# FRAMEWORK FOR A CORPORATE STRATEGY


**Hector Kobbekaduwa Agrarian Research and Training Institute**
**No. 114 Wijerama Mawatha Colombo 07**
**November 2021**

# FOREWARD

The Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI), formerly simply the Agrarian Research and Training Institute or ARTI, will be celebrating its 50th anniversary soon. Half a century is a long time and such a landmark moment in the institution's history lends itself for reflection, for review and, if necessary, course correction. This exercise, i.e. the formulation of a corporate strategy for HARTI, was prompted in part by historic moment but more so in view of vast and rapid changes that have taken place over the past decade or so. Such exercises have been initiated on several occasions under direction from the Board of Governors but for numerous reasons haven't been implemented. This time, however, I am confident that the Board of Governors will have the fullest support of the Institute's staff in implementing the proposed re-positioning.

The process was initiated in March 2021 and consisted of a series of discussions with all categories of staff. The contribution of the research community was invaluable and their views have played an important and indeed major role in designing this corporate strategy. In particular, the trends and emphases in agrarian studies, the changing Sri Lankan reality in terms of policy preference and issues related to implementation were considered. These were of course framed by the mandate of the Institution as evident in the legislation. What have become routine practices were also reviewed. The new architecture of research and training, I believe, addresses well the operational flaws and constitute a solid organizational foundation for the development of the Institute.

I wish to thank in particular Mr Arjuna Seneviratne who spend countless and tireless hours in long and deep conversations with all categories of staff. He expended much effort to propose a reorganization that does justice to the mandated functions of the Institution. All this, free of charge.

The research and training community of the Institute was also heavily invested in this exercise. In addition to sharing their experience, views and proposals, they took the time to review and comment on several iterations of this document. The senior officers of the administrative staff also contributed, especially in ensuring that relevant rules, regulations and other protocols were affirmed.

I am confident that the Institute will greatly benefit and its contribution to both policy advocacy and communicating research findings to the general public will become more streamlined and effective once this strategy is fully operational.

Malinda Seneviratne
Director/Chief Executive Officer

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# INTRODUCTION

With the advent of the green revolution in the 1960s and the influx of emerging technologies, cultivars, species and varieties and the explosion of market economics, it was considered critical to establish a strong research facility to proactively present both the government and the public evidence based information on emergent agrarian issues pertaining to sociologic and economic realities in the agrarian sector. It was in response to this need that the **Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI)** was established under Parliament Act Number 05 of 1972 as a statutory body under the Ministry of Agriculture and is presently one of the key organizations researching into socioeconomics and analyzing policy in the agrarian sector.

Technically, both agriculture and fisheries sectors fall under the agrarian umbrella. However, with respect to HARTI, its mandate as outlined in the act indicates a changed scope focusing on the socioeconomics of agriculture and its impact on rural development. It forms part of a portfolio of national research agencies in the agriculture and fisheries sector that include the rice/rubber/tea research institutes, horticulture research, aquatic research and livestock research. However, at present, it is the only agency exclusively tasked through its mandate to inquire into agrarian aspects of socioeconomics and rural development.

In that capacity, over its almost 50-year history, it has played a substantive role in providing state, private and civil stakeholders and researchers as well as the general public with high quality data and information in its focus areas. With the livelihoods of almost 45% of Sri Lanka households being in the agrarian sector with 2.1 million households currently engaged in agriculture while another 150,000 families are engaged in fisheries the mission of HARTI has never been more critical than it is now.

However, over the last decade, the HARTI has found itself in resistive conditions vis-à-vis aligning and harmonizing itself with rapidly changing and fluxing global and local agrarian realities as the world battles crises in food, climate, health and finance due to both internal and external dependencies, dynamics and torques. A possibly outdated and outmoded mandate which was created during a closed economy but has persisted through an open economy and now possibly a circular economy, emerging technologies and a volatile technological landscape, international crisis response covenants and expansion of the scope and changes in the practicalities of engaging in agrarian research have all contributed in greater or lesser degree to reduce both the impact and the relevance of the HARTI's primary outputs.

At a time when a crisis ridden world it increasingly relying on own-resources over international trade, where nations must secure their food supply within its own boundaries, where citizens are being called upon to contribute to food production, the work of a national research agency such as the HARTI must become increasingly more valuable and its outputs increasingly more useful and useable as a matter of national security itself. It is therefore, mission critical to the future of agrarian research specifically, and, agricultural academics generally, to reimagine the mandate of the HARTI and reengineer its institutional positioning, its capacities and capabilities and its mechanism to futureproof itself and its contribution to the nation since Sri Lanka must increasingly rely on itself to "pull itself up by its own bootstraps" and this brief outlines some of the framework considerations feeding into a more comprehensive corporate strategy for the institute.

## INSTITUTIONAL MANDATE

The Agrarian Research and Training Institute Act No. 5 of 1972 governs the institutes strategies and activities. As such, due note is taken of the fact that despite widespread changes in the agrarian landscape of the world and the country, the mandate has remained "as is" and therefore, may not always be relevant, contextual or clearly drive the purposes for which the institute was established. The mandate according to the act is as follows:

a. Foster, assist, encourage and co-operate in agrarian research

b. Coordinate agrarian research undertaken by Government departments, local authorities, public Corporations and other institutions

c. Undertake investigations, research and studies relating to economic use of land for agricultural purposes

d. Carry out socio-economic research relating to agricultural and rural development

e. Provide or implement training facilities and programs relating to agrarian research, either alone or in association with other institutions in Sri Lanka or abroad and to award diplomas, degrees, prizes and distinctions in connection therewith

f. Sponsor and hold conferences and seminars, and publish journals and magazines in connection with agrarian research and training

g. Carry out such research relating to problems of agrarian structure in co-operation with Asian countries in order to serve their regional needs and provide a center for the collection and dissemination of information on agrarian problems

h. Relate such research to problems connected with agrarian development and modernization with special reference to Sri Lanka and other Asian countries in general

