

**REPORT ON FOOD HYGIENE AND SAFETY CONTROL IN
BASA CATFISH INDUSTRY IN VIET NAM**

Communication by Viet Nam

The following communication, received on 28 May 2009, is being circulated at the request of the Delegation of Viet Nam.

I. SUMMARY ON TRA AND BASA CATFISH FARMING IN VIET NAM

1. The Mekong River has its source in China, flowing across Laos, Thailand, Cambodia and Viet Nam and empties into the sea. Four sub-Mekong countries having traditional basa catfish farming are Thailand, Cambodia, Laos and Viet Nam.
2. Vietnamese basa catfish are produced mainly in the provinces of An Giang, Can Tho, Dong Thap, Vinh Long and Tien Giang by industrial method with cages (major type of Basa farming before 2000). Recently, farming in ponds is more popular to assure natural flow of the river and constant circulation of in and out waters as well as to control more effectively the culturing.
3. Breeding sources: natural or artificial. Feeding method: mainly industrial feeds and combined with in-place formula of cooked ground fish and cereal flour. Raising period: six-eight months.
4. Basa farming establishments must be in compliance with Vietnamese requirements related to food hygiene and safety and veterinary hygiene conditions as well as undergo regular inspections and surveillance (Sector Standards 28 TCN 176:2002 Cage culture of basa bocourti, basa catfish – conditions for food safety; 28 TCN 192: 2004 Cage culture area - conditions for food safety; provisions on veterinary hygiene conditions in Veterinary Ordinance 2004 and Decree No. 33/2005 of 15 March 2005 of the Government).
5. Some householders in An Giang province have applied farm management systems in compliance with SQF 2000. Tra and basa farming establishments are applying sustainable aquaculture (GAP and CoC) which have been inspected and certified according to the Decision No. 56/2008/QD-BNN of 29 April 2008 of the Ministry of Agriculture and Rural Development, focusing on input factors (quality of supply waters and breeds), control during feeding (use of feed, veterinary drugs, chemicals, water changing, etc.), and output factors (treatment of waste water and mud before discharge) for purpose of food safety, disease-freedom and environment protection.
6. Veterinary drugs, chemicals and antibiotics used in aquaculture: the Ministry of Fisheries which had been merged into the Ministry of Agriculture and Rural Development had issued the Decision No.07/2005/QD-BTS of 22 February 2005, which was replaced by the Circular

No. 15/2009/TT-BNN of 17 March 2009 of the Ministry of Agriculture and Rural Development. The Circular No. 15/2009/TT-BNN promulgated the lists of veterinary drugs, chemicals and antibiotics prohibited and restricted from use in fishery production and trading (see Appendices 1-4). These lists fully conform to requirements of Canada, the European Communities and the United States. Farmers are responsible for not using the banned drugs, chemicals and antibiotics and stop using drugs before harvesting in conformity with regulations.

7. Veterinary drugs, chemicals and feeds used in aquaculture must be examined for manufacturing/trade license and requested for testing/field trials before circulation in Viet Nam.

8. The number of tra and basa catfish processing establishments is about 120 (updated at the beginning of 2009); all of them meet food hygiene and safety conditions according to Vietnamese requirements; many of them meet strict requirements of importing countries such as the European Communities and the United States.

9. All fishery processing establishments have been trained on and apply quality and safety management programmes based on HACCP. The results of annual inspections (by the European Communities and the United States) showed that HACCP plans of the establishments were appropriate and effective.

10. The consignments intended for export to Canada, the European Communities and the United States and must be tested at the laboratories of international standard (ISO 17025) before being dispatched.

11. Vietnamese tra and basa catfish have been exported to over 128 countries/territories, including difficult markets such as Australia, Canada, the European Communities, Russia and the United States, which are also the major consumers of Vietnamese tra and basa fish.

II. FOOD HYGIENE AND SAFETY CONTROL IN TRA AND BASA CATFISH PRODUCTION IN VIET NAM

A. ORGANIZATIONAL SYSTEM

1. Central competent authority

12. Vietnamese Competent Authority in charge of food hygiene and safety of fishery products is the National Agro-Forestry-Fisheries Quality Assurance Department (NAFIQAD) under the Ministry of Agriculture and Rural Development, including:

- NAFIQAD Headquarters in Hanoi;
- 02 Regional Agencies in Nha Trang and Hochiminh City;
- 06 NAFIQAD Branches having 06 laboratories which are sufficiently equipped to test for food criteria including micro-biological, chemical and antibiotic residues, and contaminants).

