

1. Governance and Institutions

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
Regarding the management of geospatial information at the national level, are the responsibilities of the institutions regarding the generation and maintenance of geospatial data in their diverse subjects clearly defined?	<ul style="list-style-type: none"> ▪ Responsibilities are clearly defined on certain levels. ▪ Not clearly guidelines defined on a national level, regarding generation and maintenance ▪ Different situation in every institute ▪ A clear mandate is not familiar within the institutions ▪ No central gathering point of data. ▪ Institutions focus on their own data acquisition ▪ In some cases rules are not clearly defined to understand which institutions does what 	<ul style="list-style-type: none"> ▪ Need to sign agreements at the national level, like a MOU on standards, systems and sharing of data ▪ Analysis of the legal decrees, laws and regulations ▪ Provision of guidelines at the national level ▪ Improve coordination between ministries ▪ One institution managing all the data per layer. ▪ Revision of decrees and laws. ▪ Improve communications within institutes ▪ Improve networks and collaboration
At the level of decision makers in public institutions in Suriname, is the value of geospatial information recognized as a tool to support management?	<ul style="list-style-type: none"> ▪ The value of geospatial information is recognized as a tool to support management ▪ The value of geospatial information is partially recognized but not fully utilized. ▪ Awareness about the importance, but due to many circumstances it is used insufficiently ▪ Institutions lower on the decision making level recognize the value. ▪ Lack of awareness or not aware enough in most cases. ▪ At higher decision maker level the value is not recognized to support management. ▪ Decision makers sometimes don't want things to be transparent. 	<ul style="list-style-type: none"> ▪ National strategic plan for the use geospatial information ▪ Policy coming from higher up to include geospatial information for making decisions ▪ Proposed regulation by lower level institutes to the high-level decision makers ▪ Strengthen awareness to high-level decision makers ▪ Workshop or seminars to share the knowledge ▪ Strengthen collaborations ▪ Budget for equipment and strengthening of experts. ▪ Interdepartmental coordination commission responsible for the coordination planning data sharing
What actions or measures could be taken to strengthen the institutional mandates for	<ul style="list-style-type: none"> ▪ There is no legal framework 	<ul style="list-style-type: none"> ▪ Promote the willingness to share the info

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the management and use of geospatial information?	<ul style="list-style-type: none"> ▪ No uniform standard in data collection, processing and use ▪ No actions or measurements taken ▪ Existing conflicts on which type of data should or should not be shared. 	<ul style="list-style-type: none"> ▪ Implementation of a national platform with all geospatial stakeholders ▪ Legal framework be set up national awareness to get institution on board ▪ Make clear laws ▪ Regulate the use of geospatial information by law. ▪ Strengthen awareness on the use and benefits of geospatial information. ▪ Collaborating with international organizations such as the UN.
In the organizational structure that Suriname has today for the management of geospatial information, are all the actors involved at the sectoral and territorial levels?	<ul style="list-style-type: none"> ▪ Institutions well vested in their own work routine but not in correlation with others ▪ Not all actors are involved in the SDI. ▪ Lack of collaboration ▪ No organizational structure for management of geospatial information ▪ For each subject, every organization which make use should have that access 	<ul style="list-style-type: none"> ▪ Identify all the crucial actors for establishing SDI by each institution ▪ All the institutions work together to a national framework, supported by law ▪ Authority (and a law) to implore that institutes create spatial data for the NSDI ▪ Formally assign a Spatial Data Users/Producers Group with representatives of all stakeholders.
What options of institutional framework are visualized as an instrument to enhance the management of geospatial information in Suriname?		<ul style="list-style-type: none"> ▪ One on one MOUs and agreements between different stakeholders. ▪ A cooperation MOU between MIGLIS, SBB, GMD, NIMOS and SPS ▪ Workshops to collaborate and to get a better understanding of the needs ▪ Stakeholders meetings have to be organized. Make a network ▪ Build a national geospatial framework. ▪ Formally assign a Spatial Data Users/Producers Group with representatives of all stakeholders. ▪ Other proposals related to data and platforms

