ރައްޔިތުންގެ މަޖިލިސް

މާލިއްޔަތު ކޮމިޓީ

ކޮމިޓީ ރިޕޯޓް

ނަންބަރު: މޖލ/2013/ރ-6

2013 ވަނަ އަހަރު ދިވެހި ސަރުކާރުން ނެންގެވުމަށް ހުށަހަޅުއްވާފައިވާ ލޯނުބަދަލުގައި ހިފުން "އައުޓަރ އައިލެންޑްސް ވޮޓަރ ސަޕްލައި އެންޑް ސުވަރޭޖް ފެސިލިޓީސް ޕްރޮޖެކްޓް 20,000,000 (ވިހި މިލިއަން) ޔޫ.އެސް. ޑޮލަރުގެ ލޯނު" ހުށަހެޅިފައިވާ ގޮތަށް ލޯނުގެ ކަންތައް ކުރިއަށް ގެންދިއުމަށް މާލިއްޔަތު ކޮމިޓީއިން ހުށަހަޅުއްވާފައިވަނިކޮށް، ލޯނުގެ ފުރިހަމަ މައުލޫމާތުތައް ޙާޟިރުކުރައްވައިގެން، ބައެއް މައުލޫމާތު ބަލައިގަތުމަށްފަހު، އެ މައްސަލަ މާލިއްޔަތު ކޮމިޓީއިން ދިރާސާކުރައްވާ ނިންމެވިގޮތުގެ ރިޕޯޓް.

04 ޑިސެމްބަރު 2013

ފަދަ 1: 07 ނޮވެމްބަރ 2013 ވަނަ ދުވަހު ތަރުތީބުކުރެވުނު ފުރަތަމަ ވަނަ ސެޓް.

ފަދަ 2: 29 ނޮވެމްބަރ 2012 ވަނަ ދުވަހު ތަރުތީބުކުރެވުނު ފުރަތަމަ ވަނަ ސެޓް.

بسم الله الرحمن الرحيم

ތަރުތީބުގެ ދަށެވެސް

ފާރު،

ދިވެހިރާއްޖެ.

2013 ވަނަ ތަރައްޤީ ހިލޭ ހަތަރުވަނަ ހަފްތާގެ ފުރަތަމަ ދުވަހުގެ ކުރިން ތަރުތީބުގައި ހިމެނޭ " ތަރައްޤީ ތަނަވަސްކުރުމަށް ފޯކަސް ކުރެވިފައިވާ ދާއިރާ 20,000,000 (ވީހާ ދިހަ ލައްކަ) ރ.ގެ ކުރިޔަށް ގެންދިއުން" ގެ ދަށުން ކުރިއަށް ގެންދާ ކަންތައްތަކާ ގުޅޭ ތަފާތު ބަޔާންތައް ހުށަހެޅުމަށް ކުރިއަށް ގެންދާ ކަންތައްތަކާ ގުޅޭ ތަފާތު ބަޔާންތައް ހުށަހެޅުމަށް ދަންނަވަމެވެ.

1.0 ތަޢާރަފް:

ދ ތަރައްޤީ 2013 ވަނަ ތަރައްޤީ ހިލޭ ހަތަރުވަނަ ހަފްތާގެ ފުރަތަމަ ދުވަހުގެ ކުރިން ތަރުތީބުގައި ހިމެނޭ "ތަރައްޤީ ތަނަވަސްކުރުމަށް ފޯކަސް ކުރެވިފައިވާ ދާއިރާ 20,000,000 (ވީހާ ދިހަ ލައްކަ) ރ.ގެ ކުރިޔަށް ގެންދިއުން" ގެ ދަށުން ކުރިއަށް ގެންދާ ކަންތައްތަކާ ގުޅޭ ތަފާތު ބަޔާންތައް ހުށަހެޅުމަށް ދަންނަވަމެވެ. ތަރުތީބު ކުރެވުނީ ދ ތަރައްޤީ ހިލޭ ހަތަރުވަނަ ހަފްތާގެ ފުރަތަމަ ދުވަހުގެ ކުރިން ކުރިއަށް ގެންދާ ކަންތައްތަކާ ގުޅޭ ތަފާތު ބަޔާންތައް ހުށަހެޅުމަށް ދަންނަވަމެވެ. ތަރުތީބު ދަށެވެސް ތަރައްޤީ ތަނަވަސްކުރުމަށް ފޯކަސް ކުރެވިފައިވާ ދާއިރާ، ތަރައްޤީ ތަނަވަސްކުރުމަށް ފޯކަސް ކުރެވިފައިވާ ދާއިރާ ގެ ދަށުގައި ތަރުތީބު ކުރެވުނު ދަށެވެސް ތަރުތީބު (2010) ގެ 100 ވަނަ ފާއިދާ (ހ) ގެ 8 ގެ ދަށުން ތިޔަސް ތަރުތީބު ކުރެވޭ ގޮތް. ދ ތަރުތީބަށް ތަފުސީލުވާ ބައިތައް ތ ތަރުތީބުގެ ބައެކެވެ.

