

# **Curriculum Development for Land Policy and Management in National Land Institute, Indonesia**

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**Key words:** Curriculum Development, Land Policy, Land Management, Vocational School

## **SUMMARY**

National Land Institute is a higher education institution under the Ministry of Agrarian Affairs and Spatial Planning/ National Land Agency responsible to provide human resources on Land Management through education. As part of development and evaluation, National Land Institution conducts curriculum review every four years to ensure that education process able to meet the need of the Ministry as well as adapting current technology and meet the need of the development of agrarian, land and spatial planning. Curriculum development process was conducted into 3 steps: (1) conducting tracer study and users evaluation to gather data related to working performance of the graduated students; (2) evaluating alumni profile and learning outcome; and (3) reformulating curriculum. Tracer study results show that several competencies should be improved in order to adjust working competencies of the graduated students with the work. The competencies are (1) the ability to measure and mapping administrative boundaries; (2) the ability to operate recent technology of measurement and mapping techniques and equipments; (3) the ability to design program of community empowerment related to agrarian, land and spatial planning; (4) the ability to design, manage and collect data related to database of sustainable food agriculture, and (5) understanding land and property valuation for land acquisition. 2018 curriculum also formulate 9 competencies related to agrarian, land and spatial planning, that were translated into 147 credits consist of 65 subjects, with 130 credits (58 subjects) covering general competencies, while 17 credits (7 subjects) related to specific competencies. The new curriculum also changes the management of the department, by dividing it into 3 concentrations: Cadastral Survey and Mapping, Land Management, and Spatial Planning.

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## 1. Introduction

### 1.1 History of National Land Institute

On its development, Agrarian Academy has been changed into 3 (three) development stages, (i) Agrarian Academy (1964-1983), (ii) National Land Academy (1983 - 1993), and (iii) National Land Institute (1993 - present), with its core business to provide human resources on agrarian and land administration. First established in 1964 through the Decree of the Minister of Agriculture and Agrarian Affairs Nr. SK.36 / KA / 1963 on September 24, 1963, Agrarian Academy (currently National Land Institute) became the first higher education in Indonesia focused on agrarian and land management. The first educational activities were conducted in two cities in Java, Yogyakarta and Semarang. While Agrarian Academy in Semarang was organized under the administrator of Department of Land Registration, in Yogyakarta, it was conducted under the administrator of Department of Land Right, Land Use and Land Reform, both were under the coordination of the Ministry of Agriculture and Agrarian Affairs. At that time, to support educational activities of Agrarian Academy in Yogyakarta, the Ministry collaborated with Gadjah Mada University to conduct teaching activities, as stated in the Cooperation Charter on October 10, 1963. Graduated students from Agrarian Academy have the degree of S-O (bachelor/ BA). Later, in 1983, based on the Decree of the Minister of Home Affairs Nr. 34/1983, both Agrarian Academy in Semarang and Yogyakarta were joined into Agrarian Academy, located in Yogyakarta, with 3 (three) departments, which are (i) Department of Land Use, (ii) Department of Land Management, and (iii) Department of Land Registration (Sutaryono, 2014). Later, in 1989, Agrarian Academy then was changed into National Land Academy, and became a Technical Implementation Unit under the administrator of National Land Agency (previously Minister of Agriculture and Agrarian Affairs), with the level of education as Diploma III. Then, in 1992, the organizational arrangement was changed, and National Land Academy was upgraded into Diploma IV in Land Policy and Management, and was conducted education with 2 (two) departments, Land Mapping and Land Management. While Department of Land Mapping was focused on cadastral survey, mapping and data management, Department of Land Management emphasized its education on land policy, land law, land right and land titling. Furthermore, in 1993, with the issuance of Presidential Decree Number 25 of 1993, National Land Academy was changed into National Land Institute, with level of education of Diploma IV (equivalent to bachelor degree), with two major departments, Department of Land Management and Department of Land Mapping. Then, in 2012, the term of "Department" was changed into "concentration", as mandated by Act Nr. 12/ 2012 concerning higher education.

## 1.2 History of the Curriculum of the National Land Institute.

Historical background of the establishment of Agrarian Academy (currently National Land Institute) was inseparable by the enactment of the Basic Agrarian Law (BAL) in 1960, brought major changes in the implementation of land law enforcement in Indonesia. The BAL contains 5 (five) major programs on land administration and management in Indonesia: (1) Changes on National Agrarian Law; (2) Implementation of Land Reform; (3) Land use structurization; (4) liquidation and nationalization of foreign right of land and agrarian sector, and (5) Reforming feudal practices in agrarian sectors (Luthfi, 2014). Based on those background, curriculum of National Land Institute was designed to fulfill competence on 5 (five) major programs as mandated by BAL.