2. Geospatial data and infrastructure

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
<p>Is there a thorough and systematized knowledge about the stock and needs of geospatial data in the institutions?</p>	<ul style="list-style-type: none"> ▪ There is some knowledge but only for stocking purposes but not for further processing ▪ Some organizations have knowledge but other organizations are in the process ▪ Not enough knowledge. ▪ Knowledge about the stocks and needs of geospatial differs from the institutions. ▪ There are some initiatives but they haven't been shared with all stakeholders. ▪ Institutes are aware of the storage and needs within their own organization. 	<ul style="list-style-type: none"> ▪ An inventory is needed of what each institution has available and what the national needs are. ▪ Legislation document to strengthen the awareness on the importance of geospatial data ▪ Strengthen collaborations with other organizations for sharing information ▪ Share the existing assessments made ▪ Use best practice use cases. ▪ Capacity building. ▪ Internal standardization ▪ Funding to strengthen the knowledge and to acquire the necessary tools within the institutions.
<p>Are there documentation practices for geospatial information through metadata?</p>	<ul style="list-style-type: none"> ▪ Some institutions have documentation practices through metadata. ▪ For some institutions there is documentation available. But for most there isn't ▪ Every organization has their own metadata format and practices ▪ The practices are not standardized through all institutes. ▪ There is no central point of documentation. ▪ All depends on the user how they use geospatial data through metadata 	<ul style="list-style-type: none"> ▪ To produce a national standard metadata format ▪ Standardization of metadata through all institutes. ▪ Policies should be implemented for every institution ▪ Create documentation together with the national authority ▪ Guidelines needed on how to use geospatial information for optimal and efficient use
<p>Are there known experiences of generating geospatial data from citizens (voluntary geographic information)?</p>	<ul style="list-style-type: none"> ▪ There are known experiences of generating geospatial data from citizens <ul style="list-style-type: none"> ○ Agriculture/fisheries data for certain areas and business licenses for the private sector 	<ul style="list-style-type: none"> ▪ Need to document these experiences ▪ Produce a geoportal for citizens for them to provide relevant input ▪ Provide awareness and tools (apps) to the public.

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
	<ul style="list-style-type: none"> ○ To get data from citizens regarding waterlevels in an area that is frequently inundated. ○ Indigenous community through conservation research projects. ○ Outages at utility companies through their websites. ○ Application from GHFS with the mosquito app. ○ Tropenbos –P3DM ○ WWF – 3D mapping ○ ABS, SBB and MI-GLIS ○ Redd+ assistants can send info on activities in the interior to SBB through the use of an app. ○ “Ter inzage legging” project of PMU GLIS – Citizens checking to see if there parcel information and rights were correct 	<ul style="list-style-type: none"> ▪ It depends on the projects and the needs of the institutes. ▪ If it does happen it should be done in an easy to understand manner for example an app. ▪ Need of institutions to train their staff to stock, process and maintain the geospatial data
<p>Do institutions have geoportals for viewing and downloading geospatial data?</p>	<ul style="list-style-type: none"> ▪ Some institutions but not enough ▪ Capabilities for viewing more than for downloading <ul style="list-style-type: none"> ○ Gonini - SBB ○ GISSAT. ○ MI-GLIS (parcel layer and NGRS) ○ ABS ○ GMD ○ EBS 	<ul style="list-style-type: none"> ▪ Implement a central geoportal ▪ Overview of all the portals and an integration is necessary ▪ Facilitate the use of the portals through an SDI. ▪ Integrate the data for compatibility. ▪ Need to be promoted better the existence of geoportals ▪ More integration between the geoportals ▪ To find an option where everyone can geoportals for viewing and downloading. ▪ Clarity about what needs to be downloadable and what not.
<p>Are the national public institutions using geospatial data to solve their management problems?</p>	<ul style="list-style-type: none"> ▪ Yes. There are cases where institutions use geospatial data to solve problems and hire certain expert in geospatial information system 	<ul style="list-style-type: none"> ▪ It should become a policy to use geospatial data ▪ there should be more awareness and knowledge to be able to connect the dots

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	<ul style="list-style-type: none"> ○ Utility companies, statistics and education. ○ Census project . ○ NIMOS. ○ SBB uses geospatial data to identify illegal logging. ○ Digging out of the Saramacca canal based on an assessment of the inundation of the city. <p>) A geospatial assessment is also used to obtain funding from international organizations.</p>	<p>between geospatial data and management problems</p> <ul style="list-style-type: none"> ▪ Storage of the data at a central point. ▪ There is an important need of institutions to train their staff to stock, process and maintain the geospatial data
<p>What are the central issues at the country level that require geospatial information to sustain decision making?</p>	<ul style="list-style-type: none"> ▪ Urban planning, infrastructure maintenance, forest management. ▪ Money and capacity, education ▪ Spatial planning ▪ Public transport ▪ Land use ▪ Data of country boundaries ▪ Give geospatial format to data on education, health, livelihood, infrastructure etc. ▪ Issues related to accessibility need to be addressed 	<ul style="list-style-type: none"> ▪ Make data sharing available on a structured standardized platform. ▪ Address solutions for the lack of knowledge and tools for geospatial format ▪ Implement a central point of documentation ▪ Use geospatial information to make structural and land allocation plans ▪ Address the lack of knowledge and tools to use geospatial data for other cooperating institutions for example (SBB, HI & LVV)
<p>Are there experiences of territorial analysis in public institutions?</p>	<ul style="list-style-type: none"> ▪ There are some experiences of territorial analysis in public institutions <ul style="list-style-type: none"> ○ SWM- checking for possibilities to expand the distribution network ○ GBS - district and resort profiles based on the Census data ○ NIMOS, Min of Public Works, Min of RGB 	<ul style="list-style-type: none"> ▪ Planning departments to initiate and guide territorial analysis. ▪ Sharing of available geospatial data from institutions ▪ Analyses ▪ Further stimulation

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	<ul style="list-style-type: none">○ Analysis of forest concessions○ Analysis of the inner city of Paramaribo.○ AEZ of the ministry LVV○ SBB for deforestation.○ ADEK for land use analysis research projects.	

