory analysis
GAqP
Vigilance teams to monitor the use of
VMPs.
Awareness activities conducted to
prevent illegal use of VMPs



Residue Monitoring

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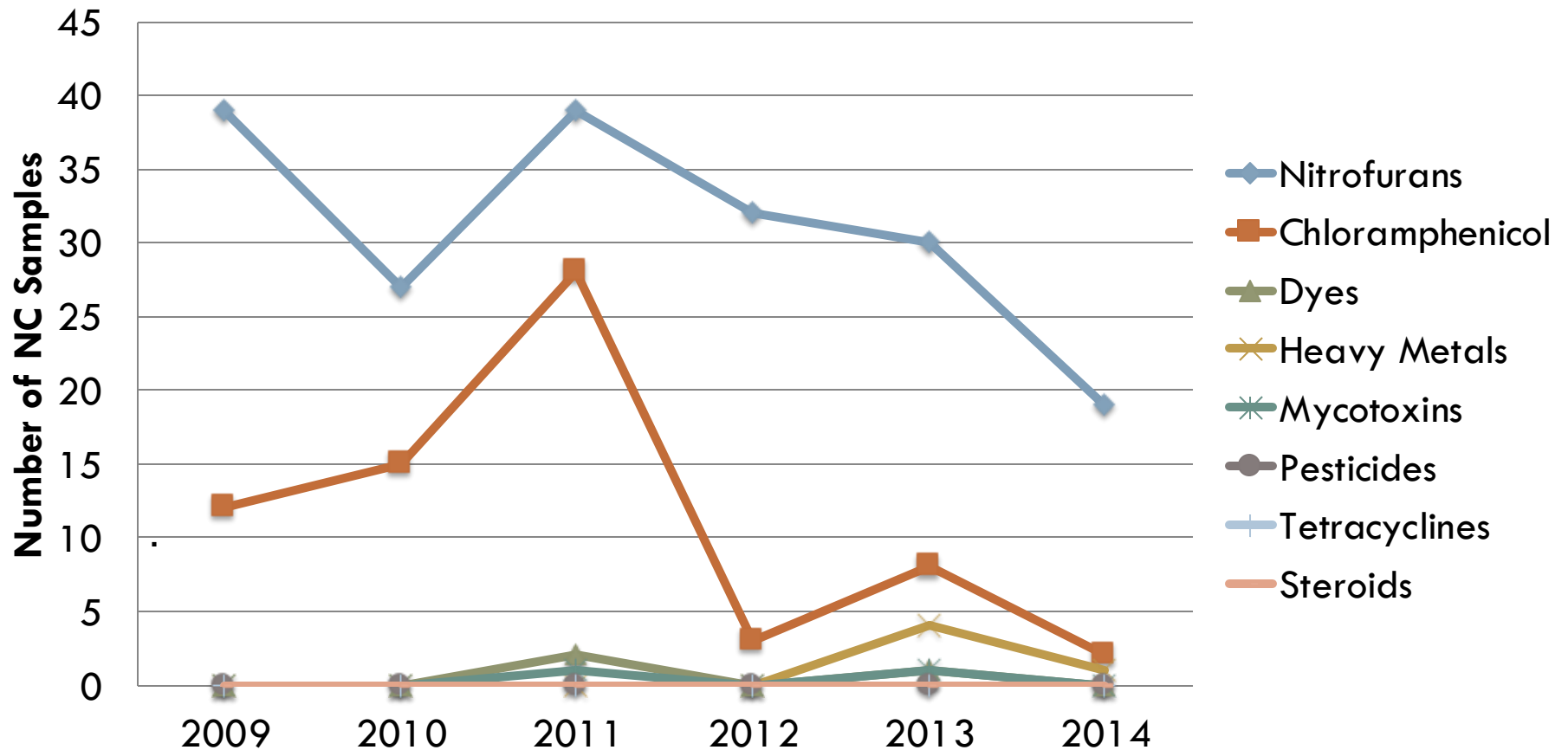


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Residue Analysis

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Residue Analysis 2009-2014



Laboratory Competency (2007-2015)

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2007	2010	2011	2013	2014	2015
<ul style="list-style-type: none"> •LCMSMS-02 •GCMS -01 •Methods not validated •Limited Staff •No Accreditation 	<ul style="list-style-type: none"> •LCMSMS-03 •GCMS -01 •AAS- 02 •Methods are validated •Trained staff •No Accreditation 	<ul style="list-style-type: none"> •LCMSMS-05 •GCMS -01 •AAS- 02 •Methods are validated •Trained staff •No Accreditation 	<ul style="list-style-type: none"> •LCMSMS-05 •GCMS -01 •AAS- 02 •Methods are validated •Trained staff •Accreditation 01 	<ul style="list-style-type: none"> •LCMSMS-06 •GCMS -01 •AAS- 02 •ICPMS-01 •Methods are validated •Trained staff •Accreditation 03 	<ul style="list-style-type: none"> •LCMSMS-07 •GCMS -02 •AAS- 02 •ICPMS-01 •Methods are validated •Trained staff •Accreditation 04