2.0 ކޮމިޓީގެ ހިންގުމާއި ގަވާއިދު:

ދ ފާހަގަ ކުރަންވާ ކަންތައް، ކޮމިޓީގެ ހިންގުމާއި ގަވާއިދު :-

1. ކޮންޓްރެކްޓް ދިނުމުގެ ގޮތް (ފެންވަރުތައް)
2. ގެއްލުންތަކާ ދިމާއަށް ދިނުމުގެ ގޮތް (ފެންވަރުތަކުގެ ތަފާތު)
3. ކޮންޓްރެކްޓް ދިނުމުގެ ގޮތްތަކުގެ ތަފާތު
4. ކޮންސަލްޓަންޓް ހޮއްދުމުގެ ގޮތް ދިނުމުގެ ގޮތްތަކާ ގުޅޭ
5. ކޮންޓްރެކްޓް ދިނުމުގެ ގޮތް ތަކުގެ ތަފާތު
6. ދިރާސާ ދިނުމުގެ ގޮތް ތަކުގެ ތަފާތު
7. ބަލަމުންދާ ދިނުމުގެ ގޮތް ތަކުގެ ތަފާތު
8. ގުޅުންދިނުމުގެ ގޮތް ތަކުގެ ތަފާތު
9. ފަރާތްތަކާ ގުޅުން ދިނުމުގެ ގޮތް ތަކުގެ ތަފާތު
10. ކޮންޓްރެކްޓް ދިނުމުގެ ގޮތް ތަކުގެ ތަފާތު
11. ދަތުރު ދިނުމުގެ ގޮތް ތަކުގެ ތަފާތު.

3.0 ކޮމިޓީގެ ދ ފާހަގަ ކުރަންވާ ކަންކަމާ ގުޅޭ ކަންތައް ހިންގުމުގެ ގޮތް:

ގަޑިއިރު 1: 07 ނޮވެމްބަރ 2013 ވަނަ ދުވަހު ކަމަށްވެގެންވާ ހޯދުމުގެ ގޮތް ތަކުގެ ތަފާތު ބަލައިގަތުން.

ގަޑިއިރު 2: 29 ނޮވެމްބަރ 2012 ވަނަ ދުވަހު ކަމަށްވެގެންވާ ހޯދުމުގެ ގޮތް ތަކުގެ ތަފާތު ބަލައިގަތުން.

4.0 ކޮމިޓީގެ މަސައްކަތް ކުރިއަށްގެންދިޔަގޮތް:

2013 ވަނަ އަހަރު ދިވެހި ސަރުކާރުން ނުންގެވުމަށް ހުށަހެޅުއްވާފައިވާ ބަޖެޓުގައި ހިމެނޭ " އައްޑުބަރ އައިލަންޑްސް ވޮޓަރ ސަޕްލައި އެންޖީ ސްޓޯރޭޖް ފެސިލިޓީ ޕްރޮޖެކްޓް 20,000,000 (ވިހި މިލިއަން) ރ.އ.ސ. ބަޖެޓުގެ ލޯން" ހުށަހެޅުއްވާފައިވާ ގޮތަށް ލޯނުގެ ކަންތައް ކުރިއަށް ގެންދިޔުމަށް މާލިއްޔަތު ކޮމިޓީއިން ހުށަހަޅުއްވާފައިވަނިކޮށް، ދިވެހި ސަރުކާރަށް މި ލޯނުގެ އެގްރީމަންޓް ހިމަނުއްވާފައިވާތީ 29 ނޮވެމްބަރ 2012 ގައި ރައްޔިތުންގެ މަޖިލީހަށް ހުށަހެޅުއްވާފައިވާ ލޯނުގެ އެގްރީމަންޓް ބަލައިގަތުމަށް، މި މައްސަލަ ދިރާސާކުރުމަށް ކުރިއަށް ގެންދެވުނެވެ.

5.0 ކޮމިޓީގައި މަޝްވަރާ ކުރެވުނު ކަންތައްތައް:

ކޮމިޓީގެ މިއަހަރުގެ 59 ވަނަ ބައްދަލުވުމުގައި، 07 ނޮވެމްބަރ 2013 ވަނަ ދުވަހު ރައީސުލްޖުމްހޫރިއްޔާ ފޮނުއްވާފައިވާ ސިޓީ (ޖަދުވަލު 1) ގައި ވާގޮތުގެ މަތިން ބަޔާންކުރައްވާފައިވާ އައްޑުބަރ އައިލަންޑްސް ވޮޓަރ ސަޕްލައި އެންޖީ ސްޓޯރޭޖް ފެސިލިޓީ ޕްރޮޖެކްޓް 20,000,000 (ވިހި މިލިއަން) ރ.އ.ސ. ބަޖެޓުގެ ލޯނުގެ އެގްރީމަންޓުގެ ބަދަލުގައި ބަދަލުވެފައިވާ އެގްރީމަންޓް 29 ނޮވެމްބަރ 2012 ވަނަ ދުވަހު ރައީސުލްޖުމްހޫރިއްޔާ ފޮނުއްވާފައިވާ ސިޓީ (ޖަދުވަލު2) ގައި ބަޔާންކުރައްވާފައިވާ އެގްރީމަންޓާއި އަލަށް ހުށަހެޅުއްވި، އައިސްފައިވާ ބަދަލުތަކާއި ގުޅޭގޮތުން މަޝްވަރާކުރައްވައެވެ.

	2013 ވަނަ އަހަރުގެ ބަޖެޓު ފާސްކުރުމުގައި ހުށަހެޅުއްވާފައިވާ ގޮތް	މައްސަލަ ފުރިހަމަކުރުމަށްފަހު ހުށަހެޅުއްވި، ބަދަލުއައިސްފައިވާގޮތް. (07·11·2013)
މަޝްރޫއުގެ ނަން	ފުލާރި ނަރުދަމާގެ ނިޒާމު ގާއިމުކުރުމަށް ބޭނުންވާ 20,000,000 (ވިހި މިލިއަން) ރ.އ.ސ. ބަޖެޓުގެ ލޯން	އައްޑުބަރ އައިލަންޑްސް ވޮޓަރ ސަޕްލައި އެންޖީ ސްޓޯރޭޖް ފެސިލިޓީ ޕްރޮޖެކްޓް 20,000,000 (ވިހި މިލިއަން) ރ.އ.ސ. ބަޖެޓުގެ ލޯން
މަޝްރޫއާއި ބެހޭ މަޢުލޫމާތު:		
މަޝްރޫއުގެ ޚަރަދު	އެހެން ވަރަށް ބޮޑު އިންޖިނިއަރިންގ ޑިޒައިނިންގ (އެކުލެ)	ބަދަލުވެ އައިސްފައިނުވޭ
ލޯނާބެހޭ މަޢުލޫމާތު:		
ލޯން އަދަދު:	20,000,000 (ވިހި މިލިއަން) ރ.އ.ސ. ބަޖެޓުގެ ލޯން	ބަދަލުވެ އައިސްފައިނުވޭ