In educational process, the term 'curriculum' has 2 (two) major approach: what will be taught (as a process of knowledge transfer) and how to deliver/ teach it (as a process of capacity building). As a vocational school, curriculum of National Land Institute also have other function to provide professional human resource on land administration and management for The Ministry of Agrarian Affairs and Spatial Planning. Compare to a non-vocational higher education, curriculum of vocational school should be designated to fulfill implemented technical skill, able to go inline with industrial development and working environment. Thus, the students should have certain competences related to their designated working environment. Curriculum of National Land Institute, therefore, should be able to accomodate knowledge and skills on agrarian, land management and spatial planning, as core business of The Ministry of Agrarian Affairs and Spatial Planning/ National Land Agency.

In the beginning of the enactment of agrarian law in Indonesia, land policy was carried out under the Ministry of Agrarian Affairs, bringing major changes from 'colonial land law' to 'national land law'. The change also taken place on land managemen, by implementing land registration, covering all parcels in village unit, as regulated by Government Regulation Nr. 10/ 1961. Other concern of land management also focused on reducing imbalance of land ownership by implemented land reform agenda. At that time, National Land Institute (STPN) affiliated those needs by establishing Department of Land Registration, focused on land right, land use and land reform. Educational contents including materials regarding to cadastral surveys, land history analysis, agrarian law, civil law, inheritance law, and islamic law regarding to land and legacy. Beside land registration, STPN also established Department of Land Right, with the study focused on land right and titling on legal system, land use suitability and the concept of land reform in Indonesia.

Later, in New Orde period (1965 – 1988), regarding simplification and efficiency of the organization, the Ministry of Agrarian Affairs was being merged with the Ministry of Home Affairs, and agrarian affairs became responsibility of the Directorate General of Agrarian Affairs. However, after 1988 period, Indonesia was in a state of rapid and massive

development period, and the current government realized that agrarian and land affairs performed important influence for national economic growth. Furthermore, the government, again, re-forming the organizational arrangement of Directorate General of Agrarian Affairs, and was changed into National Land Agency (BPN). As a result, this change also effecting on the change of curriculum in STPN. While previously it only consist of 2 (two) department, with the re-organization of the Ministry, STPN established 3 (three) department: Department of Land Use, Department of Land Right Management, and Department of Land Registration.

Second institutional changes occurred in 2014, when institutional policy then decide to merge some department into 2 (two), which were Department of Land Management and Department of Mapping. With this change, the curriculum was also change, with the focus on land administration, land law and spatial mapping.

In 2015, after general election, National Land Agency was merged with Directorate General of Spatial Planning and changed into The Ministry of Agrarian Affairs and Spatial Planning/ National Land Agency. This change give consequences that the ministry has responsibilities to regulate spatial planning beside agrarian affairs and land administration. This merge was designated to incorporate spatial planning into land administration, giving a broader context on land management (previously, spatial planning was under authority of The Ministry of Public Works). Organizational arrangement was also reshuffled into 7 Directorate Generals responsible for the main business of the Ministry. The Directorate Generals are (1) Directorate General of Agrarian Infrastructure, (2) Directorate General of Spatial Planning, (3) Directorate General of Land Control, Tenure and Utilization, (4) Directorate General of Legal Land Law, (5) Directorate General of Land Acquisition, (6) Directorate General of Land and Space Dispute Handling, and (7) Directorate General of Agrarian Arrangement. This new arrangement giving emphasizes that The Minsitry play a role on land policy regulator, and does not necessarily act as land administration executor.

Regarding to the institutional change at ministry level, STPN should undertake curriculum adjustment to fulfill working competency needed by The Ministry. A major change was taken place where the curriculum should incorporate spatial planning on the learning process, while previously it only emphasizes on land administration and cadastre mapping. Furthermore, STPN should also follow the regulation of The Ministry of Research, Technology and Higher Education (Menristek DIKTI) on the implementation of higher education in Indonesia. Menristek DIKTI requires that curriculum of higher education should be evaluated for every 4 (four) years to respond the changes and development of existing needs. Therefore, in 2018, curriculum evaluation and revision was carried out in response to the organizational change at ministry level and as mandated by higher education regulation.

## **2. The Process of Developing a Higher Education Curriculum**

In designing curriculum for vocational school, it should consider that educational process should be able to provide human resources with practical skills related to the field of work.

