SUSTAINABLE ROAD INFRASTRUCTURE DEVELOPMENT IN GBARAIN/EKPETIAMA, OKORDIA/ZARAMA AND KOLO CREEK CLUSTERS AS COMPONENT OF DIVERSIFIED DEVELOPMENT INTERVENTION MIX

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1.0 BACKGROUNG:

One of the key objectives of the RCE Greater Yenagoa is to advocate for all-inclusive and holistic development interventions that are decided and driven by the beneficiaries. The most challenging environmental problem of the four local government areas where RCE Greater Yenagoa is situated is the seasonal water-logging experienced by the communities, during the rainy seasons. This problem is more pronounced between July to October every year because most of

Bayelsa state is in the wet lowlands of the Niger Delta region close to the Atlantic Ocean. During the rainy seasons, the soils in most of the area suffer waterlogging. This makes movement difficult in many of their communities during the rains.

Community Inter-Relations and Conciliation Initiative (CIRCI), a non-government organization (NGO) that specializes in community relations/sustainable community development was engaged by Shell Petroleum Development Company of Nigeria Limited to facilitate the smooth implementation of the Global Memorandum of Understanding, the company entered with the following three development clusters and their communities: Gbarain/Ekpetiama (12 communities), Kolo Creek (4 communities) and Okordia/Zarama (9 communities). The NGO ensures that every community working with it makes a five-year community development plan (CDP) in line with the operational guideline of the GMOU. The CDPs were revalidated every year as a possible way of mitigating unexpected changes that may warrant realignment of the made plans. Equally, the NGO as a matter of policy ensures that the communities are adequately educated through community enlightenment talks to build their capacities towards them making informed decisions about sustainable intervention choices, and appreciate the importance of sustainable development and peaceful coexistence. This is done as the first thing during most community engagements especially engagements for conducting Sustainable Needs Assessment. CIRCI, therefore, had Community Education for all 25 communities at the beginning of these needs assessment engagements.

The process involves the communities listing their key development challenges, then ranking them in line with priorities using pair-wise ranking tools to allow the communities objectively challenge the lists made. The 25 communities covered in the three development clusters of Gbarain/Ekpetiama, Kolo Creek, and Okordia/Zarama development clusters under the facilitation of this NGO, each came up with a prioritized ranking of such challenges, and also for each challenge, they also agreed upon after brain-storming the possible interventions that can address the issue bearing in mind the possible funding constraints they have.

The ranking summary analysis as shown below indicates that water-logging in the communities is the highest priority challenge and it was so in the subsequent re-validations carried out between years 2020 and 2022.

The table below shows a summary of the priority rankings given by the individual communities to the major challenges they identified.

Table 1: Showing the priority ranking of developmental challenges by the communities

SN	Development Cluster	Community	RANK				
			Seasonal Water-logging	Poor access to education	Acute Unemployment	Lack of finance for business	No constant electricity supply
1	Gbarain/ Ekpetiama	Agbia	3	5	2	6	1
2		Ayama	2	3	5	7	2
3		Gbarantoru	1	7	1	5	3
4		Koroama	4	2	2	1	6
5		Kumbuama	7	2	3	5	1
6		Neduga	3	6	4	2	1
7		Obunagha	1	5	3	6	2
8		Ogboloma	6	5	2	8	7
9		Okolobiri	3	5	4	10	1
10		Okotiama	1	5	4	9	6
11		Polaku	1	3	2	5	9
12		Tunuama	1	3	4	14	2
13	Kolo Creek	Elebele	1	2	5	7	4
14		Imiringi	1	4	3	8	5
15		Otuasega	2	10	18	9	7
16		Yiba-Ama	1	11	6	17	20
17	Okordia/ Zarama	Agbobiri	1	10	9	5	3
18		Akumoni	1	6	5	3	10
19		Ayamabele	1	3	4	9	9
20		Epie-Zarama	2	7	6	8	3
21		Free-Town	1	3	2	4	8
22		Ikarama	2	4	3	10	14
23		Kalaba	1	2	5	4	10
24		New-Jerusalem	2	5	6	7	1
25		Nyambiri	3	5	6	2	1
Cumulative score from individual ranking			52	123	114	171	136
Average ranking score			2.08	4.92	4.56	6.84	5.44
Ranking in terms of most challenging			1st	3rd	2nd	5th	4th

The third last row of the table above shows the cumulative ranking score for each identified problem. The second last row shows the mean ranking derived from dividing the total by the number of communities (25). The table showed that water-logging was ranked the most pressing problem, followed by acute unemployment. The third most pressing problem they identified was access to quality education. The problem of constant availability of electricity supply came fourth while lack of finance to do business came fifth. There were other problems mentioned by the communities but the five listed above were the most important priorities for them.