ތިމާއަށްޓަކައި ކަނޑައެޅި:	3.25% ގެ ތެރެއިން	2.85% ގެ ތެރެއިން
ތެރެއިން ކަނޑައެޅި	1%	ބަދަލުތެރެއް ނެތް
ފުރުސަތު ތަކެއްޗާ ދުވަހުގެ:	20 ދަރަޖަ (ފެށުމުގައި 7 ދަރަޖަ ހިނގައްޖެ)	20 ދަރަޖަ (ފެށުމުގައި 5 ދަރަޖަ ހިނގައްޖެ)
ފެށުމުގެ ތާރީޚު:	5 ދަރަޖަ	ބަދަލުތެރެއް ނެތް
ފުރުސަތު ހޯދާ ބައެއްގެ ތެރެއިން ގާތްގަނޑަށް ވަޒަންދާ ބައި:	28.92 ދިވެހިން ޢުމުރުން (ފުރުސަތު ތަކެއްޗާ ދުވަހުގެ 20 ދިވެހިން ތެރެއިން ގާތްގަނޑަށް ވަޒަންދާ ބައި 8.92 ދިވެހިން ޢުމުރުން)	27.51 ދިވެހިން ޢުމުރުން (ފުރުސަތު ތަކެއްޗާ ދުވަހުގެ 20 ދިވެހިން ތެރެއިން ގާތްގަނޑަށް ވަޒަންދާ 7.51 ދިވެހިން ޢުމުރުން)
ފުރުސަތު ތަކެއްޗާ ދުވަހުގެ ކުރިން ދިގުކުރެވޭ:	2032 ވަނަ ތާރީޚު	ބަދަލުތެރެއް ނެތް

ދިވެހިރާއްޖެ ތިވެގެންވާ ފަރާތްތަކުން ހިންގާ ކަންތައްތަކާ ގުޅިގެން:

- ދ. ފުރާނަގޮތް ބަލައިގެންވާ ކަންތައްތަކާ ގުޅިގެން ހިންގާ ކަންތައްތަކުގައި ދ. ގެދޮށީގައި ތިބި ފަރާތްތަކަށް "ފުރާނަ ތަރައްގީ ސަރުކާރުން ދެއްވާ 20,000,000 (ވީސް ދިހަމިލިއަން) ރ.ރުފިޔާ ޚާއްޞަ ފުރުސަތު" ތަކުގެ ފަރާތްތަކުގެ ލިސްޓު، 07 ނޮވެމްބަރ 2013 ވަނަ ދުވަހު ތަރުތީބުކުރެވިފައި ހުންނަ ސަބަބުން ފުރުސަތު ލިބިގެންވާ ފަރާތްތަކުގެ ލިސްޓުގައި "ތަންތަނާ ގުޅުންހުރި ކަންތައްތަކާ ގުޅިގެން ދ. ގެދޮށީގައި ތިބި ފަރާތްތަކަށް 20,000,000 (ވީސް ދިހަމިލިއަން) ރ.ރުފިޔާ ފުރުސަތު ތަކެއްޗާ ގުޅިގެން" ހުވ.
- ފުރާނަ ގެނައުމުގައި ތަންތަނާ ގުޅުންހުރި ކަންތައްތަކާ ގުޅިގެން ހަދާ ފަރާތްތަކުގެ ލިސްޓުގައި ހުންނަ 3.25% ގެ ތެރެއިން ދިވެހިރާއްޖެ ތިވެގެންވާ ފަރާތްތަކުގެ ތެރެއިން 2.85% ގެ ތެރެއިން ތަކެއްޗާ ގުޅިގެން ބަދަލުތެރެއް ނެތް.
- ދިވެހިން ތަކެއްޗާ ދުވަހުގެ ކުރިން ދިގުކުރެވޭ ފުރުސަތު ތަކުގައި ފުރާނަ ތަރައްގީ ސަރުކާރުން ދެއްވާ ފުރުސަތު ތަކުގެ ތެރެއިން ގާތްގަނޑަށް ވަޒަންދާ ފުރުސަތު ތަކެއްޗާ ގުޅިގެން ބަދަލުތެރެއް ނެތް. ތަކެއްޗާ ގުޅިގެން ދ. ގެދޮށީގައި ތިބި ފަރާތްތަކަށް 28.92 ދިވެހިން ޢުމުރުން ފެށިގެން 27.51 ދިވެހިން ޢުމުރުން ދުވަހުގެ ކުރިން ދިގުކުރެވޭ ފަރާތްތަކުގެ ތެރެއިން ބަދަލުތެރެއް ނެތް.

- މީގެ އިތުރުން، ރާއްޖޭގެ އިންޑަސްޓްރީ ފިޔަވައި، ރާއްޖޭގެ އެހެން އެއްވެސް ބަދަލެއް އައިސްފައިނުވާކަން ފާހަގަކުރެވިއްޖެ.