3. Innovation

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
Is there an organization within the government structure responsible for innovation ?	<ul style="list-style-type: none"> ▪ Not awareness of an organization which is responsible for the overall innovation. ▪ Innovation is only on a small scale and separate ▪ No government structure responsible for innovation concerning geospatial data ▪ Office of the VP, current situation unknown. 	<ul style="list-style-type: none"> ▪ Formally assign one central organization within the government structure responsible for innovation ▪ Initiate/Set up an institute by law concerning the use and management of geospatial data responsible for innovation ▪ There should be one for a central point of registration to know what and where data is available.
Are technology and geospatial data included in the government's innovation efforts?	<ul style="list-style-type: none"> ▪ There are some efforts but this has to increase. ▪ It depends on the government department routine if geospatial data is needed <p>Some examples</p> <ul style="list-style-type: none"> ▪ MAS is now looking at the upgrading their survey equipment for gathering geospatial data in a more quick and efficient way. ▪ Technology: GBS the transition from PAPI to CAPI ▪ Geospatial data : SWM digital meters are being used and the collection of data is also with tablets ▪ All government data in the cloud. ▪ Ja, EBS, Telesur, SWM, SBB ▪ E-Government project started (Non-Geospatial), current status unknown. ▪ Geospatial innovation effort continued at 1 point in time (Lidar Data 2012), project discontinued. 	<ul style="list-style-type: none"> ▪ Involve local experts in when procuring consultants in innovative projects. ▪ Gradually update of the current technology ▪ This is an internal working issue and needs to be resolved by BIZA and other institutions for uniformity

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<p>Does the private sector participate in the management of national geospatial information?</p>	<ul style="list-style-type: none"> ▪ Only internal business use. ▪ On a low level. ▪ Some private companies have their own geospatial data which they manage. ▪ A couple of businesses that manage in different ways. ▪ Somewhat, for example Land Surveyors who submit ParcelID for management of Parcel data 	<ul style="list-style-type: none"> ▪ To work together with the private sector as a stakeholder to manage the geospatial information. ▪ It should be through a legal agreement. ▪ The government should facilitate the private sector and make use of the innovations and marketing investments of the private sector. ▪ More sharing and knowledge exchange should be promoted ▪ A procedure how to gather and distribute this data should be implemented

4. Standards

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
<p>Are there experiences in the use of standards in the institutional geospatial information management processes?</p>	<ul style="list-style-type: none">) There are experiences in the use of standards in organizations in the institutional geospatial information management processes but not on a national level) Formally there no standards in the use of geospatial data which makes it very difficult to claim this issue.. o MAS has in the use of standards (IHO, IALA and IMO standards) o Related to the spatial reference (WGS 1984 UTM 21N) and the scale of the data. o Related to the visualization of the data i.e. the symbology, accuracy o Celos uses scientific based standards 	<ul style="list-style-type: none"> ▪ Guidelines to setup standards for data sharing (interoperability) ▪ Agreement what kind of standards should be introduced for a better management of geospatial information. ▪ Striving to get the institutions to get on board on a standard for an institutional geospatial information management process ▪ A nationwide standard, to be streamlined easily. ▪ Compatible software used within companies. ▪ Awareness towards new end users ▪ Updates of standards
<p>Is there a national team to address the implementation of geospatial standards?</p>	<ul style="list-style-type: none"> ▪ There is a Bureau of Standards in Suriname, but no standards yet on geospatial. ▪ There is no national team yet but MI GLIS is in the best position to address the implementation of geospatial standards. ▪ There is a national institute with mandate (MIGLIS) but without proposed guidelines ▪ Standards are often informally agreed upon amongst organizations. ▪ Staatsolie is working on standardization within all the departments. 	<ul style="list-style-type: none"> ▪ MI GLIS should take the lead in this matter and collaborate with the national team ▪ MI-GLIS has the mandate to suggest standards with regards to geospatial information ▪ Define the standards by law, to ensure they are applied to all local data. ▪ There should be stakeholder's engagement to promote ownership, so that these guidelines must be implemented ▪ The National bureau of standards should be capable of being the responsible team by law to address the implementation of geospatial standards
<p>What standards are considered necessary to support geospatial information</p>	<ul style="list-style-type: none"> ▪ Format, ▪ Metadata standards 	<ul style="list-style-type: none"> ▪ The decision makers should support collaboration with different organization.