# KEY CONSIDERATIONS

## 1 ALIGN WITH NATIONAL PRIORITIES

**In line with the general trends in policy directions related to agriculture, the HARTI must reimagine its research foci to ensure island/nation level impact and focus on technology based agricultural practices, multiple approaches to farming (i.e. natural, chemical and combinations thereof), improved value-chain management, minimizing food miles and optimizing the nutrient-to-cost equation for both the supply and demand sides.**

## 2 ALIGN WITH INTERNATIONAL COVENANTS

**Sri Lanka is a signatory to the three 2015 conventions on the Sustainable Development Goals (UNDP-SDGs), the legally binding Paris Agreement on Climate Change (UNFCCC) and the Sendai Framework (UNDRR). All of these impact agrarian policy and practice and the HARTI must strongly consider aligning its research to focus on priority areas of these legally or morally binding covenants to which Sri Lanka is a signatory.**

## 3 PRIORITIZE STRATEGY THAT WILL REDUCE OR REMOVE DEPENDENCE ON THE TREASURY

**With the country struggling with debt repayment, reduced fiscal stability arising from external dependencies such as the global COVID19 crisis and overall global and local economic downturn, the HARTI must strive to save money for the nation by leveraging its name and its capabilities to leverage research finance from external sources and must pay as much attention to fund sourcing as it does to research activities.**

## 4 ESTABLISH THE GROUNDWORK TO ENABLE THE INSTITUTE TO UPGRADE TO A RESEARCH CENTRIC UNIVERSITY

**While almost all general-purpose universities in Sri Lanka carry an agriculture department, the sheer importance of this area has never been fully recognized with a university dedicated to all aspects of agriculture.**

**While the HARTI has been almost exclusively focused on research, its mandate also includes education and training. As such, there is an organic rationale for exploring the possibilities of creating a research heavy agriculture and agrarian development university. Such a strategy would necessitate the establishment of significantly strong and trusted links with external research and academic institutes both locally and internationally and have the added advantage of enabling permanent, seconded or temporary research personnel to improve their research and instructional skills and create an R&D hub that overarches all agrarian related research facilities and academic institutions in Sri Lanka that can optimize mutual corporations and provide the country with a sector cadre that is skilled, capable and enabled to positively impact Sri**

## 5 ESPOUSE RESEARCH APPROACHES AND TRENDS TO ENCOMPASS EMERGING TRENDS

**Experimental, micro-area related linear research that was highlighted during the industrial age has proved to be either comparatively unimportant or temporally limited in impact potential and therefore, that era is rapidly coming to a close as the world espouses multidisciplinary, holistic and macro-impact foundation type research as it transits to the age of sustainability.**

**As the world transmogrifies into crisis-solving mode it has already recognized the debilitating weaknesses of conventional scientific methodologies and is rapidly changing its stance on what constitutes proof based increasingly on the ability of a piece of knowledge to provide a practical solution to a given problem. This approach dramatically increases the sum total of channels considered to be valid and commences with the observation that "the proof of a pie is not in understanding its constituent components or how they came together to produce a pie but rather – in its eating". It also assumes significant creativity in the actual process of solving problems and is perhaps not as driven by the method of research applied if that method has now become the god and not the actual goal.**

**Given that change in approach, while most of the current crop of HARTI researchers were proponents of the former system, they must commence the necessary albeit arduous task of innovation in research methodology and factoring such fuzzy areas of knowledge acquisition such as accessing and recognizing citizen science, optimizing the leveraging of cultural knowledge and knowhow and leveraging indigenous sciences to maximize both the quality of the output of their research exercise but also vastly improve its durability, credibility and practicality.**

