Report of SuPa' first annual meeting of the Steering Committee.

Meeting room of RIA-2 station at Cai Be, Tien Giang, Vietnam, 21-12-2011

Agenda
1/ Opening by the chair en project director Prof Johan Verreth.
2/ Progress of R1: Improving Pangasius Feed, Ms TT Hien & TLC Tu.
3/ Planning and budget requirements for R1 (presentation and discussion).
4/ Progress R2: Improving Pangasius Waste Management, Mr Nguyen Nhut.
5/ Planning and budget requirements for R2 (presentation and discussion).
6/ Visit of the RAS experiments at RIA-2 staion
7/ Progress of R3: Pre-assessment of the Economic Feasibility, WU/LEI.
8/ Planning and budget requirements for R3 (presentation and discussion).
9/ Cost account 2011, Dr Roel Bosma.
10/ Procedures for External Communication.
11/ Other matters.
12/ Closure of the 1st annual meeting.

Participants
1, Dr Arjo Rothuis, Aquaculture office Dutch Ministry
2, Dr Johan Verreth, WU/AFI
3, Dr Roel Bosma, Wageningen University, Netherlands
4, Lê Viễn Chí, Department of Fisheries, MARD
5, Nguyễn Hữu Dũng, Nha Trang University
6, Nguyễn Tử Cương, Fisheries Technology Services Center of Vietnam (FITES)
7, Trần Văn Vỹ, Fisheries Technology Services Center of Vietnam (FITES)
8, Trần Thị Kim Thoa, Fisheries Technology Services Center of Vietnam (FITES)
9, Nguyễn Văn Hảo, Research Institute for Aquaculture No II (RIAII)
10, Nguyễn Nhứt, Research Institute for Aquaculture No II (RIAII)
11, Nguyễn Thanh Phương, Can Tho University
12, Trần Thị Thanh Hiền, Can Tho University
13, Trần Lê Cẩm Tú, Can Tho University
14, Nguyễn Ngô Vi Tâm, Vĩnh Hoàn Company
15, Võ Phú Đức, Vĩnh Hoàn Company
16, Đoàn Nhật Phương, Vĩnh Hoàn Company
17, Đặng Thị Thương, Vĩnh Hoàn Company
18, Đào Thị Thu Hằng, Provimi-Vietnam
19, René Noteborn , De Heus Feeds
20, Dr. Geert Depestele, Marine Harvest
21, Đinh Chí Hiếu, Vĩnh Hoàn Company
22, Phạm Thị Phương Tiến, Vĩnh Hoàn Company
And some staff members from RIA-2 and a student of Can Tho University

8h15 Opening. After his welcome words, Prof. Johan Verreth asked the participants to present themselves shortly. Upon this he gave a short introduction on SuPa objectives, results and measurable objectives, to set the task of this meeting.

Depestele asked if the powerpoints can be send to the participants; Bosma promised to do this.

8h35 Presentation of progress R-1 by miss Cam Tu (CTU/CAF). She presented also partial results of which some raised questions to the participants.

9h05 Discussion and questions:

Mr Duc (Vinh Hoan company) asked if the used feeds are available in the market, and what the relationship of used ingredients with commercial feeds is?

Hien (CTU/CAF) replies that the experiments are set-up to determine the characteristics of the ingredients; once these known a new feed can be composed for compare with the present commercial feeds.

Dr Dung (Nha Trang university; translator) asks of the quality of Kien Giang Fish meal remain the same all year long, and if not what is the consequence for the future.

Verreth and Phuong answer that the basal diet has also some fishmeal, and the goal is the compare fishmeal 4 other sources of protein, not to appreciate the value of this particular fishmeal .

Hao notes that the delay is huge and how if we can catch up or need to ask extension? Part of the delay might be due to the low quality of the fingerlings; Nhut finally got access to fingerlings from the RIA-2 breeding program.

Phuong says that the experiments are behind for about 2 month, but due to the second system CTU can speed up and catch up most of the delay. Delay due to stressful transport and adaptation to tanks; fish was healthy at the nursery. Verreth states that it takes 1.5 to 2 years to learn and manage the system for a new species. Use of a constant genetic source seems important for the interpretation of the results.

Arjo observes a tension between scientific method and the speed of work required in the interest of companies; he advises more frequent interaction between scientist and companies. In his report to Embassy and ministry he will already mention that a budget neutral extension might be needed.

Cuong asks if the results of studies in tanks can be valid for pond conditions.

Phuong answers that one available comparative study shows that performance in the pond is somewhat lower; this could partly be explained by environmental conditions such as: T and DO.