6.0 އޮޑިޓުގެ ނިންމުން:

މާލިއްޔަތު ކޮމިޓީގެ މިއަހަރުގެ 59 ވަނަ ބައްދަލުވުމުގައި މި މައްސަލަ ދިރާސާކުރެއްވުމަށްފަހު، ޙާޟިރުވެވަޑައިގެންނެވި މެންބަރުންގެ އިއްތިފާޤުން ނިންމެވީ، އައުޓަރ އައިލެންޑްސް ވޯޓަރ ސަޕްލައި އެންޑް ސެނިޓޭޝަން ޕްރޮޖެކްޓް 20,000,000 (ވިހި މިލިއަން) ޔޫ.އެސް. ޑޮލަރުގެ ލޯނަށް މާލިއްޔަތު ކޮމިޓީގެ މިއަހަރުގެ 22 ބައްދަލުވުމުގައި ހުށަހަޅުއްވާފައިވުމުންނާއި، އަދި އޭގެ ފަހުން ރައީސުލްޖުމްހޫރިއްޔާ މި ލޯނާއި ގުޅޭގޮތުން ފުރިހަމަ މަޢުލޫމާތު ހުށަހަޅުއްވައިދިނުމަށް ބައެއް މަޢުލޫމާތު ބަދަލުވެފައިވާތީ، މިލޯނާއި ގުޅޭގޮތުން ސަރުކާރުން އަދާކުރަންޖެހޭ އިލްތިޒާމު ކަށަވަރުވެފައިނުވާތީ، މި ލޯން ދިނުމަށް ސަރުކާރުން ނިންމެވުމާ ގުޅޭ އޮޑިޓުއޮފީހުން ޚާއްޞަ އޮޑިޓެއް ހެއްދެވުމަށް އެއްބަސްވެވަޑައިގަތެވެ.

ވީމާ، މިމައްސަލަ މަޖިލީހުން ފާސްކުރައްވައިދެއްވުމަށް ކޮމިޓީން ނިންމަވައި ދެއްވުން އެދެމެވެ.

04 ޑިސެމްބަރ 2013

ކާށިދޫ ދާއިރާގެ މެންބަރު އަބްދުﷲ ޖާބިރު
އޮޑިޓުގެ މުޤައްރިރު

ﷺ 1 : ﷺ 07 ﷺ 2013 ﷺ ﷺ.

بسم الله الرحمن الرحيم

ރައްޔިތުންގެ މަޖިލީހުގެ އިދާރާ

ބަލައިގަތީ: Slafana2	ރ. ނަންބަރު: 5131
ލިބުނު ތާރީޚު: 7.11.13	ގަޑި: 17:35
ރެފަރކުރެވުނު ސެކްޝަން:	
ސެކްޝަނަށް ލިބުނު	

10/11/2013

ރައީސުލްޖުމްހޫރިއްޔާ

ރައްޔިތުންގެ މަޖިލީހުގެ ރައީސް އަލްއުސްތާޛު އަބްދުﷲ ޝާހިދު،

ވެދުން ސަލާމަށްފަހު ދަންނަވަމެވެ.

ޤާނޫނު ނަންބަރު 3/2006 (ދައުލަތުގެ މާލިއްޔަތުގެ ޤާނޫނު) ގެ 5 ވަނަ މާއްދާގައިވާ ގޮތުގެމަތިން، ދިވެހި ސަރުކާރުން ލޯނުނެގުމަށާއި، ގެރެންޓީ ދިނުމާ ގުޅޭގޮތުން 20 ޑިސެމްބަރ 2011 ގައި މަޖިލީހުން މަނިކުފާނު އަރިހަށް ފޮނުވި ސިޓީއާއި، 2 ޖަނަވަރީ 2012 ގައި މަނިކުފާނު މަޖިލީހަށް ފޮނުއްވި ސިޓީއަށް ހަވާލާދީ ދަންނަވަމެވެ.

2013 ވަނަ އަހަރު ދިވެހި ސަރުކާރުން ލޯން ނެގުމަށާއި، ގެރެންޓީ ދިނުމާ ގުޅޭގޮތުން މަޖިލީހައި ހަވާލާދީފައިވާ މިއަހަރުގެ ސިޓީގައި ހުށަހަޅާފައިވާ މައްސަލަ ރައްޔިތުންގެ މަޖިލީހުގެ މާލިއްޔަތު ކޮމިޓީގައި ދިރާސާ ކުރައްވައި ކޮމިޓީން ނިންމެވި ގޮތުގެ ރިޕޯޓުގައި ފާހަގަކުރައްވާފައިވަނީ، އެ ލޯންތަކާއި، ގެރެންޓީތަކުގެ ހުރިހާ މައުލޫމާތު ފުރިހަމައަށް ކަމަށާއި، އަދި އެ ލޯންތައް. ނަގަންވާނީ ނުވަތަ ގެރެންޓީދޭންވާނީ، އެ ލޯންތަކާއި ގެރެންޓީތައް ނެގުމުގެ ކުރިން، އެ ލޯންތައް ނުވަތަ ގެރެންޓީތަކުގެ ފުރިހަމަ މައުލޫމާތު، ޤާނޫނު ނަންބަރު 25/2010 (ޤާނޫނު ނަންބަރު 3/2006 (ދައުލަތުގެ މާލިއްޔަތުގެ ޤާނޫނު) އަށް 1 ވަނަ އިސްލާހު ގެނައުމުގެ ޤާނޫނު) ގެ 5 ވަނަ މާއްދާގައި ބަޔާންކޮށްފައިވާ ގޮތުގެމަތިން މާލިއްޔަތު ކޮމިޓީއަށް ހުށަހެޅުމަށްފަހުގައި ކަމަށެވެ.