# CURRENT SITUATION – ORGANIZATIONAL ADMINISTRATIVE STRUCTURE

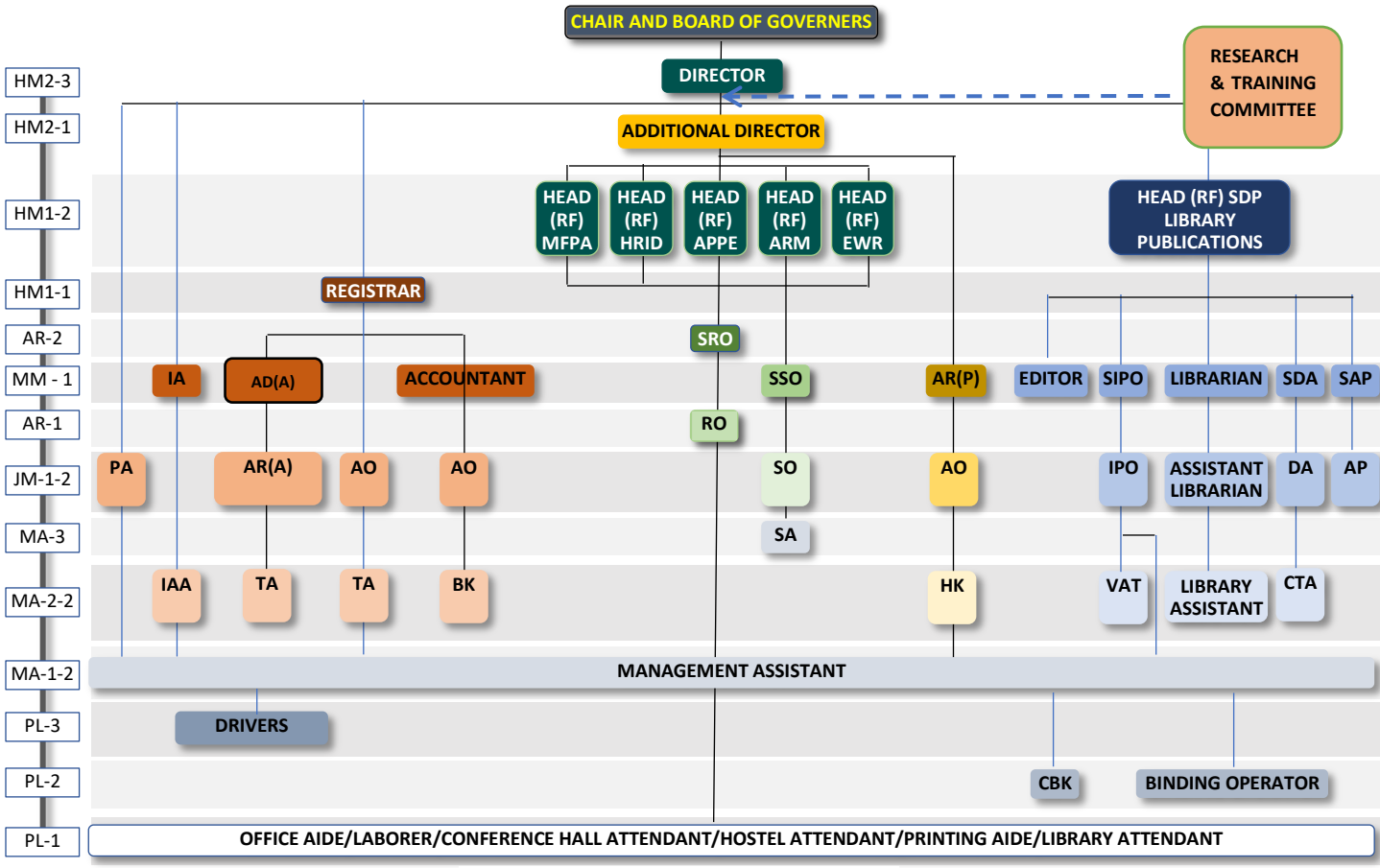



**DIAGRAM 01 – ORGANIZATION CHART**

| DIAGRAM 1 – ORGANIZATION CHART – ABBREVIATIONS TABLE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 01. | Director | 01 | 17. | Librarian | 01 | 33. | **TA:** Technical Assistant | 02 |
| 02. | Additional Director | 01 | 18. | **SDA:** Senior Data Analyst | 01 | 34. | **VAT:** Visual Aids Technician | 02 |
| 03. | Registrar | 01 | 19. | **SAP:** Senior Analyst Programmer | 01 | 35. | **BK:** Bookkeeper | 01 |
| 04. | **Head/RF** Research Fellow, **MFPA**: Marketing Food Policy | 01 | 20. | **RO:** Research Officer | 24 | 36. | **HK:** Housekeeper | 01 |
| 05. | **Head/RD HRID:** Human Resources and Institutional Development | 01 | 21. | **PA:** Personal Assistant to the Director | 01 | 37. | **CTA:** Computer Technology Assistant | 01 |
| 06. | **Head/RF APPE:** Agriculture Policy and Project Evaluation | 01 | 22. | **AR(A):** Assistant Registrar (Administration) | 01 | 38. | Library Assistant | 02 |
| 07. | **Head/RF ARM:** Agricultural Resource Management | 01 | 23. | **AO:** Accounts Officer | 01 | 39. | Management Assistant | 54 |
| 08. | **Head/RF EWRM:** Environment and Water Resources Management | 01 | 24. | **AO:** Administrative Officer | 02 | 40. | Drivers | 18 |
| 09. | SRO: Senior Research Officer | 19 | 25. | **SO:** Statistical Officer | 12 | 41. | **CBK:** Circuit Bungalow Keeper | 01 |
| 10. | IA: Internal Auditor | 01 | 26. | **IPO:** Information and Publications Officer | 04 | 42. | Binding Operator | 01 |
| 11. | **Asst. Dir. (Admin):** Assistant Director (Administration) | (01) | 27. | Assistant Librarian | 01 | 43. | Office Aide | 33 |
| 12. | Accountant | 02 | 28. | **DA:** Data Analyst | 02 | | Laborer | |
| 13. | SSO: Senior Statistical Officer | 01 | 29. | **AP:** Analyst Programmer | 01 | | Conference Hall Attendant | |
| 14. | Editor | 02 | 30. | **SA:** Statistical Assistant | 30 | | Hostel Attendant | |
| 15. | AR(P): Assistant Registrar (Programs) | 01 | 31. | **IAA:** Internal Audit Assistant | 01 | | Printing Aide | |
| 16. | SIPO: Senior Information and Publications Officer | 01 | 32. | **TA:** Transport Assistant | 01 | | Library Attendant | |
| **TOTAL CADRE POSITIONS: 235** | | | | | | | | |