Total staff: 384 (as of 31 January 2009). Professional officials have been trained on food safety control in Viet Nam and foreign countries such as Canada, France, Korea, the Netherlands and the United States.

2. Provincial competent authorities

13. Provincial competent authorities have 789 officials in total (as of 31 January 2009). Annually, provincial competent authorities send their professional officials to training courses on fishery quality and safety control organized by NAFIQAD.

3. Research institutes assisting state management in food safety control

14. Monitoring Centres for Aquaculture environment and Epidemic (under Institutes of Aquaculture Research Nos. 1, 2 and 3) are available.

B. ENVIRONMENT MONITORING RESULTS IN TRA AND BASA FARMING

15. During the recent years, in order to develop sustainable tra and basa farming, the Ministry of Agriculture and Rural Development has carried out surveys and planning of farming areas in accordance with Sector Standards on Tra and Basa farming (No.: 28TCN 192:2004) to ensure food safety and friendly environment.

16. Vietnamese Competent Authorities regularly conduct environment and food safety surveillance in aquaculture areas:

- Since 2004, Monitoring Centres for Aquaculture environment and Epidemic under Research Institutes for Aquaculture have developed the programmes of aquaculture environment monitoring and surveillance in Mekong Delta Zone with frequency of four times a year in its upper, middle and lower reaches. The surveillance results show that water quality index (pH, turbidity, salinity, DO, H₂S, Nitrit) range in the permitted level and meet the water standards for fresh water fish.
- The sanitation monitoring programme for bivalve mollusc production areas has been implemented since 1999. The microbiological testing results (*E. Coli*, Coliform) in bivalve mollusc production areas in lower Mekong show that these production areas are graded at class B and authorized to harvest bivalve molluscs to be processed for export to the European Communities, New Zealand and the United States (harvesting notes and monitoring results are regularly uploaded on website: www.nafiqad.gov.vn). This demonstrates that water in Mekong River has not yet been contaminated with microorganisms.
- The residues monitoring programme for certain harmful substances in aquaculture fish and products thereof has been implemented since 1999 and the results of the programme show that residues of contaminants (heavy metals, pesticides, etc.) are not-detected or detected at the levels lower than the MRLs in tra and basa catfish flesh (Notifications of monthly and annually monitoring results are uploaded on website: www.nafiqad.gov.vn).

17. The above monitoring programmes show that Mekong River has not been micro-biologically nor physicochemically polluted and it is appropriate for aquaculture and fish cultured in Mekong basin comprehensively to meet the food hygiene and safety requirements.

C. HYGIENE AND SAFETY CONTROL OF TRA AND BASA PRODUCTION

1. Control results at aquaculture and post-harvesting stages

18. Local competent authorities in provinces and cities regularly inspect and monitor the use of chemicals, antibiotics and hygiene conditions in Tra and Basa farms. The farms applying sustainable aquaculture models according to GAP, CoC are inspected and certified in conformity with Decision No. 56/2008/QDD-BNN dated 29 April 2008 of the Ministry of Agriculture and Rural Development.

19. To prevent and verify the abuse of antibiotics, chemicals and harmful substances in aquaculture, particularly in Tra and Basa farming, NAFIQAD has been implementing the monitoring programme for certain harmful substances and residues thereof in aquaculture animals since 1999. The results of the programme show that residues of contaminants (heavy metals, pesticides) are not-detected or detected at the levels lower than the MRLs in Tra and Basa catfish flesh (Notifications of monthly and annually monitoring results are uploaded on website: www.nafiqad.gov.vn). This programme has been inspected and recognized by competent authorities of Canada, the European Communities and the United States and regarding the organizational system, legislation and practical control activities.

20. In addition, NAFIQAD has also carried out the Post-Harvest Sanitation Monitoring Program including carrying out inspection of hygiene conditions at primary production units (fishing vessels, fishing ports/landing sites, middlemen); sampling of post-harvested fishery products (including Tra and Basa) for testing and verifying criteria of chemicals, antibiotics, pathogenic microbiology and preservation substances. Violations are strictly treated.