This presentation aims to elucidate on the efforts so far made by the affected communities between the years 2018 and 2023 and we have highlighted the projects completed between Nov. 2022 to March 2023 towards ameliorating the impacts of seasonal water-logging in their communities and how they had used resources available to them to mitigate this particular developmental challenge.

NEEDS ASSESSMENT/COMMUNITY EDUCATION:

Gbarain/Ekpetiama Cluster wide Engagement

Community Engagement in Akumoni

Community Engagement in Epie Zarama

Community Engagement in Freetown

The four pictures above are some of the community group discussions that were held in each of all the communities.

2.0 MAGNITUDE OF THE CHALLENGE:

The water-logging problem causes difficulty for people to move around within the communities, and it also produces conditions for the breeding of mosquitoes that cause malaria disease. Motor vehicle owners may find it just a little easier to move around but considering the situation where almost everyone in such communities does not have motor vehicles, the enormity of the challenge can be better appreciated.

The severity of this problem is mainly for the communities' internal roads. The main access roads linking the various communities are mostly in good or tolerable condition and were constructed by either the state government or an oil company operating in this locality (Shell Petroleum Development Company of Nigeria Limited).

See below some roads showing the nature or conditions of unattended or poorly managed roads in the wetlands of the Niger Delta region and the RCE network area.

Figures above show the different grades of disrepair (nature) of some community internal roads

These 25 communities, therefore, see it as a necessity to help themselves by constructing their roads with some of the funds available to them.

It is worth mentioning at this point that the seasonal water-logging problem occurs not only in the habitable areas of the communities, the whole environment, including their farm-lands equally get flooded causing farmers to hurriedly harvest their crops immature as a means of getting back some produce from the field and not losing all to the floods. In addition, to these seasonal flood problems, the communities suffer massive high flood problems at

intervals of 5 to 10 years. The massive flooding which is aggravated by climate change impacts a much wider area in Nigeria, as the banks of Niger and Benue rivers and several adjourning communities in the states in Nigeria are flooded and the flood can rise as high as to roof-tops of houses.

This concrete roads as an intervention being discussed in this presentation, however only covers the improvement of internal community roads as access by people to their various homes within the communities all year round and not as a result of these major climate change-related flood incidents that have regional impacts, and are not within the capacities of the communities or their state governments to handle or address.

3.0 NATURE OF PROJECT:

The choice of road type by the communities is of concrete nature, obtained from a mixture of cement, aggregate (granite) and sand, and such roads withstand the environmental and physical stress they are exposed to better and are invariably more durable.

The road construction usually involves the following:

- Clearing of the proposed route
- Removal of vegetable topsoil
- Excavation of side drains
- Construction of drainage form-work
- Casting of bottom and side concrete drainage
- Filling with sharp sand
- Casting of the concrete road pavement

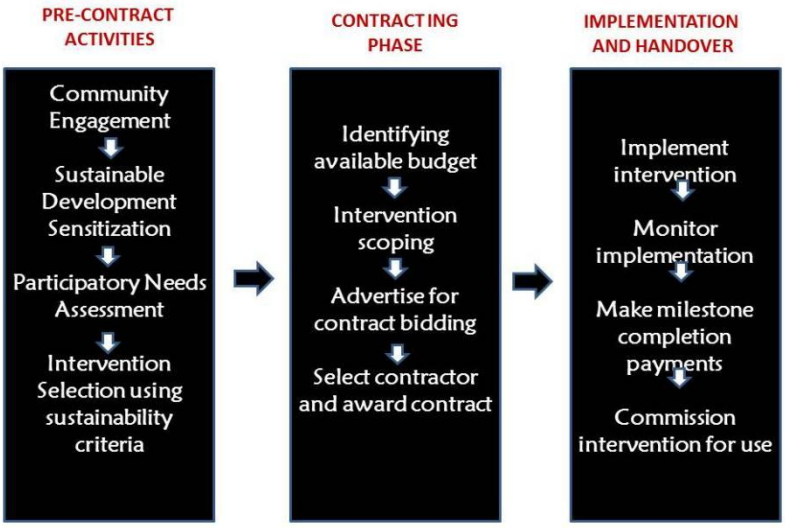
This type of road infrastructure intervention aims at improving the 'quality of life' of the communities in line with **Sustainable Development Goal 11: Sustainable cities and communities** (Make cities and human settlements inclusive, safe, resilient, and sustainable), and especially that of Target 11.3 (By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries).