# CURRENT SITUATION - SWOT

| HARTI SWOT | HELPFUL<br>To achieving the objectives | HARMFUL<br>To achieving the objectives |
|---|---|---|
| INTERNAL FACTORS | **STRENGTHS**<br>▪ State agency with highest-level representation from line ministries on BoG<br>▪ High institutional credibility as a research agency<br>▪ Excellent physical infrastructural assets<br>▪ A multidisciplinary research team capable of significantly and quickly improving its own skills and abilities<br>▪ Strong adherence to government recruitment process in terms of the research team<br>▪ Good quality assurance process for research outputs<br>▪ Guaranteed instream of state funds | **WEAKNESSES**<br>**Financial**<br>▪ Overdependence on state funds<br>▪ Lack of a sustainable mechanism for leveraging international funds<br>▪ Lack of sufficient reward against performance for researchers<br>▪ No allocation of funds for international publications<br>▪ Limited funding for international participation in research confabs<br>▪ Widely disparate forecast against actuals of budgets for research<br>**Infrastructural**<br>▪ Sub-optimal utilization of extraordinarily well located premises<br>**Organizational identity, governance, administration, management**<br>▪ Lack of strong direction from governance elements<br>▪ Possible gaps in internal engagement in research and training processes<br>▪ Lack of a strong organizational identity yielding ad-hoc changes in research direction<br>▪ Incoherent departmental structure<br>▪ Outdated / outmoded mandate<br>▪ Underutilization of physical assets<br>▪ Relationship with international research partners weakened<br>▪ Relationship with relevant UN organizations weakened<br>▪ High levels of attrition among statistical staff<br>▪ Lack of sufficiently strong performance evaluation measures<br>▪ Weak espousal of expanded research mechanisms and knowledge avenues<br>▪ Lack of research team observer on the Board<br>▪ Lack of a sufficiently strong soft-skills development program<br>▪ Logistics issues related to the engagement of all levels of staff<br>**Research**<br>▪ Local interagency cooperation between research institutes low<br>▪ Lack of will and/or capability to engage in collaborative, multidisciplinary, macro and meta studies<br>▪ Lack of analytical tools<br>▪ Lack of a mentoring program<br>▪ Lack of a strong capacity development program<br>▪ Lack of sufficient focus on rural development<br>▪ Lack of sufficient recognition of global trends in sustainability, environment and disaster<br>▪ Weaknesses in optimizing research findings for various consumers<br>**Academic**<br>▪ Lack of strong teaching capabilities or credentials<br>▪ No comprehensive ET&A mechanism<br>**Information, communications and marketing**<br>▪ Weak utilization of emerging technological trends / tools for information processing<br>▪ Lack of attention to archiving and library functions<br>▪ Woeful lack of communications methods for sharing research outcome in optimized form<br>▪ Significant lack of the use of emerging media findings |
| EXTERNAL FACTORS | **OPPORTUNITIES**<br>▪ Research aligned and harmonized with global trends in development and crisis management can make HARTI more socioeconomically relevant<br>▪ Leverage institutional credibility to obtain significant international research funding<br>▪ May contribute significantly to improving the policy and plan implementation of the government in the agrarian sector<br>▪ Can be the trusted source of quality agrarian information through optimized data quality, massively reduced response times and improved public engagement<br>▪ Research team's capacities increased through international exchange programs<br>▪ Can become a research centric agricultural university by significantly improving its allocation of financial capital for education | **THREATS**<br>▪ Significant negative socioeconomic downturn due to prevailing health crisis affecting all sectors<br>▪ Doubt as to the stability of political direction and will<br>▪ Possible negative public and state perceptions of the work of the institute<br>▪ Danger of irrelevance if research exercises are not aligned with global trends<br>▪ Lack of a durable mid-term research strategy and affirmative advocacy to persist with those strategies<br>▪ Lack of internal cohesion among the various researchers and research exercises |

**TABLE 01 - SWOT**


**DIAGRAM 02 – VUCA**

The PESTLE framework tool above, applied to HARTI informs management on information useful to analyze and monitor the macro-level scenarios or research/engagement/business environment and external dependencies that can have a significant impact on the organization, its day-to-day management decision making and its forecasts, strategies and plans. These factors were used to identify threats and weaknesses in the SWOT analysis given above. Here, the SWOT and PESTLE provide an indication of the volatility, uncertainty, ambiguity and complexity of the operating environment where

a) Volatility is relatively unstable change where the challenge is unexpected and may be of unknown duration, but it is not necessarily hard to understand; knowledge about it is often available,
b) Uncertainty is lack of knowledge. Nevertheless, the situation's basic causes and effects are known,
c) Ambiguity arises when the management cannot know what they do not know,
d) Complexity is where the causal relationships are entirely unclear, no precedents exist and the management faces “unknown unknows”.

Scoring the dynamics of externals that influence an organization is comparatively complex. However, for the purpose of this exercise, the experience of the operator is used to determine the various values. In those terms, the following key is used:

| SCORING RANGE | ASSESSMENT |
|---|---|
| | |
| 0-2 | The impact of the parameter is negligible |
| 3-5 | The impact of the parameter is marginal |
| 6-8 | The impact of the parameter is considerable |
| 9-10 | The impact of the parameter is significant |

Volatility, Uncertainty, Complexity and Ambiguity (VUCA) of operating environment