2. Control results at processing stage

21. Fishery processing establishments are enforced to build up and implement HACCP-based quality management programme and risk management (antibiotics, chemical residues, pathogenic microbiology, toxin, etc.) in compliance with Vietnamese requirements (Sector Standards: No. 28 TCN 129:1998 on fishery processing establishments - HACCP-based quality management programme and No. 28 TCN 130:1998 on fishery processing establishments - basic hygiene and food safety conditions).

22. Fishery processing establishments are prohibited to use raw materials without clear origin. Raw materials must be tested for pathogenic microbiology, banned and restricted antibiotics, chemical residues before being processed by establishments.

23. NAFIQAD verifies the effectiveness of the own-check applied by the establishments by carrying out regular inspection and taking samples to test for food safety criteria if necessary, in accordance with Vietnamese regulations (the Decision No. 649/2000/QĐ-BTS dated 4 August 2000 of the Minister of Fisheries, replaced by the Decision No. 117/2008/QĐ-BNN dated 11 December 2008 of the Minister of Agriculture and Rural Development).

24. Under the framework of regular inspections carried out by the competent authorities of Canada, the European Communities, Korea and the United States, etc., the effectiveness of food safety control system in Vietnamese fishery, particularly Tra and Basa processing, have been recognized. Please see the number of Vietnamese fishery processing establishments approved to export their products (including tra and basa) to some importing countries in the Table 1 and the quantity of Tra and Basa exported in 2008 in Table 2.

Table 1 - Number of establishments approved for export, broken down by markets

(as of 20 April 2009)

Markets	Total of approved processing establishments	Approved processing establishments of Tra and Basa
European Communities	300	90
Japan	440	120
United States	438	90
Korea	438	120
China	440	120
Canada	232	86

Source: The National Agro-Forestry-Fisheries Quality Assurance Department

Table 2 - Quantity of Tra and Basa exported in 2008 (by market)

Item	Markets	Quantity (tons)	Item	Markets	Quantity (tons)
I. EC: 224,310 tons					
1	Spain	46,237	14	Denmark	1,370
2	Germany	41,959	15	Bulgaria	1,723
3	Netherlands	33,278	16	Cyprus	844
4	Poland	37,056	17	Latvia	1,226
5	Belgium	14,399	18	Slovenia	575
6	Italy	16,137	19	Austria	394
7	United Kingdom	5,960	20	Slovak Rep.	345
8	France	4,807	21	Hungary	335
9	Portugal	4,372	22	Malta	146
10	Lithuania	4,353	23	Estonia	162
11	Sweden	2,744	24	Finland	33
12	Greece	2,955	25	Ireland	33
13	Czech Republic	2,866	26	Luxembourg	1
II. North America: 32,057 tons					
27	US	24,179	28	Canada	7,878
III. ASEAN: 33,953 tons					
29	Singapore	11,237	33	Cambodia	1,007
30	Thailand	8,163	34	Indonesia	1,004
31	Malaysia	8,584	35	Brunei	679
32	Philippines	3,279			
IV. China and Hong Kong, China: 18,519 tons					
36	Hong Kong, China	16,647	37	China	1,872