The communities have chosen to use some of the funds from the Corporate Social Responsibility investments by Shell Petroleum Development Company of

Nigeria Limited and her Joint Venture partners to improve their environments, and especially construct these concrete roads and walkways to Improve access and easy movement around within their communities.

In line with the sustainable development procedure and guidelines agreed in the Global Memorandum of Understanding for which SPDC is providing a stipulated annual funding for use by the communities to implement sustainable development interventions towards mitigating their development challenges, communities were able to improve their lot using this and other interventions.

4.0 PROJECT IMPLEMENTATION PROCESS:



The figure above explains the implementation process.

The first block representing the pre-contracting phase is critical for a successful implementation of an intervention. It shows the steps of participatory planning, community education/enlightenment talks, needs assessment, problem priority ranking, and intervention selection.

The second block explains the following: identifying the budget available, scoping the intervention in line with budget availability, advertising for pre-qualified contractors to tender for the jobs, and awarding the contract.

The last block is equally very important, as the beneficiaries are part of the monitoring and approval of payments for completed milestones. At the end of the project implementation, the beneficiaries are equally part of the project

commissioning, so that some feedback and possible learning points are gathered for posterity.

5.0 PROJECT OUTCOMES:

The table 2 below shows the road projects completed between Set. 2022 and June 2023 in Kolo Creek cluster

S/N	COMMUNITY	PROJECT TITLE	START DATE	COMPLETION DATE	PROJECT AMOUNT IN NAIRA	ESTMATE IN US DOLLARS AS AT 2022	PICTURES
1	Elebele	Concrete Road With Dual Drainage (100m Long X 6m Wide) Elebele Community	July, 2020	Sept. 2022	11,400,000.00	25,909.09	
2	Otuasega	Concrete Road With Dual Drainage (135m Long X 8.4m Wide) At Sir Orlando Igbuasi Street Otuasega Community	August, 2021	Oct. 2022	24,969,420.00	56,748.68	
3	IMIRINGI	CONSTRUCTION OF CONCRETE ROAD WITH DUAL DRAINAGE (300M LONG X 6M WIDE) AT IMIRINGI COMMUNITY	August, 2021	Nov. 2022	37,895,000.00	86,125.00	
	SUB-TOTAL				74,264,420.00	168,782.77	

The table 3 below shows the road projects completed between Sept. 2022 and June 2023 in Okordia/Zarama cluster

S/N	COMMUNITY	PROJECT TITLE	START DATE	COMPLETION DATE	PROJECT AMOUNT IN	ESTMATE IN US DOLLARS	PICTURES
4	FREETOWN	Construction Of 30 X 8m Concrete Road/Drainage at Water Board Road, Freetown Community	July, 2022	Sept. 2022	6,080,000.00	13,818.18	
5	KALABA	Construction Of Concrete Road/Drainage Phase 2 At Women Development Center Road Kalaba, Bayelsa State	July, 2022	Oct. 2022	6,620,800.00	15,047.27	
6	AGBOBIRI	Construction Of 32 X 8m Concrete Road Drainage at Agbobiri Community	July, 2022	Oct. 2022	6,442,014.00	14,640.94	
7	AKUMONI	Construction Of Concrete Road/Drainage at Akumoni, Bayelsa State (Length: 40m X 8m Wide).	July, 2022	Jan. 2023	7,796,257.00	17,718.77	
8	AYAMABELE	The Construction of Concrete Road/Drainage at Ayamabele Community, Bayelsa State (Length: 40m X 8m Wide).	July, 2022	Feb. 2023	6,975,144.00	15,852.60	
	SUB-TOTAL				33,914,215.00	77,077.76	

The table 4 below shows the road projects completed between Sept. 2022 and June 2023 in Gbarain/Ekpetiama cluster