2013 ވަނަ އަހަރަށް ފާސްކުރި ދައުލަތުގެ ބަޖެޓް ދިރާސާކުރައްވަމުންދަނިކޮށް ބަޖެޓު ދިރާސާކުރާ ކޮމިޓީން ނިންމެވި ގޮތުގެ ރިޕޯޓަށް ރައްޔިތުންގެ މަޖިލީހުން ގެންނެވި އިސްލާހުތަކާއެކު ފާސްކުރައްވައި އެކުލަވާލައްވާފައިވާ ރިޕޯޓުގެ 7.2 ވަނަ މާއްދާގެ ދަށުން ޖުމުލަ ގޮތެއްގައިވާ ގޮތުގެމަތިން، މަތީގައި ދަންނަވާ މަޝްރޫޢަށް 2013 ވަނަ އަހަރު ދިވެހި ސަރުކާރުން ނަގަމުން

WV

ދަށުގެ ގަވާއިދުގެ ދަށުން ކުރިއަށް ގެންދާ ކަންތައްތަކުގެ ތަފްޞީލު ހުށަހަޅާ ފަދަ ތަފާތު ތަފާތު ކަންތައްތަކަށް ހަމަ ހަމަ ގޮތަށް ކުރިއަށް ގެންދާ ކަންތައްތަކަށް ބަޖެޓުގެ ތެރެއިން ކުރިއަށް ގެންދާ ކަންތައްތަކަށް ކުރިން ދެވިފައިވާ ފައިސާ (ރ.ތ.ތ) 20,000,000 ގެ ތެރެއިން ބާކީ ހުރި ފައިސާ ދެމެހެއްޓުމަށް ދިވެހިރާއްޖޭގެ ފައިސާ ބާރުގެ ދަށުން ކުރިއަށް ގެންދާ ކަންތައްތަކަށް ބަދަލުކުރުން.

ވީމާ، ދެ ގޮތަކުން ކަންތައްތައް ކުރިއަށް ގެންދާ ގޮތަށް ބަދަލުކުރުން ކަންތައްތަކުގެ ތަފްޞީލު ހުށަހަޅާ ފަދަ ތަފާތު ތަފާތު ކަންތައްތަކަށް ހަމަ ހަމަ ގޮތަށް ކުރިއަށް ގެންދާ ކަންތައްތަކަށް ކުރިން ދެވިފައިވާ ފައިސާ (ރ.ތ.ތ) 20,000,000 ގެ ތެރެއިން ބާކީ ހުރި ފައިސާ ދެމެހެއްޓުމަށް ދިވެހިރާއްޖޭގެ ފައިސާ ބާރުގެ ދަށުން ކުރިއަށް ގެންދާ ކަންތައްތަކަށް ބަދަލުކުރުން.

ތާރީޚް 3 ޖުމާދަ 1435

7 ސެޕްޓެމްބަރ 2013

ނާޒިމް

ޖުނައިދު ވަޒީރު

ތަކުރާރުކުރެވޭ ގޮތަށް

ދާއިރާ،

ފާހަގަ ކުރުމަށް.

އައްޑޫ އައިލެންޑްސް ވޮޓަރ ސަޕްލައި އެންޑް ސުވަރޭޖް ޑިސްޕޯސަލް ޕްރޮޖެކްޓަށް 20,000,000 (ވިހި މިލިއަން) ޔޫ.އެސް ޑޮލަރުގެ ލޯނު

މަޝްރޫޢާއި ބެހޭ މަޢުލޫމާތު

މަޝްރޫޢުގެ ނަން:	ސ.ހިތަދޫ، ސ. ފޭދޫ، ސ.މަރަދޫފޭދޫ އަދި ގއ. ކޮލަމާފުށީގައި ނަރުދަމާ އާއި ފެނުގެ ނިޒާމު ގާއިމްކުރުން އަދި ގދ. ގައްދޫ ގައި ނަރުދަމާގެ ނިޒާމު ގާއިމް ކުރުމުގެ މަޝްރޫޢު
މަޝްރޫޢުގެ އަދަދު:	20,000,000 (ވިހި މިލިއަން) ޔޫ.އެސް ޑޮލަރު
މަޝްރޫޢުގެ ޑޯނަރ:	އޮޕެކް ފަންޑް ފޯރ އިންޓަރނޭޝަނަލް ޑިވެލޮޕްމަންޓް (އޮފިޑް)
ލޯނުގައި ސޮއި ކުރުމަށް ހަމަޖެހިފައިވާ ތާރީޚް:	2013 ވަނަ އަހަރު
މަޝްރޫޢު ހިންގާ ފަރާތް:	މިނިސްޓްރީ އޮފް އެންވަޔަރަންމަންޓް އެންޑް އެނަރޖީ
އެގްޒެކިއުޓިންގ އެޖެންސީ:	މިނިސްޓްރީ އޮފް ފިނޭންސް އެންޑް ޓްރެޜަރީ
މަޝްރޫޢު ހުށަހެޅި ފާސްކުރި ފަރާތް:	ވަޒީރުންގެ މަޖިލިސް

ދަރަނީގެ ޒަރިއްޔާއިން ހާސިލުކުރާ ބޭނުން:

~~ސ.ހިތަދޫ، ސ. ފޭދޫ، ސ.މަރަދޫފޭދޫ، ގއ. ކޮލަމާފުށި އަދި ގދ.ގައްދޫ ގައި ނަރުދަމާގެ ނިޒާމު ގާއިމްކުރުމާއި ނަރުދަމާގެ ނިޒާމު~~ ހިމެނޭގޮތަށް ނަރުދަމާގެ ނިޒާމު ގާއިމްކުރުމާއި، ނަރުދަމާގެ ވިއުގައާއި ގުޅުއްވުން، ޕަމްޕް ސްޓޭޝަނާއި ޓްރީޓްމަންޓް ޕްލާންޓް އަދި އައުޓްފޯލް ގާއިމުކުރުމަށް ރޭވިފައިވާ. އަދި ގދ. ގައްދޫ ފިޔަވައި، އެހެން 4 ރަށުގައި ފެނުގެ ނިޒާމެއް ގާއިމް ކުރެވޭނެ.