Verreth adds that the difference might come from the difficulty to measure the feed intake in ponds, even when using a good marker.

Depestele: guideline of ASC advices to use MSC certified fishmeal: did you consider this?

Phuong answer that we did not consider this specifically, also because ASC is formally not ready yet; however the amount of fishmeal in pangasius rations is low. Verreth affirms others that ASC in specific is not a topic for SuPa; it is about sustainability.

Nhut thinks that the adaptation period for the feeds is short.

Phuong states that based on 10 years of experience with catfish diet shows that 14 days in small tanks after the 2 to 3 weeks in larger tanks on the basic diet is enough for adaptation.

Verreth advices to buy the fry younger for adaptation to living in tanks.

Hien adds and enforces Phuong's arguments and Dung enforces Nhut and Verreth arguments.

Verreth suggest that Schrama organises a discussion on the experimental set-up and conditions.

9h45: R-1 planning

Upon the question of Verreth, Phuong and Roel confirm that there are no budget constraints, thanks to the in-kind contribution of companies, as well as their promises. The in-kind contributions makes make it also difficult to make a precise planning of budget needs.

Verreth asks when Ms Tu can come to Wageningen? Phuong advices to discuss this in detail later, but anyway the first set of experiments needs to finish.

10h20 Presentation of progress R-2 by Nhut on the RAS pilot system and the monitoring of pond' water and nutrients (N, P and total carbon) budgets, for which he measure evaporation using Boyd's tubular method, seepage using a tube, and sludge using bottom pan+cover method; for nutrient content in the seepage water he uses rhizons. He presents preliminary results of fish performance in the farmer' managed ponds (Vinh long harvest; Dong Thap still growing), and of the budgets. Lay-out of slides is bad.

Verreth and Phuong wonder the tubular method is good enough compared to the pan; other have questions about the . Verreth asks about the reasons for the huge difference in stocking; Nhut: due to availability on market.

Several participants wonder how to explain the huge difference in growth (Dong Thap low): due to feed offer, or disease, are intermediate sampling methods correct? Available data are not final and the farm manager present in the meeting confirmed that disease did not affect fish.

According to Verreth, the large difference in the growth data show that standardisation of on-farm experiments is very difficult ; this might hamper the data interpretation. Hao states that such data were not collected before. Verreth says that number of ponds (2 sites and 2 ponds) is probably too limited given the variation, and the low final weight for one and the low productivity for the other site. Hao thinks there's no need for more farms to understand budgets in the pond system which is the study goal. Cuong thinks it is OK to understand the system but one cannot not say that results are valid for the entire MD.

Depestele asked if the two sites have different owners, feed and management? Nhut affirms and Hao explains the reasons for two sites; Budget limitations did not allow to increase numbers.

Cuong asked if the farms are comparable and typical? Hao and Nhut confirms that farms are representative for MD, though indeed the farms are not small, this is not an issue for the present monitoring .

Concerning the Carbon budget, Dung asks if he considered the phytoplankton in the system. Nhut says he did but that the content remains very small.

As the presented data on water and nutrient budgets are preliminary it is hard to draw conclusion, however the low organic matter content in the sludge (2-5%) confirms the experts' observation.

Duc wonders if standards in water quality for N, P and OM are available and if results are comparable? According to Nhut there are standards but it is not sure yet if the values are within the ranges. Cuong states that there are 2 standards : one on water quality for aquaculture issued by government and one for effluent issued by ministry of environment!

Verreth wonders, that when OM in sludge is low, pumping out sludge is perhaps not so important for water quality. Hao states that frequent removal of the sludge might have affected these results, also given the sampling method that does not seem to capture all sludge. Nhut suggest that in the water layer above the sludge, nutrients and OM are also processed/fermented already!

Nhut confirms that in both the RAS and flow-through DO is close to saturation; in the RAS due to the trickling filter. The source of fingerlings might have influenced growth and survival positively.

Verreth: your experiments shows that pangasius in tanks can grow well and perhaps even faster than in ponds, but this might be due to the genetic source, if the selection was for growth. Audience was not certain about the better growth of the fingering compared to ponds)

Cuong wonders if result would be usable in farmer practice in the future as the fish source is genetic improved stock? Hao says that the genetic improved stock is being distributed to hatcheries and that farmers can use it in the future. Fish was selected for growth and filet characteristics; the fact that the fish grow well in tanks is promising. The genetic source was not the goal, but these fish were used because they were close to the tanks which prevents damage during transport.