As a vocational school under The Ministry of Agrarian Affairs and Spatial Planning, skills of land management, land registration and spatial planning are required. Furthermore, the skills should be broken down into course subject with specific learning outcome. As stated on UN-FIG Declaration (1999), Land management is the activities associated with management of land as a resource from both environmental and economic perspective toward sustainable development. In land administration activities, it was translated into 2 (two) main activities: survey and measurement, and mapping activities at parcel level, while defining the relationship between the parcel and individual right by analyzing the history of ownership. No less important, Sevatal (2002) also point on the importance of "land consolidation" or "land readjustment" as part of land management, to upgrade land on its physical, economic and environmental functions. Therefore, curriculum design of National Land Institute should perceive land management in a more broader context and translated it into courses with a design that bring it through a teaching and learning process.

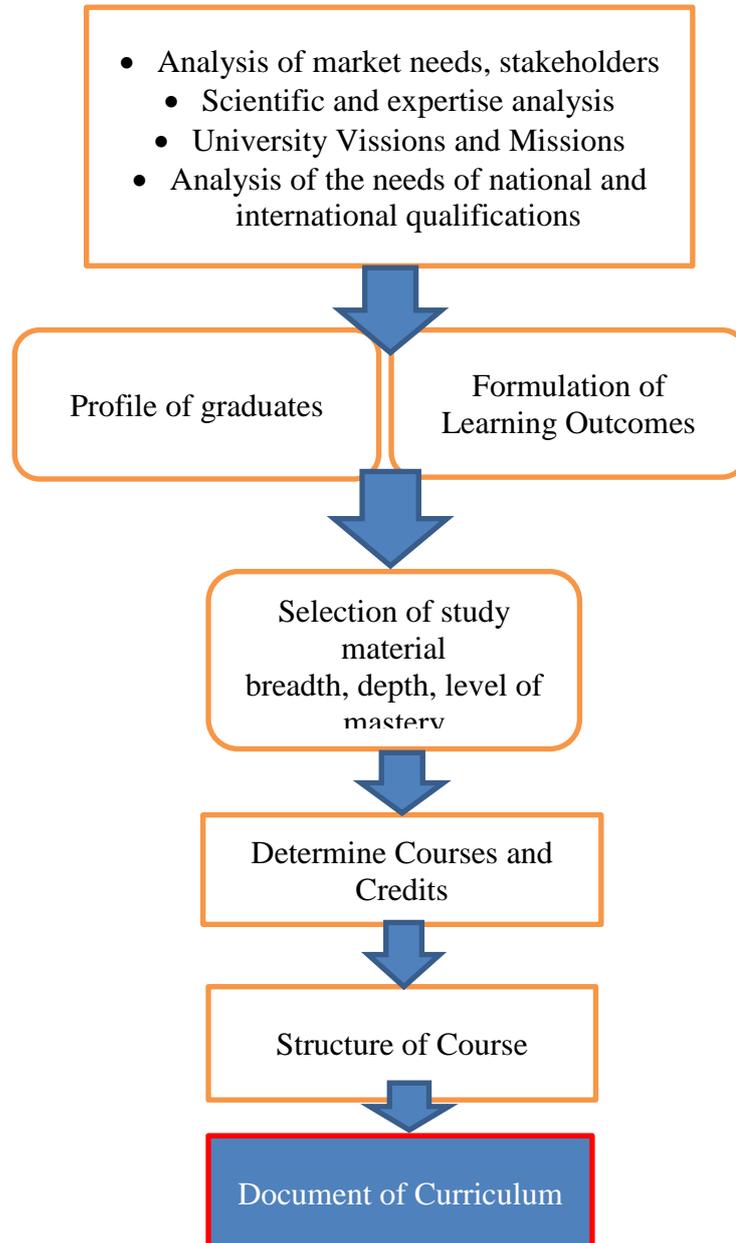
Basically, curriculum consist of the design of teaching process including the materials, delivery methods, expected learning output and outcome, and how to evaluate it. Curriculum should consist not only transfer of knowledge but also on the process of capacity building of the students, specifically in problem solving related to their works. In order to perform a comprehensive teaching activities, the designed curriculum should be able to consider 3 (three) main components: what will be taught (the materials), who will be taught (student-centered), and how it will be taught (methods).