މަޝްރޫޢުގެ ސަބަބުން މުޖުތަމަޢަށް ކުރާނެ ފައިދާ:

މި މަޝްރޫޢު ނިމުމުން ފެނުގެ ޚިދުމަތް ފޯރުކޮށްދިނުން ރަނގަޅުވެ، ވެށީގެ ސާފުތާހިރުކަން ބޮޑުވެ، މިރަށްތަކުގެ މުޖުތަމަޢުގެ ސިއްހީ ހާލަތު ރަނގަޅުވާނެ. އަދި ރަށުގެ ފެނުގެ ވަސީލަތްތައް ރައްކާތެރިކުރެވި، ބިމުގެ ފެން ސާފުކޮށް ބެލެހެއްޓޭނެ. އަދި ރަށުގެ އާބާދީ ދިރިއުޅުމުގެ ފެންވަރު ރަނގަޅުވެ މިމަޝްރޫޢުގެ ސަބަބުން ހާއްސަ ކުރުވާނެ.

ލޯނުގެ މަޢުލޫމާތު

(މިބައިގައި ހިމެނޭ މިވަނީ އަންދާޒާ އެކަތި. ފުރަތަމަ މަޢުލޫމާތު ލިބުނީ ލޯނުދޭ ފަރާތްތަކުންނެވެ، ލޯނުގެ މަޢުލޫމާތު ލިބުމުންނެވެ.)

ލޯނު އަދަދު:	20,000,000 (ވިހި މިލިއަން) ޔޫ.އެސް. ޑޮލަރު
އިންޓަރެސްޓް ރޭޓް:	2.85 ޕަސެންޓް ޕަރ އެނަމް
އެޑްމިން ޗާރޖަސް:	1 ޕަސެންޓް ޕަރ އެނަމް ސާރވިސްޗާޖު
ގްރޭސް ޕީރިއަޑް:	5 އަހަރު
ލޯނު އަނބުރާ ދައްކާ ނިމުމުގެ މުއްދަތު:	20 އަހަރު (ގްރޭސް 5 އަހަރު ހިމެނޭގޮތުން)
ލޯނު ސަރވިސް ކުރުމަށް ދާން ޖުމްލަ ޚަރަދު:	27.51 މިލިއަން ޑޮލަރު (ލޯނު އަނބުރާ ދެއްކުމަށް 20 މިލިއަން ޑޮލަރު އަދި އިންޓަރެސްޓާއި ސާރވިސް ފީގެ ގޮތުގައި 7.51 މިލިއަން ޑޮލަރު)
ލޯނު އަދާކޮށް ނިމެންޖެހޭ ތާރީޚް:	2032 ވަނައަހަރު

ދަރަނި ނެގުމުގެ ސަބަބުން އިޤްތިޞާދަށް އަދި ދައުލަތުގެ މާލިއްޔަތަށް ކުރާނެ އަސަރު

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OFID The OPEC Fund for International Development

LOAN NO. _____P

Revised Draft
September 24, 2013

OUTER ISLANDS WATER SUPPLY AND SEWERAGE FACILITIES PROJECT

LOAN AGREEMENT

BETWEEN

THE GOVERNMENT OF THE REPUBLIC OF MALDIVES

AND

THE OPEC FUND FOR
INTERNATIONAL DEVELOPMENT (OFID)

DATED

_____, 2013

AGREEMENT dated _____, 2013, between the Republic of Maldives ("the Borrower") and the OPEC Fund for International Development ("OFID").

Whereas the Borrower has requested a loan from OFID for part financing of the Project described in Schedule 1;

And whereas OFID has approved a loan to the Borrower in the amount of up to twenty million Dollars ($20,000,000) upon the terms and conditions set forth hereinafter;

Now, therefore, the parties to this Loan Agreement (the "Agreement") hereby agree as follows:

Article 1
GENERAL CONDITIONS; DEFINITIONS

1.01 The General Conditions attached hereto shall constitute an integral part of this Agreement.

1.02 In addition to the terms defined in the preamble, the following terms and expressions shall have the following meanings or, where they duplicate terms and expressions in the General Conditions, the following specific meanings:

(a) "Authorized Representative of the Borrower" means the Ministry of Finance and Treasury of the Borrower;

(b) "Closing Date" means December 31, 2016;

(c) "Dollar and the sign $" mean and refer to the lawful currency of the United States of America;

(d) "Eligible Expenditure Commencement Date" means March 20, 2013;

(e) "Executing Agency" means the Ministry of Finance and Treasury of the Borrower;

(f) "General Conditions" means OFID General Conditions Applicable to Public Sector Loan Agreements, October 2007;

(g) "Grace Period" means the period beginning on _____ [Date of the Agreement] and ending five (5) years from that Date; and

* * *

Article 2
THE LOAN

2.01 OFID agrees to lend to the Borrower and the Borrower agrees to borrow from OFID the Loan in the amount of twenty million Dollars ($20,000,000) on the terms and conditions set forth in this Agreement.

2.02 The Borrower shall pay interest at the rate of 2.85% per annum on the principal amount of the Loan withdrawn and outstanding.

2.03 The Borrower shall pay a Service Charge at the rate of one per cent (1%) per annum on the principal amount of the Loan withdrawn and outstanding.

2.04 Interest and Service Charges shall be paid semi-annually on May 15 and November 15 in each year into OFID Account.

2.05 Immediately following the end of the Grace Period, the Borrower shall repay the principal of the Loan in Dollars, or in any other freely convertible currency acceptable to OFID Management, in an amount equivalent to the Dollar amount due according to the market exchange rate prevailing at the time and place of repayment. Repayment shall be effected in thirty (30) semi-annual instalments in the amounts, and on the dates, all as specified in Schedule 3 (AMORTIZATION).