Item	Markets	Quantity (tons)	Item	Markets	Quantity (tons)
V. Other markets: 331,988 tons					
38	Russia	118,155	51	Georgia	3,054
39	Ukraine	74,359	52	Israel	2,180
40	Mexico	23,154	53	Dominican Rep.	2,586
41	Egypt	26,630	54	Switzerland	1,717
42	Australia	12,776	55	Kuwait	1,686
43	Saudi Arabia	10,831	56	Syria	1,840
44	United Arab Emirates	10,244	57	Chinese Taipei	2,211
45	Japan	5,217	58	Costa Rica	1,325
46	Jordan	4,419	59	Moldova	1,723
47	Romania	4,929	60	Algeria	1,055
48	Colombia	3,562	61	Croatia	908
49	Lebanon	3,369	62	Bahrain	936
50	Belarus	3,279	63	Oman	856
64	Kazakhstan	950	97	Northern Mariana Islands	42
65	Qatar	538	98	Brazil	42
66	Nigeria	717	99	Cuba	53
67	Guatemala	477	100	Argentina	49
68	Mauritius	329	101	Liechtenstein	74
69	Korea, Rep.	318	102	Libya	55
70	Dominica	457	103	Panama	33
71	Serbia	318	104	Liberia	46
72	South Africa	279	105	Cameroon	48
73	Chile	280	106	Guinea	19
74	Montenegro	321	107	Armenia	50
75	Montserrat	301	108	Polynesia	21
76	Iraq	248	109	Albania	24
77	Other countries of ex-Yugoslavia	217	110	Iran	11
78	Morocco	229	111	Monaco	21
79	Portugal	208	112	Malawi	22
80	Reunion	183	113	New Caledonia	22
81	Puerto Rico	131	114	Cote d'Ivoire	23
82	Honduras	176	115	Afghanistan	23
83	Ireland	151	116	Mozambique	48
84	Peru	123	117	Sierra Leone	23
85	Venezuela	144	118	Suriname	25
86	New Zealand	152	119	Bhutan	22
87	Pakistan	137	120	Kyrgyzstan	25
88	Norway	108	121	Macao, China	8
89	Tunisia	91	122	Mali	15
90	Senegal	95	123	Mauritania	12
91	Guam	103	124	India	10
92	Aruba	59	125	Martinique	8
93	Bahamas	63	126	Ghana	2
94	Azerbaijan	75	127	Antigua and Barbuda	2

Item	Markets	Quantity (tons)	Item	Markets	Quantity (tons)
95	Uruguay	56	128	Maldives	1
96	Former Yugoslav Rep. of Macedonia	74			
TOTAL 640,827					

Source: Viet Nam Association of Seafood Exporters and Producers - VASEP (Source: Viet Nam Customs)

3. Inspection and certification of pre-export fishery consignments

25. In accordance with Vietnamese regulations (Decision No. 118/2008/QĐ-BNN dated 11 December 2008 of the Ministry of Agriculture and Rural Development), the inspection and certification of pre-export fishery consignments are performed in line with requirements of importing countries. In case importing countries do not apply this requirement, the inspection and certification fishery consignments intended for export can be carried out as required by consignor (importer/exporter).

26. To certify a consignment, NAFIQAD Branches need to verify not only production records, but also origin, packaging and labeling of the consignment. The sampling for testing organoleptic, physical and microorganism criteria (*E. Coli*, *Staphylococcus aureus*, *Salmonella*, *Vibrio cholera*) and chemicals residues (Malachite Green, Chloramphenicol, Nitrofurans) are carried as required by importing countries or consignor. The Health Certificate can only be granted to the consignment in case of satisfactory testing results.

27. Since 2002, NAFIQAD laboratories have applied quality management and been accredited with ISO 17025 by Vietnam Bureau of Accreditation (VILAS-BoA), Singapore Accreditation Council (SAC-Singlas) and Norwegian Accreditation (NA). Annually, these laboratories have also participated in international proficiency testing programmes and achieved successful results. NAFIQAD testing capabilities have also been recognized by the European Communities and the United States following their regular inspections carried out in Viet Nam.

28. Up to date, NAFIQAD has signed bilateral cooperation arrangements with certain EC member States, Korea, Russia, China, Canada and Chinese Taipei. These countries have also recognized NAFIQAD competencies on quality and safety control of fish and fishery products. The inspection and certification of fishery consignments intended for export to these countries are carried out in compliance with their requirements.

D. CONCLUSION

29. Quality and safety control of fishery products (including Tra and Basa catfish) in Viet Nam is carried out comprehensively and effectively in the whole production chain from aquaculture to processing and export.

30. The competencies and effectiveness of the Vietnamese Competent Authority in charge of fishery quality control have been approved by competent authorities of importing countries (Canada, China, Korea, the European Communities, the United States and Russia). Vietnamese fishery products (including Tra and Basa catfish) have been exported to over 128 countries/territories and appreciated by foreign consumers.