In vocational higher education, rather than emphasizing on theoretical and conceptual understanding, teaching process is emphasized on practical and applicable aspects of learning. Therefore, practical lessons have more time allocation compare to regular (in-class) lessons. This will impacted on how the material will be delivered (the methods), how to asses it (evaluation process), and what is the learning output and outcome. According to the Curriculum Guidance of Vocational School 2016 (enacted by Kemenristek DIKTI), the stages of vocational higher education curriculum development including:

- a) Determine Graduate Profiles and Learning Outcomes (CP);
- b) Select and compile study materials based on the results of tracer study and market study;
- c) Assigning the course, curriculum structure and credits of each course;
- d) Compiling Learning Plans for each semester (Rencana Pembelajaran Semester – RPS).

The scheme of developing vocational higher education curriculum can be seen in figure 1.

## Developing vocational higher education



*Figure 1 Scheme of a Higher Education Curriculum in Indonesia*

This process is held for each 4 (four) years, to evaluate whether the curriculum building still relevant with the market needs. As indicator, the university has responsibility to conduct tracer study, assessing working performance of the graduated students, as well as interviewing

stakeholder and users on the needs of certain competency in the working fields. Furthermore, input from professionals, practitioners and other similar university were also collected and being analyzed as an input for learning outcomes on curriculum.

Tracer Study conducted in 2017 by taking a sample of 12 users from 10 Land Offices on each section in the Land Office organizational structure with the following results:

### **3. Curriculum Development of Diploma IV Land Management STPN**

In general, curriculum building of Diploma IV Land Management STPN cannot be separated from core business of The Ministry of Agrarian Affairs and Spatial Planning, in land management, administration and spatial planning. The revision process was carried out by identifying each organ in the Ministry of Agrarian and Spatial Planning / National Land Agency along with its duties and functions. In addition, a tracer study process was carried out by taking 10 samples of Regional Offices and Land Offices at provincial and local level, to track the work of graduated students compare to the need of the office. This process was carried out to ensure that the new curriculum was designed to fulfill the need of organization on competence and professional human resources regarding to their duties, and should be adapted by the curriculum as learning output and outcome.

The process of curriculum development in Diploma IV Land Management STPN including 3 (three) stages, which are:

1. Conducting tracer study and users evaluation.
2. Evaluating alumni profile and learning outcome based on the results of tracer study.
3. Reformulating curriculum

#### **3.1. Conducting Tracer Study and the Results.**

Tracer study was implemented to evaluate working performance of the graduated students based on the evaluation of the users and self-assessment by the alumni. In this process, some indicators of evaluation were determined based on its competence. There are 4 (four) competencies have been used to determine indicators, which are (i) competency in surveying and mapping, (ii) competency in legal land law, (iii) competency in land management, and (iv) competency in handling land dispute and conflict. Each competency has different indicators, determined by tasks and duties of the employees at provincial and regional level.

Tracer study were carried out in 10 samples of Regional Office and Land Office at provincial and local level. The respondents including alumni of STPN within last 5 (five) years, the users (supervisors of the alumni) and related stakeholder. The result was shown as described below.

##### **3.1.1. Competency of Surveying and Mapping**

Working performance of the alumni on surveying and mapping giving scores ranging from 66.67 to 83.33. The measurements were carried out for 7 (seven) indicators related to the technical work of survey, measurement and mapping. The highest indicator of this competency is the ability to conduct basic measurement and mapping, while the lowest are the ability of the alumni to measure administrative boundaries (local, provincial or national

boundaries) and the ability to perform thematic mapping. The indicators and result is shown in figure 2.