S/N	COMMUNITY	PROJECT TITLE	START DATE	COMPLETION DATE	PROJECT AMOUNT IN NAIRA	ESTMATE IN US DOLLARS AS AT 2022	PICTURES
9	Tunuama	Construction Of 99m X 5m Concrete Road with Dual Drainage at Chief Timipa Benson Street Road, Tunuama, Bayelsa State	February, 2022	Oct. 2022	16,414,105.00	37,304.78	
10	Tunuama	Construction Of Chief Werenipre Road At Tunuama Community {A/Ave.Dimensions 57m X 4m & B/94m X 5m With Dual Drainage}.	February, 2022	Oct. 2022	19,972,472.24	45,391.98	
11	Tunuama	Construction Of Chief Imomotimi Road (95m X 5m) Concrete Road With Ground Beam On Both Sides At Tunuama Community, Bayelsa State	February, 2022	Oct. 2022	13,709,138.00	31,157.13	
12	Polaku	The Construction Of Concrete Walkway (2m X 200m) At Polaku, Bayelsa State	February, 2021	Oct. 2022	10,100,000.00	22,954.55	
13	Ogboloma	Construction Of Concrete Road with Single Drainage (80m Long X 5m Wide) Road 2 At Ogboloma Community	July, 2022	Nov. 2022	12,050,602.00	27,387.73	
14	Ogboloma	CONSTRUCTION OF CONCRETE ROAD WITH SINGLE DRAINAGE (80M LONG X 5M WIDE) ROAD 2 AT OGBOLOMA	July, 2022	Nov. 2022	12,050,602.00	27,387.73	
15	Obunagha	Construction Of Ebitimi Okoko 220m X 6m (Average Width) Concrete Road With Dual Drainage At Obunaga Community Bayelsa State	July, 2021	Nov. 2022	36,498,428.72	82,950.97	
16	Koroama	Construction Of Concrete Walkway (3m X 200m) At Isaiah K Road-Koroama	July, 2021	Dec. 2022	18,194,534.00	41,351.21	
17	Obunagha	The Construction Of 240m X 7m Concrete Link Road/Drainage Extension At Obunagha, Bayelsa State	February, 2021	Dec. 2022	36,882,000.00	83,822.73	
18	Nedugo	Construction Of Concrete Road With Single Drainage 78m Long At Nedugo	July, 2022	Jan. 2023	11,499,390.00	26,134.98	
19	Kumboama	Completion Of Concrete Road With Dual Drainage At Christ Embassy Road-Kumbo Ama {Ave. Dimension 87m X 5m}.	February, 2022	Feb. 2023	13,391,783.41	30,435.87	
	SUB-TOTAL				200,763,055.37	456,279.67	
	GRAND TOTAL				308,941,690.37	702,140.21	

Out of **eighty (80) road projects** completed by these three development clusters between 2018 and 2023, nineteen **(19) of the roads** were completed within the reporting period of September 2022 to August 2023. The total cost of the nineteen road projects from start to completion was approximately Seven Hundred and Two Thousand One Hundred and Fourty US Dollars and Twenty-One cents ($702,140.21). This figure was derived by dividing the actual Naira cost equivalent of the project by 440. Though the exchange rates were not static during the project implementation period, as Naira got devalued from about 325 Naira to 1 US Dollar in 2018 to about 460 just before the end of 2022. For this report, we used the estimated exchange rate of 440 Naira to 1 USD for convenience only.

6.0 CONCLUSION

The beauty of this approach is their application of funds in a balanced way. Since in developing nations, there is a high deficit of necessary infrastructure, it will be difficult for them not to apply some of their funds to implementing some critical infrastructure like the construction of water schemes, roads, market stalls, and extension of electricity to new community areas, and installation of electricity transformers, among many. Waiting for the government to handle most of these projects may take a lot more time than the communities can afford. The communities are therefore highly commended as in addition to implementing hard infrastructure projects, they had used a good percent of their funds to implement human capital and other human development interventions like improving access to education, improving the learning environment, implementing income-generating projects, etc. For example, most of these clusters are spending 15% of their funds on women empowerment-related projects. In addition, Gbarain/Ekpetiama development cluster spent 25% of its funds on youth development interventions on cluster-wide bases. For such clusters, it is therefore less than 60% of its resources that are available for the communities to utilize on other interventions critical to them, of which a number are infrastructure related.

The report has shown a remarkable improvement in the quality of the internal roads in these 25 communities over the period. With these efforts, these

communities are achieving in principle the aspirations of the SDG11, and the credit goes to the sole sponsors of these interventions.

There is high local content in the project implementation as community members served as the contractors or nominated pre-qualified contractors that bided for and executed the jobs. These contractors were actively supervised by SPDC's employed Engineers to ensure quality control and assurance. The CDBs awarded and managed the project implementation process along with the sponsor.

We commend the Shell Petroleum Development Company of Nigeria Limited for their corporate social responsibility investments in these communities and therefore improving the quality of lives in their host and neighbouring communities. We thank the various community leadership (Kings, Paramount Chiefs, Community Development Boards, Community Trusts, and all the other stakeholders (chiefs, men, women, and youths, etc.) for their diligence and cooperation in carrying out these quality projects.