**TABLE 2: VUCA ESTIMATES (SCORING OUT OF 10 FOR EACH PARAMETER)**

| ARENA | ISSUE | CHARACTERISTIC | | | |
|---|---|---|---|---|---|
| | | V | U | C | A |
| POLITICAL | | | | | |
| | Political stability | 3 | 3 | 0 | 0 |
| | Quality and continuity of leadership | 7 | 9 | 0 | 0 |
| | % score against absolute values | 50% | 60% | 0% | 0% |
| ECONOMICAL | | | | | |
| | Local and global economic downturn | 9 | 9 | 3 | 5 |
| | Shift to circular economy | 3 | 9 | 3 | 5 |
| | % score against absolute values | 60% | 90% | 30 | 50% |
| SOCIAL | | | | | |
| | Global health crisis | 9 | 9 | 3 | 3 |
| | Global food crisis (indirect) | 3 | 3 | 7 | 7 |
| | Citizen rethink of agricultural engagement | 6 | 6 | 0 | 0 |
| | % score against absolute values | 60% | 60% | 33% | 33% |
| TECHNOLOGICAL | | | | | |
| | Rapid changes in technology use in agri-research | 0 | 0 | 7 | 3 |
| | Rapid changes in technology use in agriculture | 0 | 0 | 5 | 5 |
| | % score against absolute values | 0% | 0% | 60% | 40% |
| LEGAL | | | | | |
| | Change of mandate | 0 | 9 | 9 | 0 |
| | % score against absolute values | 0% | 45% | 45% | 0% |
| ENVIRONMENTAL | | | | | |
| | Trends in ecological sensitivity | 3 | 7 | 7 | 7 |
| | Environment crisis (indirect) | 0 | 0 | 9 | 9 |
| | Adherence to global covenants | 0 | 0 | 9 | 9 |
| | Expansion of research approach and scope | 0 | 9 | 9 | 9 |
| | % score against absolute values | 7.5% | 40% | 90% | 90% |

Complexity and Ambiguity of the operating environment is primarily driven by dynamics created through technology intrusion into research methodologies and agrarian practice and the requirement to reimagine the entire process of doing research with a result oriented approach over "research for the sake of research" which may encompass many channels of knowledge acquisition and many ways of positively impacting the policy thinking of lawmakers. In that respect, the environment and food crises indirectly albeit significantly impact these parameters but more as a knock-on effect on research based on their direct impact on agriculture.

Volatility and Uncertainty of the operating environment have manifold dependencies of which the present process of appointing the leader of the institute, requirements for mandate change, the global health crisis, ecological trends and rapidly changing economic scenarios play the most important roles.

Overall, significant innovation, increased structural and response efficiency, strong communication, wider and deeper awareness/knowledge/skill sets maybe required at a foundation level to at the very least mitigate the impact of some of these externals.

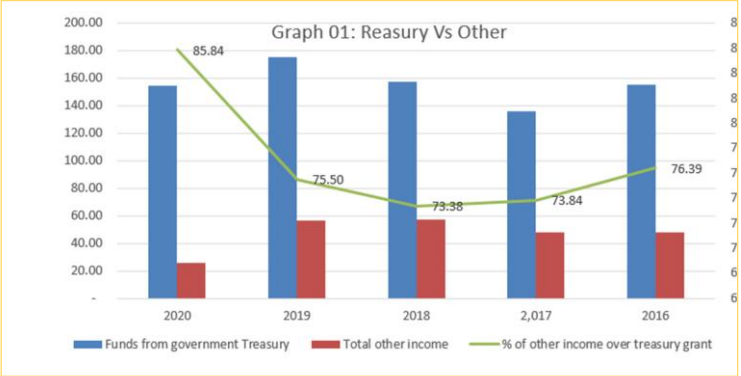
# CURRENT SITUATION – KEY FISCAL CONSIDERATIONS

## 1 OVERDEPENDENCE ON THE TREASURY

Over the last five year (2016-2020), the institute is observed to be highly dependent on yearly treasury grants with between 73.38% (2018) to 85.84% (2020) arriving from that source. Understanding that 2020 was a special year with the Easter attacks and later, COVI19, it still indicates that 3/4ths of all funds are from the state coffers. Given the current fiscal crisis that the government faces, this may need to be rectified as

**TABLE 3: Key income (LKR '000,000)**

| | 2020 | 2019 | 2018 | 2,017 | 2016 |
|---|---|---|---|---|---|
| Government Treasury | 154.74 | 175.00 | 157.73 | 135.82 | 155.20 |
| Other income | 25.53 | 56.79 | 57.21 | 48.13 | 47.97 |

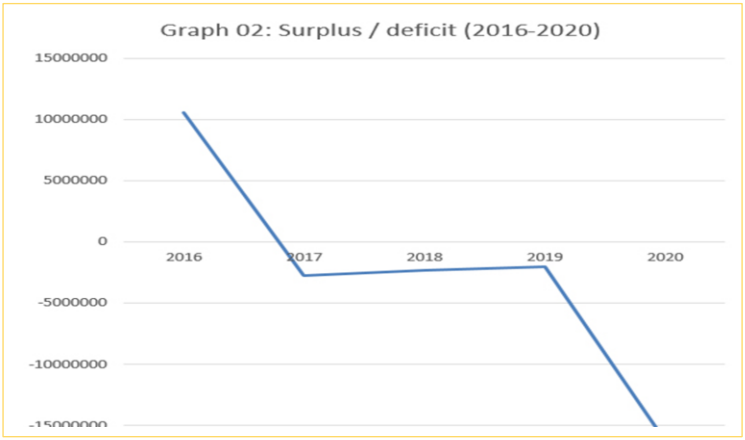



## 2 SIGNIFICANT FISCAL DEFICIT

During the last five years, 2016 was the only year in which there was a surplus. During the next three years (2017-2019) there was a deficit ranging between approximately 2.1 million (2019) and 2.7 million (2017). The year 2020 saw the deficit plunges to 16.2 million rendering the financial situation of the institute tenuous. Again, therefore, strong strategies for increasing income are indicated by the trend.