Article 3
EFFECTIVENESS

3.01 This Agreement shall enter into force and effect in accordance with Section 3.02 upon receipt by OFID of:

(a) satisfactory evidence that the execution and delivery of this Agreement on behalf of the Borrower have been duly authorized and ratified according to the constitutional requirements of the Borrower; and

(b) a certificate issued by the Minister of Justice or the Attorney General or any other competent legal authority of the Borrower confirming that this Agreement has been duly authorized and ratified by the Borrower and constitutes a valid and binding obligation of the Borrower in accordance with its terms.

3.02 As soon as possible after the conditions specified in Section 3.01 shall have been satisfactorily fulfilled, this Agreement shall enter into full force and effect on the Date of Effectiveness.

3.03 If this Agreement shall not have become effective within ninety (90) days after the Date of the Agreement, the Agreement and all obligations of the parties hereunder shall terminate, unless OFID Management, after consideration of the reasons for the delay, shall establish a later date for the purposes of this Section.

* * *

Article 4
ADDRESSES

4.01 The parties' addresses are as specified below:

For the Borrower:

Ministry of Finance and Treasury
Ameenee Magu
Block 379
Male'
REPUBLIC OF MALDIVES

Facsimile: (++960) 33 24 432

For OFID:

The OPEC Fund for International Development
Parkring 8
A-1010 Vienna
AUSTRIA
Facsimile: (++43-1) 513 92 38

* * *

LOAN NO. ____P

IN WITNESS whereof the parties hereto, acting through their duly authorized representatives, have caused this Agreement to be signed and delivered at Vienna in two copies in the English language, each considered an original and both to the same and one effect as of the day and year first above written.

FOR THE BORROWER:

Signature:

Name: _____

Title: _____

FOR THE OPEC FUND FOR INTERNATIONAL DEVELOPMENT (OFID):

Signature:

Name: Suleiman J. Al-Herbish

Title: Director-General

* * *

REPUBLIC OF MALDIVES
OUTER ISLANDS WATER SUPPLY AND
SEWERAGE FACILITIES PROJECT

SCHEDULE 1
DESCRIPTION OF THE PROJECT

The Project aims at improving health standards and living conditions of approximately 12,000 people in five of the country's poorest and most populated islands, namely *Thulhadhoo*, *Velidhoo*, *Hulhuduffaaru*, *Kolamaafushi* and *Gahdhoo*, by providing sustainable access to safe water and sanitation services and thereby contributing towards health promotion, economic growth and poverty alleviation in these selected areas. This is to be achieved through the implementation of the following Project components:

(a) Sewerage Networks, providing for the construction of sewerage networks in the five selected island as specified below:

- construction of about 53 km of combined sewer networks, including about 2,544 lateral property connections;
- construction of 5 pumping stations, one on each island;
- construction of 5 treatment plants and sludge management facilities; and
- construction of 5 office buildings, one on each island, to be used as operation and maintenance facilities upon project completion.

(b) Water Supply Networks, including the following project activities in the first four selected islands as mentioned above:

- construction of 4 borehole intake facilities;
- construction of 4 reverse desalination plants;
- construction of about 32 storage tanks with a total capacity of 6,000 m^3 of water;
- construction of 4 pumping stations; and
- construction of about 40 km of combined water distribution networks, including about 1,975 property connections.

(c) Project Management, covering the services of consulting engineers required for the preparation of engineering designs, tender documents for civil works and provision of equipment, supervision of constructions works, staff salaries and recurrent expenses of the Project Implementation Unit as well as the costs of the supervisory site engineer stationed on each island.

* * *

REPUBLIC OF MALDIVES
OUTER ISLANDS WATER SUPPLY AND
SEWERAGE FACILITIES PROJECT

SCHEDULE 2
LOAN ALLOCATION

1. Unless otherwise agreed between the Borrower and OFID Management, the table below sets forth the components to be financed out of the proceeds of the Loan, the allocation of amounts of the Loan to each component and the percentage of total expenditures for items so to be financed in respect of each component:

Component	Amount of the Loan Allocated (Expressed in Dollars)	Percentage of Total Expenditures to be Financed
(a) Sewerage Networks	13,300,000	95
(b) Water Supply Networks	6,500,000	95
(c) Project Management	200,000	50
Total:	20,000,000	

2. Notwithstanding the allocation of an amount of the Loan or the disbursement percentages set forth in the table in paragraph 1 above, if OFID Management has reasonably estimated that the amount of the Loan then allocated to any component will be insufficient to finance the agreed percentage of all expenditures in that component, OFID Management may, by notice to the Borrower: (i) reallocate to such component, to the extent required to meet the estimated shortfall, proceeds of the Loan which are then allocated to another component and which in the opinion of OFID Management are not needed to meet other expenditures; and (ii) if such reallocation cannot fully meet the estimated shortfall, reduce the disbursement percentage then applicable to such expenditures in order that further withdrawals in respect of such component may continue until all expenditures thereunder shall have been made.

* * *

REPUBLIC OF MALDIVES
OUTER ISLANDS WATER SUPPLY AND
SEWERAGE FACILITIES PROJECT

SCHEDULE 3
AMORTIZATION

No.	Date of Repayment	Amount Due (Expressed in Dollars)
1	May 15, 2018	666,660
2	November 15, 2018	666,660
3	May 15, 2019	666,660
4	November 15, 2019	666,660
5	May 15, 2020	666,660
6	November 15, 2020	666,660
7	May 15, 2021	666,660
8	November 15, 2021	666,660
9	May 15, 2022	666,660
10	November 15, 2022	666,660
11	May 15, 2023	666,660
12	November 15, 2023	666,660
13	May 15, 2024	666,660
14	November 15, 2024	666,660
15	May 15, 2025	666,660
16	November 15, 2025	666,660
17	May 15, 2026	666,660
18	November 15, 2026	666,660
19	May 15, 2027	666,660
20	November 15, 2027	666,660
21	May 15, 2028	666,660
22	November 15, 2028	666,660
23	May 15, 2029	666,660
24	November 15, 2029	666,660
25	May 15, 2030	666,660
26	November 15, 2030	666,660
27	May 15, 2031	666,660
28	November 15, 2031	666,660
29	May 15, 2032	666,660
30	November 15, 2032	666,860
	Total:	20,000,000