Cuong does not think that genetic selection can be important for pangasius. Verreth says that experience of pig and poultry show the difference and the farmers acceptance.

Arjo asks why experiments in RAS already started if there's no good data to make a choice for a RAS. Bosma reports that after the first indication was that density of nutrients and OM in effluent water was too low for struvite and biogas production it was decided to do these tests to be able to see if these can be produced from effluents from RAS. The RAS was funded and to be built already by another project.

Cuong wonders how combining R-1 and R2 can be tested? Hao states that this is planned in year 3. Verreth adds that in the second half of 2012 we can start the testing the new feed in the experimental RAS systems.

12h00 Planning: Analysis and interpretation of monitoring data when dataset complete; RAS experiments until May 2012 followed by calculations of the feasibility of struvite production. Design and upscale to pilot scale can start after August 2012, somewhat later than planned.

Nhut wonders who is responsible for the oxygen research.

Roel explains (once more) that RIA-2 is responsible for the entire R-2; a reservation in the budget for a scientist of CTU/CAF was added as they have experience with set-up and analysis of oxygen experiments as was written in the project proposal; RIA-2 should not hesitate to use this know-how whenever they need it! Verreth confirms this and asks the partners to collaborate closely.

Tam advises Nhut to do the data interpretation together with the farm managers!

Cuong: proposes technical meetings on R-1, R-2 and R-3 separately. Verreth: good idea, but perhaps use video conferencing because organising meetings is costly.

The budget availability for analysis of Total Carbon in water was not clear to RIA-2. Bosma says that budget is not a restriction because the contribution of the companies are available but not mentioned in the budgets of the companies. Hao requests that Marc Verdegem comes to Vietnam to assist in data interpretation. Verreth thinks that thesis students might help Nhut and that Nhut better comes to Wageningen for a month. (In the evening Hao and Verreth have concluded on this issue.)

Before closing the morning session Verreth welcomes Dr Vinh from MARD' department of aquaculture & fisheries.

13h30 After lunch Mr Nhut showed the experimental facilities: 6 small RAS and 3 small flow through systems, each of about 1 m3 in which the fish performed well and were swimming actively. The flow-troughs used 5m3 of water per day and the RAS about 20 litre!

14h00 For R-3, Bosma presented the activities of year 1 (including a drawing of the floating in-pond RAS) and the results of the calculations by LEI staff.

Verreth asks if the participants think the values given to the success factors are realistic.

Mr Duc thinks the estimated 25% higher yield is overestimated; Vinh Hoan did not succeed RAS with baramundi! Dr Hao states that the baramundi failure can be explained and Verreth adds that for other catfish species it took some years but productivity of African catfish is indeed much higher in RAS. Higher densities, higher growth rates and FCR below one are no exceptions.

According to Dr Hao one of the risks of the RAS is the red flesh. Bosma replies that one suspected cause is the lack of water current in ponds: the RAS systems will induce more current than in present ponds.

According to Ms Tam the taste is also an important issue. Bosma suggest that Nhut organises taste panels. She adds that an improved filet recovery rate might incite processors to pay a better price; at present this rate is 35% only. Verreth thinks that there is definitely room for improvement.

Dr Vinh thinks the improvement of the FCR is optimistic though also the starting point is higher than achieved at present. Verreth states that experience showed that getting a FCR <1.2 is easy, but cost might increase.

Considering the cost and the volume, some experts suggest that RAS might be an interesting options to reduce the mortality in the nursing phases. The cost and benefits of the floating RAS including its options to produce struvite or biogas should studied by experiments but these can start but after the experiments of Nhut.

Arjo wonders if the Internal Rate of Return might be a better indicator than Net Profit as was presented. He insists that the margin is limited and moreover the companies confirm that 10% extra for certified fish is optimistic. Verreth explains that the PhD economics is intended to study the options to distribute the cost of sustainability over the value chain. Rothuis agrees that many variables are unknown and advises to consider designing and testing the floating RAS after the laboratory scale tests of the RAS are concluded.

The partners agree not to communicate on the preliminary results of the R-3' CBA outside of the meeting as the results are based on assumptions with too much uncertainty. The two guests of RIA-2 and CTU are requested to align on this issue.

14h45 Planning of activities and budget of R-3.

The PhD economics, to be recruited in 2012, can start with funding from the company's contributions (especially since Queens doubled its contribution in April), if a WU or NFP scholarship isn not acquired in 2012 but later. The representative from EL&I hopes that the project does not forget that at the end

of year 3 a conclusion should be available and this could conflict with a PhD and this is unacceptable. A PhD study of the value chain might reduce cost while increasing outcomes, but planning should consider project priorities; this is also valid for the following.