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management? Could a prioritization be done?	<ul style="list-style-type: none"> ▪ Access service ▪ Spatial reference (WGS 1984 UTM 21N) ▪ Symbology. ▪ Data collection method ▪ Data accuracy ▪ QA/QC date. ▪ QA/QC process. ▪ Standard colors ▪ Settlement (village) ▪ Geographical entities 	<ul style="list-style-type: none"> ▪ There must be a policy between the stakeholders. ▪ Use of one base map. ▪ An uniform/general standards where all parties are working with ▪ A standard for different themes (forestry, agriculture, demographic, infrastructure, metadata). ▪ Working with the most applicable standards.
Are there links between the geospatial community and the national standardization body?	<ul style="list-style-type: none"> ▪ There are no links between the geospatial community and the national standardization body 	<ul style="list-style-type: none"> ▪ There should be a link between the standard bureau and collaborating geospatial institutes through MoU with cooperating agreements
What actions would be necessary to strengthen the use of geospatial standards in the daily geospatial information management processes?	<ul style="list-style-type: none"> ▪ There is no national team but only on institutional level. ▪ We are still in a beginning process of this issue 	<ul style="list-style-type: none"> ▪ Implementation of a body that sets the standards regarding geospatial information and management. ▪ There must be a National team for the validation and management of the spatial information. ▪ Create a platform (virtual or personal) for users with geospatial information and exchange information, experiences and new developments ▪ Proper documentation of standards, information sessions to improve awareness of the standards, broad communication through different media about standards, capacity building sessions on how to implement the standards in workflows.

5. Partnerships

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
<p>What kind of partnerships could be established in Suriname to make the national geospatial initiative advance?</p>	<ul style="list-style-type: none"> ▪ There is cooperation within certain institutions but there is none on national level. ▪ We already have national collaboration initiatives ▪ There are no formal partnership between institutions ▪ There are partnerships between organizations. ▪ MOU's between different organizations ▪ TOR, one on one contracts between organizations. 	<ul style="list-style-type: none"> ▪ A network, board or association with members from institutions that produce or make frequent use of geospatial data. ▪ Strengthen bilateral partnerships with regards to knowledge sharing, end-user optimization, not be limited to operational but also on technical ▪ There must be an agreement between the partners which data should be shared and which not (such as confidential data). ▪ There must be a monitoring unit for data. ▪ Central point of data storage, information sharing and communications. ▪ Cross sector and interdisciplinary cooperation(utilities-EBS, SWM, TELESUR, Ministries/public organizations with common goals) ▪ Community participation ▪ Public - private partnerships ▪ Share updates within the industry, provide tips and info on data sources or possibly share data, and have capacity building sessions.
<p>Would any organization outside the government be interested in supporting the national geospatial initiative?</p>	<ul style="list-style-type: none"> ▪ Organizations outside the government such as NGO's and CBO's will benefit from harmonized geospatial initiative because it will save them a lot of time and effort to get support from the geospatial experts in Suriname ▪ There are organizations interested in supporting national geospatial initiative outside the government. Example: SBB (FCMU), GISSAT, NIMOS ▪ Consultants 	<ul style="list-style-type: none"> ▪ The head of government organizations should be more open to such initiative and come to an MoU with these extending organizations ▪ It should mandatory by law. Because of the importance of the information for other institutions ▪ After a formal installation of national geospatial initiative their task and responsibilities should be communicated with the NGO's and CBO's.

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		<ul style="list-style-type: none"> ▪ Research on the need and willingness of public organizations on sharing their geospatial data ▪ Both commercial organisations and NGOs. E.g. companies that provide geospatial services and technology to organisations throughout the country, or non-profits such as VIDS, ACT-Suriname and Tropenbos Suriname, that may provide data or updates based on their experiences in the interior of Suriname, relating to both the nature and the tribal community.
<p>Who are the international partners/organizations that have been supporting the national geospatial initiative? What new instance of collaboration with the international community could be explored?</p>	<ul style="list-style-type: none"> ▪ ACTO Red- SBB (Gonini) ▪ International Hydrographic Organization (Maritime Spatial Data infrastructure) ▪ ECLAC ▪ ESRI ▪ UNDP ▪ MI-GLIS (Caribbean, the Netherlands etc.) ▪ UN ▪ ONF International I (an international, environmental consulting and expertise bureau specializing in sustainable ecosystem management) ▪ FAO ▪ ONFI ▪ INPE ▪ CATIE. ▪ World Bank ▪ IDB ▪ GEF/SGP. ▪ INPE (Institute of spatial planning in Brazil) ▪ KAPPLAN ▪ IICA 	<ul style="list-style-type: none"> ▪ Internally the institutions need to evaluate their status and create their roadmap and look for collaboration with international partners. ▪ All institutions regarding geospatial data should be aware of these possibilities and start a partnership and or apply with project proposal in this matter ▪ Acquiring high resolution data ▪ UN GGIM.