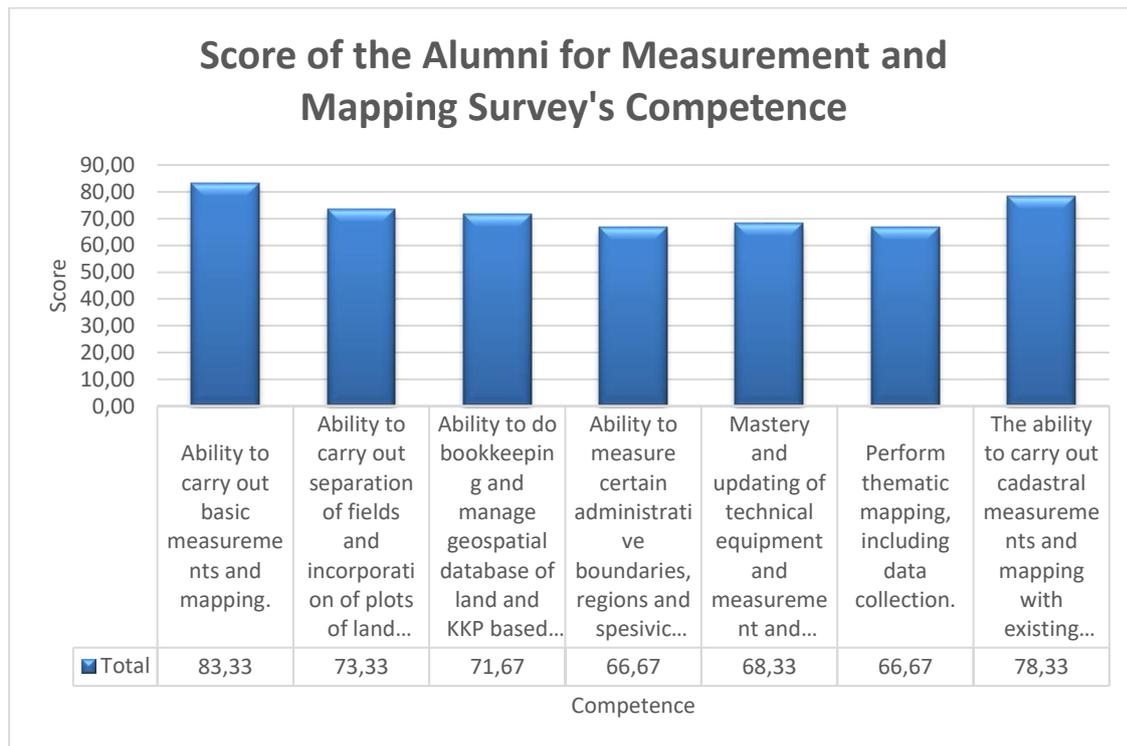


Figure 2 Score on Measurement and Mapping Survey's Competence

### 3.1.2. Competency of Legal Land Law

This competency was measured using 5 (five) indicators related to the tasks and responsibilities in legal land law. The results show that understanding on land registration procedures, including land administration data maintenance have the highest score (85), followed by the ability to carrying out inventory and identification of individual and private legal rights, and right to use the space, while the lowest score was in the ability to develop and implement community empowerment related to land rights. The indicators and result was shown in figure 3.

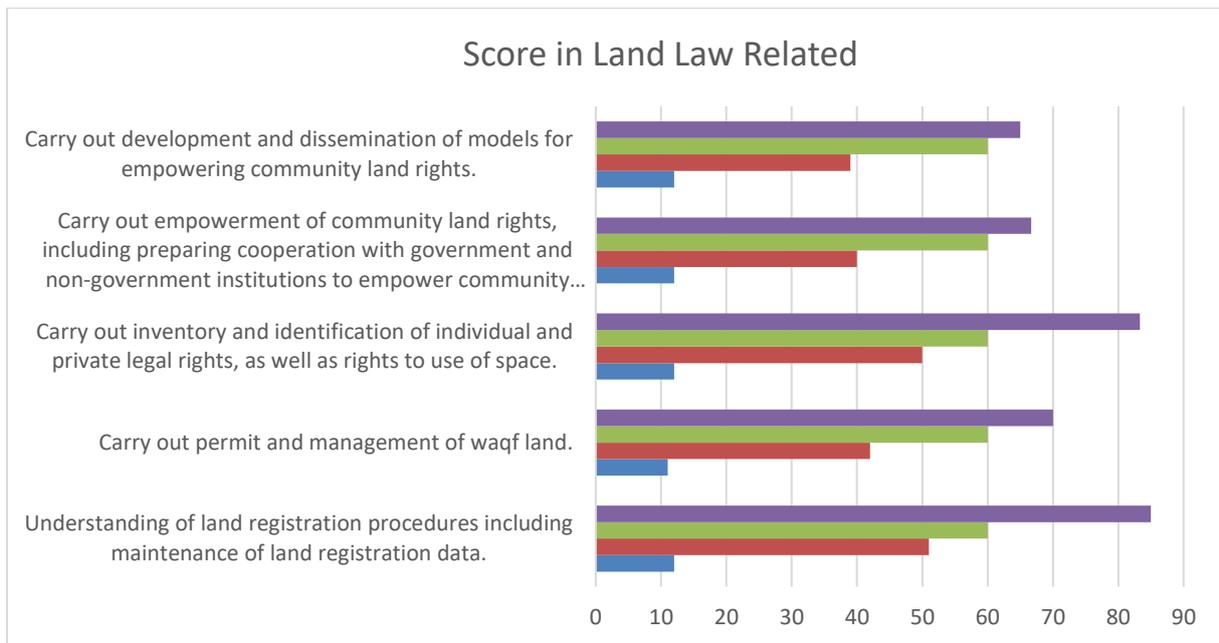


Figure 3 Score of the Alumni's Competences in Land Law

### 3.1.3. Competency on Land Management

In this competency, the highest result is shown in the ability to manage database and geographic information system (with the score of 80) and the ability to implement land consolidation (including planning, preparation, implementation and evaluation), with the score of 80. The lowest result is shown on the indicator of the ability to implement data collection and database management for sustainable food agriculture, with the score of 68.3. The indicators and result is shown in figure 4.