The partners have no objection against the proposition of UGent to associate to SuPa a PhD with a full scholarship of UGent to do an exergetic LCA. This implies that the partners accept the request of UGent to become a consortium member.

Verreth asks where the research cost will be funded from if these are not in the scholarship. Depestele confirms that there are no intentions to reduce the contribution to the present SuPa activities. However it would be much easier to defend the maintenance or better an increase of the company' contribution if SuPa publishes a newsletter 2 to 4 times a year or had a website that is maintained up to date.

Upon the question of Verreth "What is the impression of the participants on the feasibility of data collection by the PhD economics and LCA?" in other words "Can the companies open their books to these students?", the partners confirm the availability of data for both these PhDs at their level, as far as this does not damage the companies interest.

15h30 Financial report

After the detailed presentation of Roel, during which he expresses his regret that the written material did mention only the risk of overspending for the national coordinator and not yet for the Dutch side, the strategy to prevent overspending is discussed. According to Cuong the coordinators should meet on this point.

Finally Roel adds that the expenditures for R-2 seem low but there were huge contributions from the MARD funded project and from the project RASc2c. For this RASc2c project the investment needs partly to be done by the three institutes as their 'own contribution'. This can partly be done in–kind but the expert mission of Eding and Prins were more important for SuPa; the 'own contribution' would weigh too heavy on the budgets of RIA-2 and CTU, if finally the in-kind is too low. Hao and Phuong might have forgotten, that's why Roel brings it forward. Verreth proposes to charge this support to SuPa to which no objection was expressed.

16h00. Procedures for External Communication (EC), i.e. Public Relations (PR), in other words how to act towards the media on this sensitive issue. Roel adds that SuPa' Consortium Agreement defined a policy on the publication of scientific and extension results, but has no section on EC desired by the companies.

Verreth suggest a tierce option can be considered: every one of us can talk on the SuPa goals and the topics of study; for other questions one should refer the interested people to the National Coordinator when in Vietnamese and to the Dutch director or manager when in English.

Cuong insists on the risks and proposes that at forehand all partners should meet to agree on what is public. Verreth finds this last is complex and will be too costly.

Depestele says that experience of companies shows that a policy of one spokesmen works best.

Hao and Phuong add that on the respective technical issues they feel competent and enough aware of the Vietnamese policy to speak on these issues suggest at least 4 spokesmen.

Verreth insists that notwithstanding agreements on what is public the journalists can misinterpret information given by the spokesmen. Therefor publishing what is public is the best option.

Depestele states, and other contributing partners affirm, that it is important that the project shows that something is done to improve sustainability of pangasius production, even if there are no hard results yet. This can be done either through a website or a newsletter. Confidential data might be made available on a protected share-point. Within the project we can design a SuPa logo.

Vy says we could publish the newsletter in the pangasius journal from VINAFISH.

It is concluded that the coordination will write a policy note on this issue as soon as possible.

16h45 Other matters. Professor Verreth gave the opportunity to each of the participants to provide a last comment or ask a last question.

Dr Cuong agrees with the establishment of protocol for EC and he will send the VN government regulation on this matter.

Dr Hao said that the second year is crucial for the project results and wished the team good work and results. He supported the idea of using Video Conferencing (VC) more frequently; RIA-2 has one also now.

Dr Phuong wished Johan Schrama to come to CTU/CAF to support Tu on the spot.

Depestele stated that over 220,000 people make a living from fish produced on 6000 ha only; these people should not be left to the hazard of sensation looking journalist and NGOs, we should let the public know that we are on the good track, and he hopes that the newsletter become a reality.

Arjo stated that the worries he expressed in the morning are taking into account by the proposal of the scientific partners to interact more frequently by VC; he hopes that the scientist discuss more often with the companies and their technicians.

Verreth expressed the feeling that the contribution and involvement of the companies and partners was inspiring. The consortium is an the way to create a centre of excellence on pangasius by integrating also UGent. New issues will emerge such as breeding, nursery and juvenile production; RAS for out-growing is perhaps a bridge too far but for the nursery, during which 50 to 80% of mortality occurs, it might bring important progress. He concluded that we should make a master plan for the needs of the sector development that we can present to our governments and to the media by the end of 2012.

He thanked the participants for coming and for their active contributing to this 1st AM, saying that the next meeting will be planned in November, and inviting the participants for a dinner in Vinh Long. Upon this he closed the meeting.

Bosma RH