**TABLE 4: Surplus / Deficit (LKR '000,000)**

| | 2020 | 2019 | 2018 | 2,017 | 2016 |
|---|---|---|---|---|---|
| Surplus/Deficit | (16.20) | (2.06) | (2.3) | (2.73) | 10.54 |

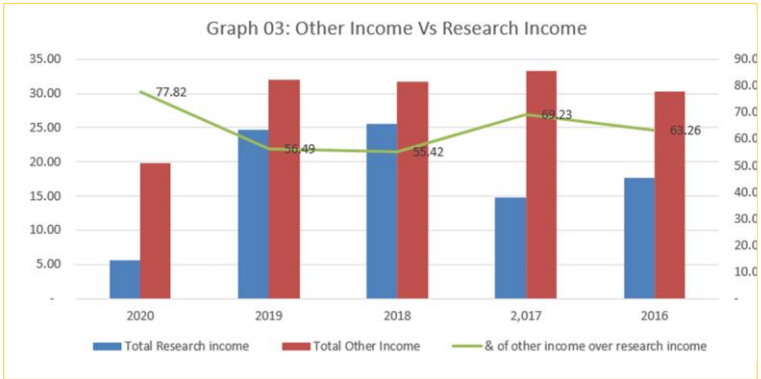



## 3 INCOME FROM FACILITIES PERFORM BETER THAN INCOME FROM RESEARCH

While research is not a wholly profit making exercise, the over dependence on the treasure seems to indicate complacency with respect to searching for external research grants or for-profit research projects. This is indicated in the fact that the hiring of the institute's conference and hostel facilities perform substantially better in terms of income generation.

**TABLE 5: Research income over Other Income (LKR '000,000)**

| | 2020 | 2019 | 2018 | 2,017 | 2016 |
|---|---|---|---|---|---|
| Total Research income | 5.66 | 24.71 | 25.50 | 14.81 | 17.62 |
| Total Other Income | 19.86 | 32.08 | 31.71 | 33.32 | 30.34 |



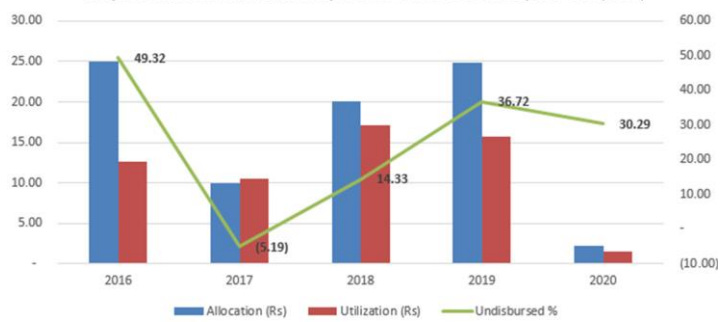
### 4 DISPARITY BETWEEN RESEARCH BUDGET ALLOCATIONS AND DISBURSEMENTS

The yearly requested funds for research is observed to be significantly over budgeted with the undisbursed percentage of such allocations beings greater than 14% in one to as much as 49% in another. Just one year (2017) shows under budgeting. A budget error of 10% either way is completely acceptable but this is too much of a flux. This is so, even if inflation, wildly fluctuating economic realities etc. as were seen over the last 5 years are to be factored in. The reasons are unclear at present. However, there are indications that the research teams lack either the skills or the fiscal focus required to create a valid budget for their work.

**TABLE 6: Research fund request over disbursement (LKR '000,000)**

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Allocation for research | 25.00 | 10.00 | 20.00 | 24.80 | 2.18 |
| Utilization of allocated budget | 12.67 | 10.52 | 17.13 | 15.69 | 1.52 |

Graph 04: Research Fund Request vs Disbursement (LKR '000,000)




## CURRENT SITUATION – KEY STRUCTURAL CONSIDERATIONS

### 1 NO RATIONAL CORRELATION BETWEEN RESEARCH DIVISIONS AND RESEARCH TOPICS

Perusal of the research undertaken by each of the divisions indicate that the five divisions currently established perform research in areas that do not seem to come directly under their specific purview. Indeed, in some instances, the research division performing a specific exercise has no bearing whatsoever on the research topic. This indicates that a reimaging of the entire divisional structure is required.

### 4 UNDER APPRECIATION OF THE IMPORTANCE STATISTICAL FUNCTIONS

It is observed that the statistics cadres are structurally set up at a lower level than research team members and there does not seem to be an observable career development path for them despite the fact that they serve a critical research need, require as much or more technical knowhow and qualifications as the researchers and their work effort is comparable to the researchers. Additionally, when capacity-building requirements are considered, those teams seem to perennially go under the radar. These Issues seem to have led to significant attrition among those cadres.

### 2 CADRE NUMBERS TO PERFORMANCE COMPARATIVELY

The institute has an approved cadre of 235 and a current cadre of approximately 180 staffers utilizing a treasury allocation of approximately LKR 200 million. In comparison, a state research outfit like the Institute of Fundamental Studies (IFS) has a cadre of less than 80 staffers, a similar state allocation and significantly higher output and greater public acceptance of their work.

### 5 DATA ACQUISITION STRUCTURE AND COMMUNICATIONS SYSTEM

The present mechanism of utilizing field statistical officers seems to have resulted in a reduced mandate to these cadres and a comparatively reduced set of data that is continuously up streamed. The data quality and data continuity has never been properly assessed and therefore its reliability or "solidity" is questionable. Additionally, once research is complete, there is no mechanism to leverage the information to provide it to various stakeholders reducing the overall impact and recognition of the work of the institute.

### 6 NO CLEAR SEGWAY TO CREATING AN ACADEMIC ARM

Despite the requirement to convert the institute into a research heavy agrarian university, at present it does not have the required skill sets among its cadres nor the linkages with local and foreign academic institutes to justify its positioning as a university. Establishing the required foundation may be a difficult task but one that must be attempted at the earliest.