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Laboratory Competency

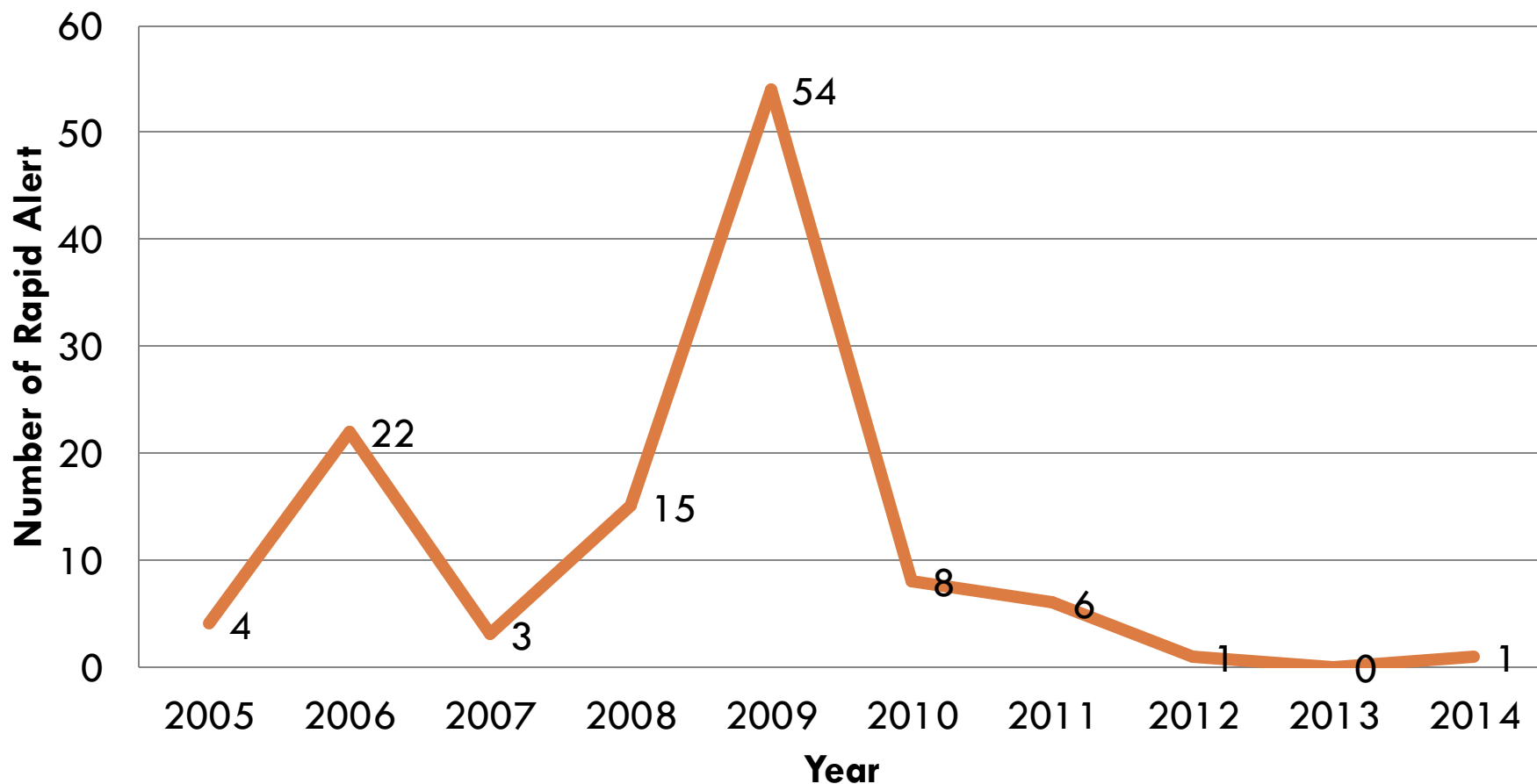
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	FIQC Dhaka	FIQC Chittagong	FIQC Khulna	BAEC Dhaka	Total
Accreditation to ISO 17025	2013	2014	2014	2015	
LC-MS-MS	3	1	2	-	6
GC-MS	1	-	-	-	1
AAS	-	1	1	3	2
ELISA	1	2	2	1	6
ICPMS	-	-	-	1	1

EU Rapid Alerts

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RASFF (2005-2014)



Conclusion

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Competent Authority Strengthened

Coordination among CAs' Increased

NRCP Guideline prepared and
Followed

Non-compliance reduced

Control on VMP increased

RASFF reduced

Laboratory Competencies Increased

Legislations updated



FAO Guidelines for Aquaculture certification

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- FAO and NACA (Network for Aquaculture centres in Asia) jointly developed guidelines for aquaculture certification.
- Describes minimum substantive criteria for:
 - Animal health and welfare
 - Food safety
 - Environmental integrity
 - Social responsibility

Bangladesh Shrimp Aquaculture

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General Characteristics

- Two cultured species
 - ▣ Black tiger shrimp, *Penaeus monodon*
 - ▣ Giant Freshwater Shrimp, *Macrobrachium rosenbergii*
- Situated mainly in coastal areas
- Small scale, converted rice fields to ponds
- Extensive or improved extensive, no or little feed and fertilizer used
- Very low production rate: average 300kg/h