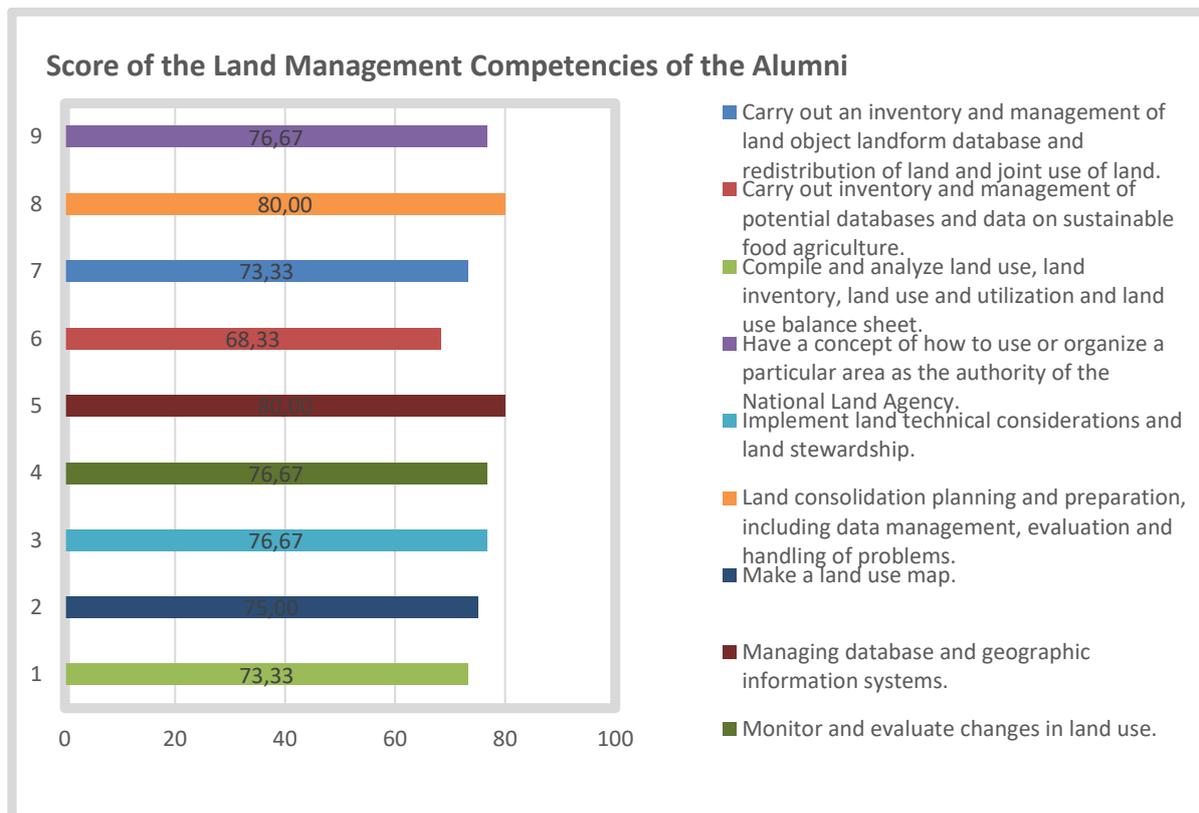
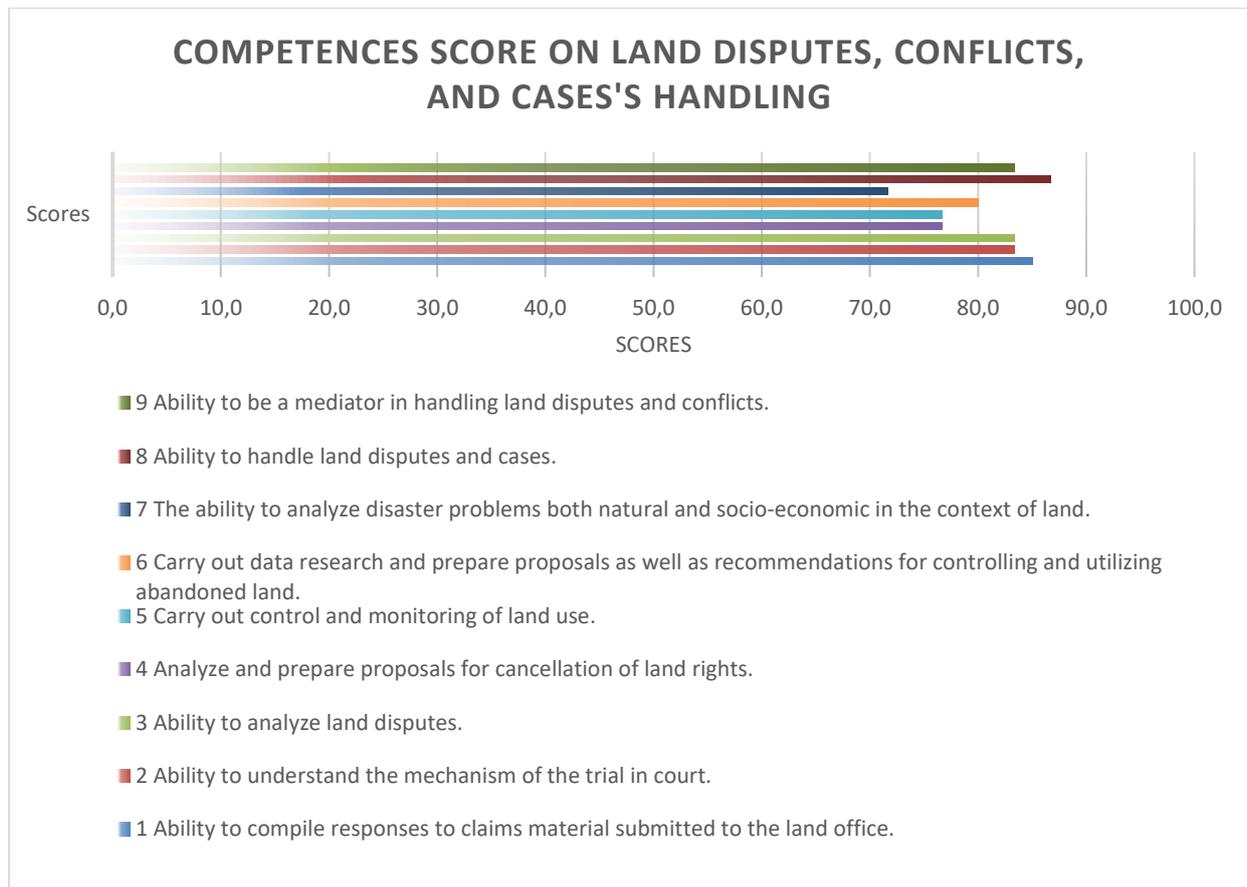