### 3 LOGISTICAL PROCESS OF DELIVERING ON INSTITUTIONAL MANDATE WEAK

It is observed that the procedural arrangements between the Board of Governors (BOG), the administrative engine, the research divisions and the Research and Training Committee (RTC) is either gapped, weak or tenuous resulting in significant logistical failures that in some cases, substantially impact output against mandate. The lack of a strong planning team to determine short and long term research foci, weak guidelines with respect to mechanisms and methods from the RTC, difficulties for both administration and researchers due to lack of proper preplanning of research logistics, requirements for ad-hoc activation of research teams to service reactive political requirements are some observed areas that may compromise both the quality and the impact of the HARTI' work and its deliverables against its own mandate.

## APPROACH TO REMEDIAL ACTION

HARTI must play a pivotal role in evidence gathering, training, promoting and communicating key components of the paradigm shift evident in the theories and practices pertaining to development globally which are also manifested in policy priorities and directions over the past few decades. In order to do this, it must rely on its strengths, adjust its approach, overcome weaknesses and optimize opportunities.

While the intellectual and physical assets of the HARTI are indeed formidable, and, the respect it has earned over the years still comparatively undamaged, meta-observations on the specifics of its research and training effort since its inception as well as its direction have shown significant stagnation, reactive responses to often mismatched, misdirected or impulsive policy and planning decisions of state influencers and gaps in the way it communicates and is recognized for the remarkable work it does.

Furthermore, future proofing the institute in terms of emerging realities and volatile practicalities across the country with respect to its socioeconomic vulnerabilities have indicated that substantive attention must be paid to secure its position within the agrarian/agricultural institutional cloud of the state, its funding sources must be broad based and its research and training approach revamped.

In order to respond to all of these, the following approach parameters are key:

a. Position itself as the primary national think tank advising the President and the Cabinet of Ministers on all aspects of agrarian and agricultural strategic planning

b. Create a sustainable internal mechanism to tap and obtain funds independently

c. Expand and optimize its research capabilities, testing and certification abilities, and, enhance its training and education environment

d. Optimize its evidence gathering, data analytic and information dissemination engine

e. Become the sectoral stakeholder integrator and work allocation clearinghouse for the country's effort towards achieving agricultural sustainability

**Response to mismatched research divisions and financial weaknesses:**

In discussions with the research staff of the institute and comparison of research activities to research divisions, it was observed that a) the buckets are mismatched with the contents, b) they are too narrowcast, and, c) they are not immediately visible to international agencies as areas for which large funds could be provided. Reviewing the structure, it is seen that there is a research core, a training envelop, a data, information and communications task, strategic planning need and an administrative and human resources overarch.

From a research, it was seen that three divisions are capable of holding all of the research and training efforts of the institution. These are 1. Food Systems, 2. Environment, 3. Rural Development. Given the nature of agrarian research, macro-level mapping of the effort is at the very least a complex and non-linear task and therefore, it is important to understand that even those larger containers overlap and researchers assigned to specific areas due to their expertise and/or research interests will regularly have to work with staff of other divisions to optimize research outputs and impacts. The divisions and their overlaps are provided in diagram 3 on the right.

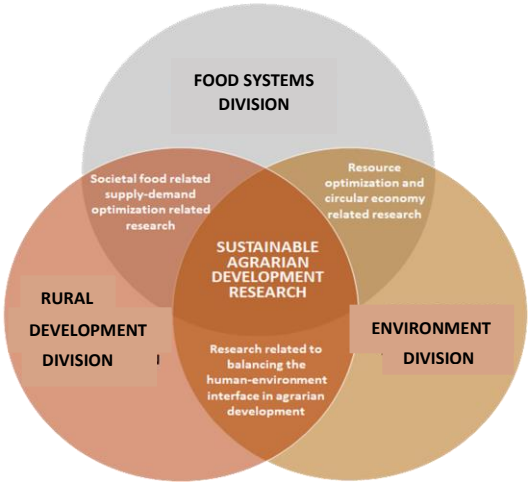



DIAGRAM 03 – RESEARCH DIVISIONS

With a view of positioning the institute to eventually become an agrarian university, it was observed that the training and education capabilities of the organization needed to be both clarified and unpacked with specific areas that are temporally relevant and highly marketable to the stakeholder cloud. While some of these do have a degree of symbiosis with the research components mentioned about and may be the outcome of such research and cyclically help in optimizing the impact of it, there are areas where the training and education activities will be purely a response to perceived learning needs of the country and will aim at knowledge outreach to the nation. The components of the training program are provided in diagram 4 on the right.

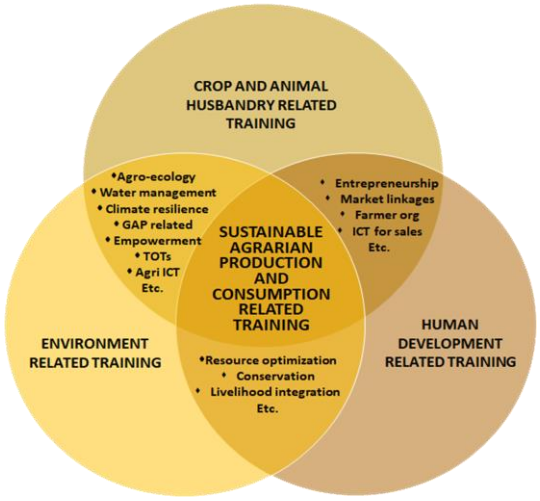



DIAGRAM 04 – TRAINING AND EDUCATION

Additionally, it was observed that the data gathering, analyzing and dissemination that was hitherto the domain of the statistical division should ideally be part of a much larger division that services not only the data acquisition and analysis needs of the research divisions but also delivers it in leveraged format to the demand side stakeholders. At present, this is not being done effectively resulting in scientifically sound but practically unpalatable research reports that have only a small viewership and even smaller readership. Therefore, the marketing/ promotions/ communications aspects of research findings need to be seriously considered if the institute is to be recognized and acknowledged for the substantial work it does and towards this an Information and Communication division should be set up that holds within it the present statistics and data processing units, the present library and the publications unit. The research team findings and reports must channel through this conduit for presentation to the general public.