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	<ul style="list-style-type: none">▪ WWF▪ EMBRAPA▪ Chinese embassy▪ NASA▪ USGS▪ CIMH▪ CMO▪ UNGGIM.▪ UWI▪ University of Twente)▪ Kadaster intl	

6. Capacity and Education

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
<p>Is an inventory currently available on the status of geospatial skills within public institutions?</p>	<ul style="list-style-type: none">) Not yet) We are not aware of such an inventory) Within the CCCD project (Crosscutting Capacity Development) an assessment has been done on the status of geospatial skills within public institutions) SBB has executed an assessment on a national level some time ago.) An inventory is currently not available on the status of geospatial skills within public institutions) Yes, there is, the national capacity self-assessment document, which is created in 2008 (NCSA). Cross cutting capacity development (CCCD).) No, but it is clear that departments who are more involved with geospatial data got more skills than others 	<ul style="list-style-type: none">) To involve all the stakeholders that has some knowledge and skills and used in daily work. (for example consultancies)) Do an inventory (e.g. an online registration of skilled persons)) Annual inventory update on the status of geospatial skills) An assessment should be made among all relevant public institutions, and maintained in case of any new developments. The resulting inventory should be made available to all relevant parties.) There must be inventory be setup or a database on the status of geospatial skills within public institutions, with the emphasis on skills, sustainability, policy, continuation, human resource, hardware, software, orgware and financial needs in the form in the governm nt budget) These assessment documents should be updated yearly/every 2 years with all the certain organizations <ul style="list-style-type: none"> - Inventory on skills - Need for geospatial data - Awareness - training
<p>Is knowledge and information disseminated regarding the undergraduate, post-graduate and other modalities (e-learning) in the field of geospatial information management?</p>	<ul style="list-style-type: none">) Yes, but not enough. Not all stakeholders are being involved.) The university is making an effort to disseminate knowledge and information. 	<ul style="list-style-type: none">) More workshops and information sessions.) It is desirable to do this on a larger scale

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	<ul style="list-style-type: none">) In some courses basis knowledge and information are disseminated.) PTC, NATIN, ADEK) Yes, GIS classes are given on various levels and to multiple study programmes. Known educational institutes that provide GIS classes are the University of Suriname, the Polytechnic College, NATIN and IOL.) SBB has had provided some basic software training to their stakeholders in the past.) GISsat provides training and on-the-job coaching sessions to clients (including may public or semi-public institutions), but specifically for ArcGIS software.) There is no knowledge and information disseminated regarding the undergraduate, post-graduate and other modalities (e-learning) in the field of geospatial information management) PTC, NATIN, IOL giving GIS courses to others) Yes, on bachelor and master level. There is an e-learning modality and there are tutorials online (is an open source website).) Basic GIS, but no further specialization (Natin, PTC.) GIS online training (Esri) 	<ul style="list-style-type: none">) Include more practical courses about geospatial info in the curriculum, starting at the primary education.) Ideally, there would be a study programme or educational institute specifically for GIS or geospatial education, but with the current situation (available knowledge and industry size) it does not seem feasible as of yet.) There needs to be platform in place for such matters (knowledge and information)) By promoting the knowledge and information more on a broader scale) There should be more education/training on geospatial
<p>Is there a diagnosis of training needs in national public institutions?</p>	<ul style="list-style-type: none">) There are some. It depends on the institutions or organization structure.) Diagnosis is being done internally in organizations. But there's no national system where the needs are available. 	<ul style="list-style-type: none">) Funds are needed for the institutions that have not yet incorporated geospatial information in their work process.) Awareness of the importance of geospatial information.

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	<ul style="list-style-type: none">) No diagnosis of training needs is applied on a regular basis, however when opportunities are available to participate on trainings certain needs become knowable) There has been a diagnosis by SBB.) If there is no inventory on spatial data skills then there is no diagnosis of training.) Yes, on project basis. It depends on the needs from the institutions. Diagnoses are also done internally.) No. currently some studies are no longer available. 	<ul style="list-style-type: none">) Do an inventory (e.g. an online registration of skilled persons)) The diagnosis of SBB should be updated.) There must be diagnosis task of the public institutions) There should be a follow up regarding the diagnosis.) Start with a national education plan for geography. We used to do it in a traditional way but it is necessary to renew this subject.) Mi gliss could participate in exhibitions for students
<p>What actions could be taken to promote the meeting between supply and demand, in terms of strengthening geospatial capabilities?</p>	<ul style="list-style-type: none">) Unknown where to search for specific geospatial data.) The current situation is that there is not enough promotion regarding geospatial capabilities for further implementation on a government level) In the form of training sessions and workshops 	<ul style="list-style-type: none">) Database of the deliverables of the institutions.) Increase of Networking, sharing of information, sharing of knowledge.) Awareness) Need of supporting data from different actors such as MI-GLIS) The first step would be to identify the demand, and then depending on those findings, promote development of the supply, if there are any gaps.) For the geospatial capacity building to be promoted on a national level, it is considered very important that national decision makers are aware of its need, so that appropriate actions can be taken on a higher level.) There should be regular meetings, trainings and workshops be promoted to be well aware of the supply and demand in terms of geospatial data