Bangladesh shrimp and certification requirements

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Requirements	Bangladesh compliance
HACCP	Almost all processing plants, not in Aquaculture farms
Traceability	partially
Residual control plan	There is plan but control is not much effective
Health management program	No. (it is not possible for small scale farmers individually, community approach needed)
Use of SPF shrimp	Very less. Facilities for screening not much available
Maintain healthy culture environment	Partially

Bangladesh shrimp and certification requirements

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Requirements	Bangladesh compliance
Responsible use of drugs	Very limited use. But when used, not according to rules. No effective mechanism in place
Location is free of risk of contamination	Partially. No industrial contamination but risk of agricultural pesticide residues
Use of feed that free of unsafe level of chemicals	Few farmer use feed. Chloramphenicol and nitrofurans found in feed.
Use of hazard free water	River or canal water used
EIA	No. Cluster or group approach needed for EIA

Bangladesh shrimp and certification requirements

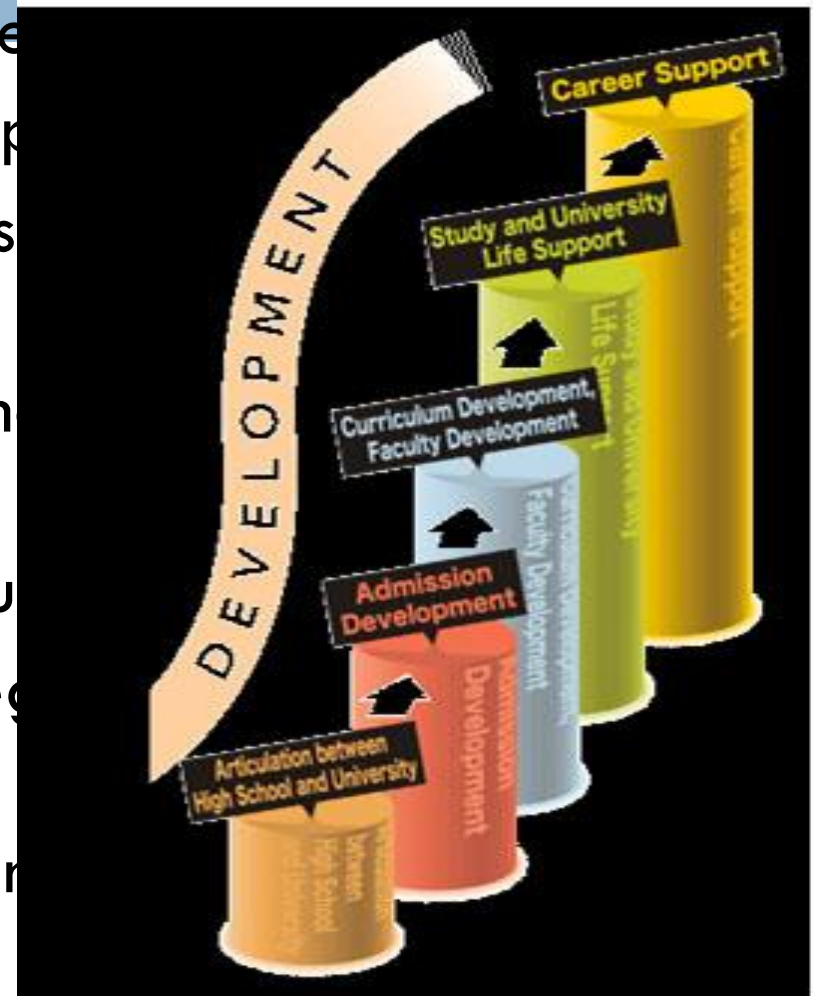
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Requirements	Bangladesh compliance
Monitoring of impact on ecosystem, biodiversity etc. And mitigation measures	No
No use of GMO	yes
Contribute to social development	Both positive development and negative impact reported
Gender equity	Few women involved in aquaculture. Gender bias reported for workers in processing plants
Workers are treated according to labour rules	Reported not.
No use of child labour	Partially

Improvements needed

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- ❑ Coordinated strategy for development
- ❑ Organisation of farms groups
- ❑ Capacity building of small scale farmers
- ❑ Land or area zoning defining for shrimp aquaculture.
- ❑ Establishment of shrimp industry
- ❑ Enforcement of rules and regulations regarding use of drugs
- ❑ Control of import of feed and ingredients



Improvements needed (contd.)

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- Farms and hatchery registration to ensure traceability
- Full compliance to HACCP method.
- Responsible use of chemicals in hatcheries and farms
- Creating more facilities to screen mother shrimp and PL for pathogen and use of SPF PL.
- Ensure gender equity
- Enforcement of laws regarding labour welfare.
- Ensure no use of child labour outside the ILO convention.

So...

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- Bangladesh can go forward to certification of shrimp aquaculture after making the improvements
- Certification can be governed initially by government (like Thailand and India): main similarity here is in farming pattern, the small scale farmers.

Thank you all