Figure 4 Score of the alumni's competence in Land Management

### 3.1.4. Competency in Handling Land Dispute and Conflict

In this competency, 9 (nine) indicators were determined to measure working performance of the alumni. The result range from 68.3 to 80.0, with the highest score on the ability to handle land dispute and cases, while the lowest score is on the ability to analyze problems related to natural and socio-economic on the context of land and agrarian. The indicators and result is shown in figure 5.



*Figure 5 Score of the alumni for land dispute, conflict, and cases's competences*

### 3.2. Alumni Profile and Learning Outcome

Alumni profile shows field of jobs in which alumni work based on their area of expertises. All graduated student of Diploma IV STPN are government employees worked in various Departments of The Ministry of Agrarian Affairs and Spatial Planning within 7 (seven) Directorate Generals. There are 18 profiles identified, as shown in table 1 below.

No.	Alumni Profile	Expertises
1	Analyst of legal land law	Reviewing and analyzing law and regulation, legal advocacy and law documentation on the context of legal land law.
2	Analyst of quality control of measurement and mapping	Reviewing and performing quality control assessment for measurements and mapping.
3	Analyst of land consolidation and land reform	Reviewing and analyzing the implementation of land consolidation and land reform based on legal procedure.
4	Analyst of land and spatial use.	Reviewing and analyzing materials of land and spatial use at national level, island area and national strategic area.
5	Analyst of land monitoring.	Reviewing and analyzing materials of land monitoring, including agriculture and non agriculture area, and sustainable agriculture area.
6	Analyst of community empowerment on land and agrarian.	Designing, reviewing and analyzing community empowerment programs related to land and agrarian.
7	Analyst of regional spatial planning	Analyzing regional spatial planning and its development and implementation, and conducting coordination within multi-sectors in regional and planning development.
8	Analyst of land use	Examining and and analyzing the compilation of land use and the materials.
9	Analyst of land right and land use registration	Examining and analyzing materials of land right and land use registration.
10	Analyst of land acquisition	Examining and analyzing materials of land acquisition.
11	Analyst of land and spatial use monitoring	Examining and analyzing materials of land and spatial use monitoring, including policy implementation and land programs.
12	Analyst of land measurement and mapping	Examining and analyzing materials of land measurement and mapping.
13	Analyst of land and regional valuation	Examining and analyzing the compilation of materials for land valuation, regional valuation and agrarian resources.
14	Analyst of land and spatial dispute and conflict.	Examining and analyzing materials of land and spatial dispute and conflicts and its handling process, and land right cancellation.