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		<ul style="list-style-type: none">) On a structural basis these training sessions and workshops should be planned) The more advanced institutes can train the less advanced.
<p>Is there a national research agenda in the geospatial field?</p>	<ul style="list-style-type: none">) No) There's no national research agenda, but MI GLIS is taking initiative.) No national research agenda in the geospatial field) Not really; geospatial research is done disparately.) There is no national research agenda in the geospatial field) There is. SBB has forest cover monitoring unit and mangrove monitoring in association with CELOS. OW has done flooding influences within Paramaribo. Telesur does desktop and field research (for internally).) Mi glis start with the workshop of a geospatial network. 	<ul style="list-style-type: none">) See previous proposal) Organizations should comply /support the agenda.) A national agenda should be drawn up.) There must be a national research agenda in the geospatial field set up in a national platform) More cooperation between the different organizations) Further they expect the government to take this plan and support further development on a national level
<p>Are there experiences or links between public institutions and academia to strengthen geospatial capabilities?</p>	<ul style="list-style-type: none">) Yes, there are links. These are through workshops and projects.) Yes there are.) E.g.) ESRI –GISSAT-ADEK (licenses are being provided for free)) ADEK-Public institutions such as Planburo, OW, ATM (ADEK provides training)) SBB-ADEK (SBB provides training)) There's a link between public institutions and academia to strengthen geospatial capabilities. 	<ul style="list-style-type: none">) Sharing experiences on a platform. Platform is needed for example that by exchanging experiences institutions can identify common ground with each other and sharing common issues and new ideas.) Strengthening of links) A possibility for a MOU between NIMOS and UWI Jamaica within UNFCCC) Further collaboration with other stakeholders/organizations between public institutions and academia to strengthen geospatial capabilities

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	<ul style="list-style-type: none"> <li data-bbox="779 245 1323 313">) SBB (FCMU) - CELOS, IGSR provide trainings <li data-bbox="779 318 1323 456">) Yes, there are public or semi-public institutions that accept students as interns to improve their geospatial skills and practical experience. <li data-bbox="779 461 1323 599">) Yes there is experiences or links between public institutions and academia to strengthen geospatial capabilities, for example University of Antwerpen <li data-bbox="779 604 1323 672">) Yes, association between SBB and CELOS, LVV and ADEK. WWF, SWM <li data-bbox="779 677 1323 745">) Between public and academia there is no link yet 	<ul style="list-style-type: none"> <li data-bbox="1352 245 1879 313">) More experiences should be shared between the different organizations

7. Communication and Engagement

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
<p>What elements, initiatives or practices could be considered a national communication plan in the geospatial field?</p>	<ul style="list-style-type: none">) Information sessions) Workshops) Land Use Land cover process can be considered as a national communication medium for geospatial data) SBB is doing info sharing sessions together with PMU.) There are some elements, initiatives/practices to set up a national communication plan in the geospatial field, scattered throughout different organizations, example: MIGLIS, SBB (Gonini), GMD, LVV (Fisheries)) NII (public), depends on MIGLIS) The current workshop of Miglis, Nimos, Gonini, LULC map of SBB, Percelen on line, HI_ coza app 	<ul style="list-style-type: none">) Central point of communications) Create an app in which is indicated what data is available and where to get it.) Stakeholders/communication matrix) Appointing focal points per organization for regular meetings regarding the geospatial field.) Organization of workshops) This should get a legal mandate) Update of LULC maps every two years) Communicate strengths and weaknesses amongst organisations so that the more equipped organisations know where their support is needed.) Newsletter among the collaborative geospatial body that was suggested earlier.) Website with an overview of geoportals.) Promotional videos on updates.) There should be a central platform be setup for elements, initiatives or practices where a national communication plan in the geospatial field can be realized) The national communication plan must be created by MIGLIS) Exhibitions) Lobby_ education centre) Curriculum change
<p>Do institutions know the actors that make up their user community?</p>	<ul style="list-style-type: none">) Some are known. But some are known only after communication or information request. 	<ul style="list-style-type: none">) When there is a central point of registration only then the actors/user community can be listed and will be known.

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
	<ul style="list-style-type: none">) They are aware of the actors that make up their user community) Usually they do know their users but we don't know if this is effective enough.) Not entirely because some of the institutions are not fully aware about their in-house data) The most important (intended) users, both internally and externally, are known to a decent degree, because there is actual contact with them. SBB knows the secondary users of their published data only to some extent, because this can be derived from their website traffic information.) Yes, the institutions know their actors, e.g. Real estate developers, Utility companies 	<ul style="list-style-type: none">) Strengthening of information to the user community.) More outreach activities needs to be done) Make an inventory of users who use info from certain institutions) If the primary users are known and reached, there is little need for additional action.) With this central platform in place we can provide information to the general public) Every organization should keep track of their statistics) Research on what their needs are.
<p>How could communication with communities of users of geospatial information be strengthened?</p>	<ul style="list-style-type: none">) There is no central point of communication.) Via organizations website) Through social media, apps.) Stakeholders – communication matrix.) The current situation now, is that some/most of the geospatial information are being shared among collaborating institutions SBB (Gonini), GMD portal, MIGLIS portal (for a certain level)) This possibility is not well known to the general public whom has no access to internet/communication facilities) Workshops, Meetings (to share information) to evaluate etc., training sessions (community basic training), 	<ul style="list-style-type: none">) Central platform to give feedback, discuss and adjust.) Through proactive outreach programs.) The proposed SDI.) An online communication platform, such as a forum, for users of geospatial data. It could also be something like Linked In, where articles could be shared and updates can be posted by users themselves.) Awareness, easy and user friendly access to internet facilities with this public relations information through websites/geoportals (for example NII), and also more collaboration with