**LIST OF CHEMICALS AND ANTIBIOTICS BANNED FOR
MANUFACTURING AND TRADING IN AQUACULTURE**

(To enclose the promulgation of this Circular No. 15/2009/TT-BNN dated
17 April 2009 of Head of the Ministry of Agriculture and Rural Development)

No.	Chemicals and antibiotics	Applied for
1	Aristolochia spp and by products	Animal feed, veterinary medicines, chemicals, environmental treatment substances, disinfectants, substances for maintain, hand cream in all breeding facilities, aqua culture and amphibians, processing and storage for fishery services.
2	Chloramphenicol	
3	Chloroform	
4	Chlorpromazine	
5	Colchicine	
6	Dapsone	
7	Dimetridazole	
8	Metronidazole	
9	Nitrofurantoin (including Furazolidone)	
10	Ronidazole	
11	Green Malachite (Malachite)	
12	Iprnidazole	
13	Nitroimidazoles others	
14	Clenbuterol	
15	Diethylstilbestrol (DES)	
16	Glycopeptides	
17	Trichlorfon (Dipterex)	
18	Gentian Violet (Crystal violet)	
19	Fluoroquinolones (banned for manufacturing and trading in aquaculture exporting to the United States and North of America)	

Appendix 2

**LIST OF DRUGS, CHEMICALS AND ANTIBIOTICS BANNED
FOR VETERINARY USES**

(To enclose the promulgation of this Circular No. 15/2009/TT-BNN dated
17 April 2009 of Head of the Ministry of Agriculture and Rural Development)

No.	Chemicals and antibiotics
1	Chloramphenicol (Chloromycetin;Chlornitromycin; Laevomycin,Chlorocid, Leukomycin)
2	Furazolidon and Nitrofurán derivatives (Nitrofurán, Furacillin, Nitrofurazon, Furacin, Nitrofurantoin, Furoxon, Orafuran, Furadonin, Furadantin, Furaltadon, Payzone, Furazolin, Nitrofurmethon, Nitrofuridin, Nitrovin)
3	Dimetridazole (Emtryl)
4	Metronidazole (Trichomonacid, Flagyl, Klion, Avimetronid)
5	Dipterex (Metriphonat, Trichlorphon, Neguvon, Chlorophos,DTHP); DDVP (Dichlorvos; Dichlorovos)
6	Eprofloxacin
7	Ciprofloxacin
8	Ofloxacin
9	Carbadox
10	Olaquidox
11	Bacitracin Zn
12	Tylosin phosphate
13	Green Malachite (Malachite)
14	Gentian Violet (Crystal violet)

**LIST OF CHEMICALS AND ANTIBIOTICS LIMITED FOR MANUFACTURING
AND TRADING IN AQUACULTURE**

(To enclose the promulgation of this Circular No. 15/2009/TT-BNN dated
17 April 2009 of Head of the Ministry of Agriculture and Rural Development)

No.	Chemicals and antibiotics	Max. residues (MRL)(ppb)
1	Amoxicillin	50
2	Ampicillin	50
3	Benzylpenicillin	50
4	Cloxacillin	300
5	Dicloxacillin	300
6	Oxacillin	300
7	Oxolinic Acid	100
8	Colistin	150
9	Cypermethrin	50
10	Deltamethrin	10
11	Diflubenzuron	1000
12	Teflubenzuron	500
13	Emamectin	100
14	Erythromycine	200
15	Tilmicosin	50
16	Tylosin	100
17	Florfenicol	1000
18	Lincomycine	100
19	Neomycine	500
20	Paromomycin	500
21	Spectinomycin	300
22	Chlortetracycline	100
23	Oxytetracycline	100
24	Tetracycline	100
25	Sulfonamide (kinds)	100
26	Trimethoprim	50
27	Ormetoprim	50
28	Tricainemethanesulfonate	15-330
29	Danofloxacin	100
30	Difloxacin	300
31	Enrofloxacin + Ciprofloxacin	100
32	Sarafloxacin	30
33	Flumequine	600

**LIST OF DRUGS, CHEMICALS AND ANTIBIOTICS LIMITED
FOR VETERINARY USES**

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No.	Drugs, chemicals and antibiotics
1	Improvac (no. of registration: PFU-85 by Pfizer Australia Pty Limited)
2	Spiramycin
3	Avoparcin
4	Meticlорpidol
5	Meticlорpidol/Methylbenzoate
6	Amprolium (powder)
7	Amprolium/ethopate
8	Nicarbazin
9	Flavophospholipol
10	Salinomycin
11	Avilamycin
12	Monensin
13	

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