In general, graduated students from Diploma IV STPN should be able to demonstrate work performance regarding to the tasks of 7 (seven) Directorate Generals of the Ministry of Agrarian Affairs and Spatial Planning. It is quite challenging to reformulate curriculum with those

complex requirements, since national regulation of higher education allowed maximum credit of 148 (SKS) for bachelor degree, while STPN should be able to equip the students with the expertises needed by the Ministry. Therefore, in reformulating curriculum, formulating a good and comprehensive learning output and outcome was needed to ensure that teaching process in line with the need of organization without neglecting the demand of education process. Furthermore, previous curriculum did not incorporate spatial planning as learning outcome, while the new organizational arrangement require it as one of the basic competence of the graduated students.

### **3.3. Reformulation of Curriculum**

Reformulation of the new curriculum of STPN was carried out by incorporating 7 (seven) elements of the main task of each Directorate General in the Ministry of Agrarian Affairs and Spatial Planning, as well as evaluation results of the tracer study. Department was divided into 3 (three) concentration: (i) Cadastral Survey and Mapping, (ii) Land Management, and (iii) Spatial Planning. Major competencies were described as follow:

1. Able to apply the concept of spatial planning for decision making, spatial arrangement, land consolidation and specific zone, as well as the ability to use science and technology responsibly for the needs mentioned above.
2. Able to carry out survey and mapping activity in the context of basic, cadastral and thematic area, carry out land administration database management.
3. Able to implement and analyze land right administration and stipulation.
4. Able to implement and analyze land acquisition.
5. Able to implement and analyze agrarian reform project.
6. Able to analyze and handling land issues.
7. Able to implement community empowerment related to agrarian, land and spatial planning.
8. Able to manage and maintain geospatial information technology related to agrarian, land and spatial planning.
9. Able to implement quality assurance of land services at national, provincial and local level.

Furthermore, in designing subjects and its credits, results from tracer study has been considered when preparing development materials. There are several subject given emphasizes on the development of subjects, which are:

1. The ability to measure and mapping administrative boundaries, at local, provincial and national level.
2. The ability to operate recent technology of measurement and mapping techniques and equipments.
3. The ability to design program of community empowerment related to agrarian, land and spatial planning and implement it.
4. The ability to design, manage and collect data related to database of sustainable food agriculture.
5. Understanding land and property valuation for land acquisition purpose.

Those major competence then were implemented into 147 credits consist of 65 subjects related to agrarian, land and spatial planning. From total credit, 130 credits (58 subjects) related to general competencies, while 17 credits (7 subjects) related to specific concertation related to specialization.

## REFERENCES

- Lutfi, A.N., 2011, *Melacak Sejarah Pemikiran Agraria : Sumbangan Pemikiran Mazhab* Bogor, STPN Press, Yogyakarta, Indonesia
- Nurwardani P., et. all, 2016, *Panduan Penyusunan Kurikulum Pendidikan Vokasi*, Kementerian Riset, Teknologi Dan Pendidikan Tinggi, Direktorat Jenderal Pembelajaran Dan Kemahasiswaan, Direktorat Pembelajaran, Indonesia
- Payne M, 1996, *Review of the Curriculum of the LTD-Internal Training Courses, Part I, Land Management Project/LTD/GTZ.*
- Sevatdal H, (2002), *Land Administration and Land Management – An Institutional Approach*, FIG XXII International Congress Washington, D.C. USA April 19-26 2002
- Sutaryono, et.all, 2014, *Perkembangan Ilmu dan Pendidikan Tinggi Agraria di Indonesia dalam Kumpulan Riset "Asas-asas Keagrariaan : Merunut Kembali Riwayat Kelembagaan Agraria, Dasar Keilmuan Agraria, dan Asas Hubungan Keagrariaan di Indonesia*, STPN Press, Yogyakarta, Indonesia

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