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	<p>hands on training, SBB Gonini portal, GMD portal</p> <p>) Structural consulting</p>	<p>institutions through MoU, contracts and workshops.</p> <p>) On a structural basis these training sessions and workshops should be planned</p> <p>) Follow up workshops, training sessions, hands on training</p> <p>) Awareness, easy and user-friendly access to internet</p>

8. Policy and Legal

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
<p>What are the biggest cultural barriers to share information?</p>	<ul style="list-style-type: none">) Internally not documented) Hesitation on data sharing because the institutions don't know how the data will be used and is afraid that their data can be misused.) Protection of your investments (data)) We are apprehensive to change especially on higher level.) Political interference in various projects) Apprehensiveness about investing in data production, only to have other parties monetising or sharing that data without permission or acknowledgement of its producer.) The willingness to share data for another, there are bureaucratic reasons which makes that they are existing barriers) Fear that data will be misused or that others will profit from their data in case it is shared for free.) Fear to loose position 	<ul style="list-style-type: none">) Although the data can be viewed at the central point, but to get the data the receiver has to contact the data owner so that they can decide if they want to share or not.) Mind shift) Think out of the box) Build a national geospatial framework. With this framework we can specify what can be shared and what not and why.) Good governments and transparency) Initiate data-sharing collaborations to create an atmosphere of data exchange rather than one of data misuse.) Set an example by taking the lead and start sharing data with others.) Structural approach. There must be by law (protocol, procedures and working guidelines, rules and policies) in regards to sharing geospatial information) To make policy concerning the sharing of data
<p>Are there licensing practices for geospatial information in public institutions?</p>	<ul style="list-style-type: none">) Yes there are. The institutions are working with license agreements.) Organizations have their own licensing practices.) Yes, e.g. software licenses, terms of use by the data producers) Yes, these are both internal and external, to limit the availability of certain sensitive information to only those users who need it. Currently at SBB it is regulated by requesting the data, then having an 	<ul style="list-style-type: none">) License agreements need to be included in the standardization.) Centralization of licensing practices from all public institutions) Make use of technology to leverage the process of accessing permitted data. E.g. a user account to which access rights are ascribed. The user then needs to log in to the system to gain access to the data, rather than going through a manual

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
	<p>authoritative body verifying the access, and if it is approved, providing the data to the requesting party.</p> <ul style="list-style-type: none"> J There are no licensing practices for geospatial information in public institutions J Every public institution has their own licensing practices J Yes, in the case of infrastructure work on public road/ ground the ministry of public works refers permit requester to the utility company to ask for their data. 	<p>check. (This is already being implemented at the SBB.)</p> <ul style="list-style-type: none"> J There must be a central institution for these licensing practices J Licensing should be determined and be in accordance with legislation J There must be by law (protocol, procedures and working guidelines) (rules and policies) in regards to sharing geospatial information
<p>Are there directives or regulations that protect intellectual property rights, privacy or secrecy, about geospatial information?</p>	<ul style="list-style-type: none"> J Yes, we think that some organizations have these in place. J Not regulations parse, but the use of MOU and contracts is common. J No there is no directives or regulations that protect intellectual property rights, privacy or secrecy, about geospatial information. Current situation is branding labels can only be protected. J The team is not aware of this part. There are some GLIS, ABS but they are not central regulations to protect intellectual property rights J There is a bureau. Not specified for geospatial. Organizations can use that to protect their data. 	<ul style="list-style-type: none"> J Although the data can be viewed at the central point, but to get the data the receiver has to contact the data owner so that they can decide if they want to share or not. J Regulations need to be in place that protect intellectual property rights, privacy or secrecy, about geospatial information J There must be a law for directives or regulations that protect intellectual property rights, privacy or secrecy, about geospatial information J There must be a central institution to protect property rights, privacy or secrecy about geospatial information by law for directives or regulations J It is the right of the institute to determine how their data should be used. Users need permission to use data from others
<p>Is it considered necessary to develop and disseminate these regulations or directives?</p>	<ul style="list-style-type: none"> J Yes it is, so that the users know exactly what kind of information/data they can obtain and how to use the information. 	<ul style="list-style-type: none"> J It is necessary to continue with it.