Overarching this structure, and, being informed by the SWOT and PESTLE on the urgent requirement to make the institute less dependent upon state funds, a dedicated research strategy and funding division should be set up, possibly comprising of the most senior researchers and supported by the institutes financial personnel to create strategy and lobby for large scale research grants from overseas funding sources.

Overarching these, a dedicated human resources division may be set up to manage internal skills development, targeted recruitment etc. This too could be managed by a combination of research and administrative staff. The logistical "onion" (not the hierarchical structure) is in diagram 5 right.

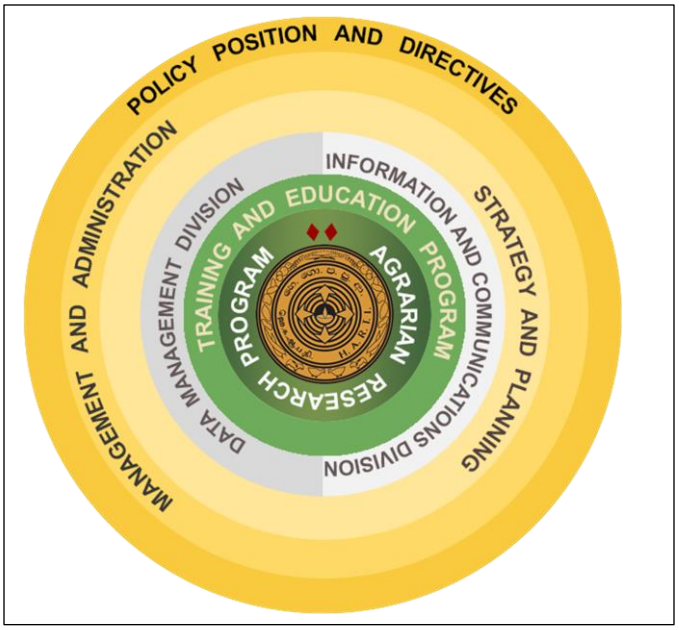



**DIAGRAM 05 – LOGISTICS ONION**

**Response to possible excess of staff:**

As mentioned under "Structural Considerations" above, the institute may be suffering from overstaffing. If this is in fact the case, a method should be found to make them more productive than they are now. This could be done by any or all of the following:

1. Expanding research scope and depth
2. Retraining some of the cadres to take on academic roles in addition to their present activities
3. Increasing the number of cadres that are out reading for higher degrees
4. Expanding the service offering of the institute to include better library services, marketing and communications, laboratory services etc.

In all events, a strong work study of the present staff is indicated and this should be performed at the earliest.

**Response to outdated / outmoded act:**

Although this may be comparatively harder to do, with the world moving swiftly towards resolving food, health and environment crises through sustainable development, strong language must be inserted into an amended act that will factor research into these areas. Additionally, it may be important to insert language that encompasses "whole-of-nation" approaches to the development of agriculture. This would (for example) necessitate the phrase "research into rural development" to be possibly changed to "research into development of citizen agriculture" or "research into rural and urban agriculture development".

**Response to weaknesses in data acquisition and information dissemination:**

From a practical standpoint, the institute must be able to acquire high quality data on a continuous basis and have it disseminated to all stakeholders as fresh as possible. However, it would be beyond its capabilities to attempt to acquire such island wide agrarian data through its own resources. Therefore, it must move into partnerships with other agencies tasked with data acquisition such as the Department of Census and Statistics, other research agencies and perhaps, if required, reserve military or home guards who have the discipline to be able to deliver quality data continuously as part of their set of duties.

While this aspect is crucial, its archival, collation, correlation, analysis and dissemination is equally important and in that area too, the SWOT and PESTLE have highlighted weaknesses. Those may be overcome by establishing a separate Strategic Information Leveraging and Optimizing (SILO) unit under the recommended new division "Information and Communication" that will ensure a) state-of-art capture of island wide, agrarian sector wide data including demographic, sociographic, psychographic, economic, academic and scientific information. This unit will also acquire for academic, research and policy purposes, supportive data from influencing sectors such as environment, disaster, irrigation etc. The repository will be powered by industry standard geophysical and geospatial mapping, b) inculcate the idea of the importance of quality agrarian data acquisition at island wide extraction points and c) leverage and optimize captured data into high quality information and disseminate it to the President, state, private, civil and academic agencies and the general public based on a sensitivity index.

Create a skilled team that understands the needs of different stakeholders and can remodel the research outputs to serve the needs of the above mentioned parties so that they may make qualified and evidence based decisions without having to wade through indigestible reams of "scientifically presented" reports.

**Response to the lack of a strong, all-encompassing agrarian/agricultural laboratory service:**

The nation, having embarked on a green agriculture ethic must rethink its entire testing, certification and trust-building framework. At present, while there are some laboratories dotting the island and performing limited sets of tasks that are usually beyond the reach of the farming community because of prohibitive costs, much needed evidence of the effectiveness and verifiability of organic practices are not performed. This gap has created much doubt in the minds of the demand side as to the level to which it can trust claims of "greenness". The HARTI must immediately leverage its "think tank" potential to establish a comprehensive laboratory in line with the draft National Agriculture Policy 6.3: Establish state of the art laboratories to monitor food standards.