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	<p>) Yes, it's necessary</p>	<p>) This will protect intellectual property rights, privacy or secrecy, about geospatial information</p> <p>) Yes, because it might make stakeholders more inclined to share their data, when they know that they can take legal measures in case their data is misused.</p> <p>) Structural approach for information sharing by law (protocol, procedures and working guidelines)</p> <p>) Legal frame work. The glis law determine that some organizations have to share data e.g CBB. However it is not specified how this should be done.</p> <p>) There must be by law (protocol, procedures and working guidelines) (rules and policies) in regards to sharing geospatial information</p>

9. Financial

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
<p>Are there collection mechanisms for end users for the use of geospatial data or services?</p>	<ul style="list-style-type: none"> <li data-bbox="772 313 1325 483">) There are collection mechanisms depending on the type of stakeholders or information they need. E.g. Purchasing Bathymetric charts, nautical charts, tide tables at MAS. <li data-bbox="772 492 1325 597">) This differs from organization to organization, E.g. Geoportal SBB – free and easy to obtain (downloading) <li data-bbox="772 605 1325 662">) GBS data – mostly not free, and it takes some time to obtain info <li data-bbox="772 670 1325 776">) This will protect intellectual property rights, privacy or secrecy, about geospatial information <li data-bbox="772 784 1325 922">) There are collection mechanisms for acquiring geospatial data. E.g. abs, glis, Where you have to pay for acquiring certain data. <li data-bbox="772 930 1325 1101">) A lot of data and services is provided freely by public institutions; payments would usually be for administrative services rather than for geospatial services. <li data-bbox="772 1109 1325 1279">) There are institutions that sell data in digital format, such as GPX files from SBB, parcel data from GLIS. CELOS also sells printed data. GISsat sells data in digital and printed format. <li data-bbox="772 1287 1325 1458">) The same organisations provide a lot of data freely online through their geoportals (e.g. SBB, GISsat, GLIS), although the data published on here is limited in detail. 	<ul style="list-style-type: none"> <li data-bbox="1346 313 1892 386">) Online viewer of the available data with the possibility for online data purchase. <li data-bbox="1346 394 1892 451">) To hold workshop or information sessions for the decision makers. <li data-bbox="1346 459 1892 597">) There must be a collection mechanism initiated for the end user for the use of geospatial data or services (rules and policies) for a fixed price <li data-bbox="1346 605 1892 743">) Create a collection mechanism for end users which is user friendly, legalized by law, with protocols, procedures. For the public users it must be an open source. <li data-bbox="1346 751 1892 808">) There have to be a financial mechanism <li data-bbox="1346 816 1892 857">) Determine which data is for free and what should you pay for.

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
	<ul style="list-style-type: none">) The current situation is there is no collection mechanisms for the end users for the use of geospatial data or services as of we know now) No. Utility companies shares their data for free to protect their infra from damage but also to protect people for accidents. Office: yes 	
<p>Is there awareness of the social and economic benefits of geospatial data, at the level of decision makers?</p>	<ul style="list-style-type: none">) Is unknown among us.) There is some awareness but this is not a priority, because things like the platform would already be established if this was the case.) There is awareness, but at the beginner fase.) There is not enough awareness.) At the level of decision makers in public institutions in Suriname, the value of geospatial information is recognized as a tool to support management and they are well aware about the social and economic beneficial effects, but it is not a priority because of financial/other reasons) No, there is no awareness at the level of decision makers 	<ul style="list-style-type: none">) The institutions need to inform the decision makers of the social and economic benefits of geospatial data.) Create more awareness) To hold workshop or information sessions for the decision makers.) The policy makers must be made aware of the social and economic benefits of geospatial data and also provide the head of the government the beneficial advice about geospatial for the financial) At the level of decision makers should be made aware in geospatial data policy) Create awareness. An institute as mi glis should provide the information towards the decision makers.
<p>Which sectors would benefit most from the use of geospatial information in their management processes?</p>	<ul style="list-style-type: none">) Sectors that work with spatial data benefit the most from it.) Mostly the public sector) The government will benefit the most from the use of geospatial information in their management processes. e.g. Glis, Min of ROGB, Min. Ro, Public works, etc) Not all institutions are well aware of the geospatial data and what the beneficial 	<ul style="list-style-type: none">) Sectors, that are not aware of the benefit from the geospatial information, need to be informed and need to be assisted to begin with gathering spatial data.) Policy where it is stated that spatial plans should be made with the use of geospatial data.) LVV: precision agriculture.

Subtopic/question	Current situation (gaps, opportunities)	Proposed Actions
	<p>effect can be for their sector. Most of the sectors that has in their core business the use of geospatial data will be beneficial in the long run</p> <ul style="list-style-type: none">) Service and production sector) Spatial planning 	<p>HI: with regards to handing out permissions. Private: retail, marketing research. OWTC, ROGB, NH.</p> <ul style="list-style-type: none">) There should be laws and regulations for the user how he or she can be aware of these beneficial effects on geospatial information on a financial aspect.) For all the sectors (agriculture, production, service), depending on the budget of those sectors