PROJECT: PROVISION OF WATER SUPPLY AND SEWARAGE FACILITIES IN 5 ISLANDS

Client :

THE OPEC FUND FOR INTERNATIONAL DEVELOPMENT

Prepared by :

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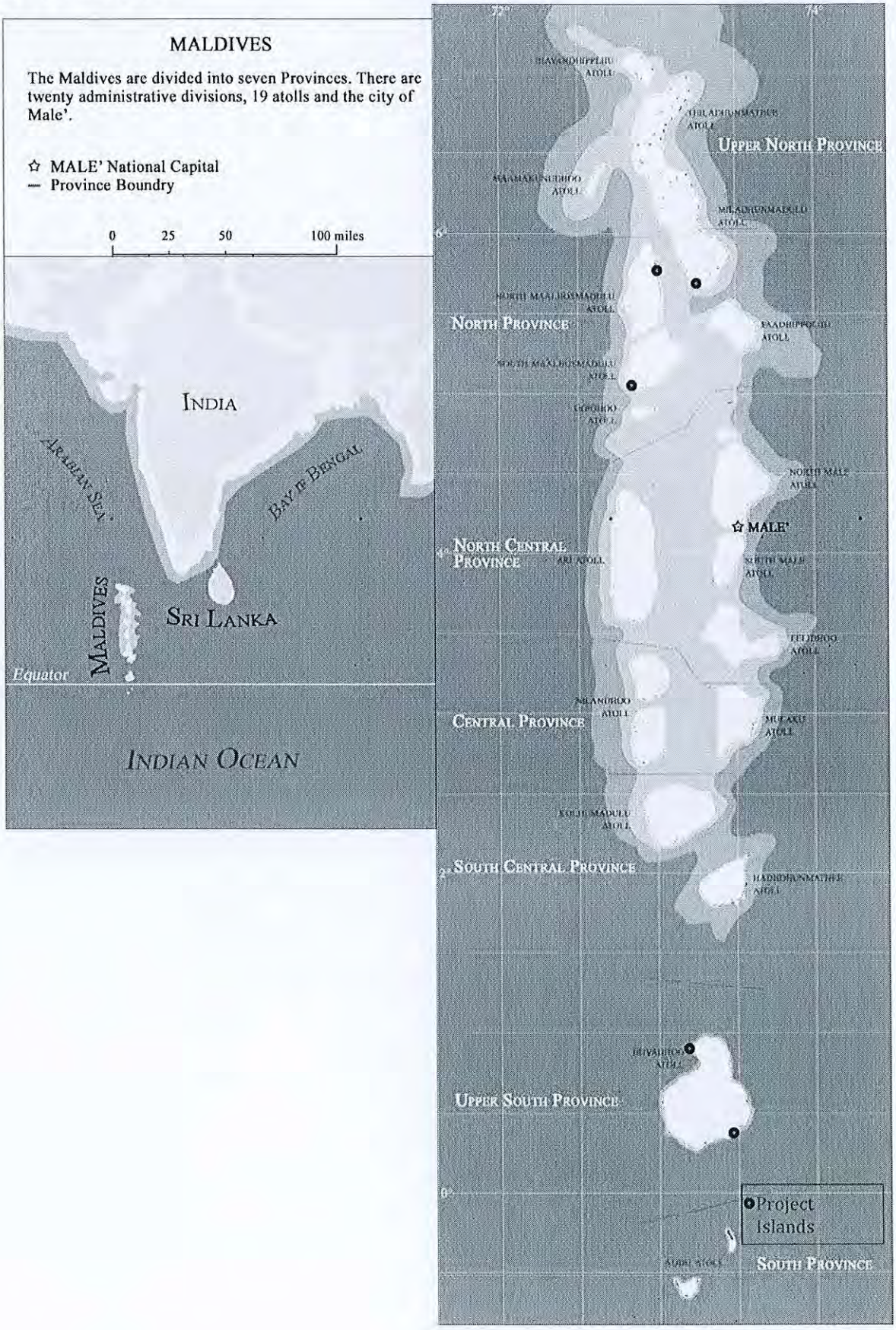
Map of Maldives



List of Abbreviations

MOFT	Ministry of Finance and Treasury
MOFT/ERMD	External Resources Management Division / MOFT
MEE	Ministry of Environment and Energy
MOFT/TEB	Tender Evaluation Board / MOFT
MOFT/PEMEB	Public Enterprises Monitoring and Evaluation Board / MOFT
MHI	Ministry of Housing and Infrastructure
EPA	Environment Protection Agency
GOM	Government of Maldives
FC	Fenaka Corporation
MDG	Millennium Development Goals
IGMH	Male' Water and Sewerage Company PLC
OFID	Opec Fund for International Development
PPP	Public Private Partnership
SAP	Strategic Action Plan
NDP	National Development Plan

Units

Measure	Abbreviation	Detail
Currency	MRF	Maldivian Rufiyaa
Currency	US$	United States Dollars
Area	Sqm or m2	Square Meters (1 sqm = 10.75 sq ft)

TABLE OF CONTENTS

Project Summary

In trying to meet the constitutional obligations towards the citizens in providing aces to safe drinking water and sanitation, the Government of Maldives, acting through the Ministry of Environment and Energy have identified the islands where the need is very acute. The obvious health and safety concerns resulting from the absence or lack of such facilities has driven the Government to embark on a very comprehensive program nationally. Unlike other services and infrastructure needs, it is inconceivable that any of the geographically dispersed communities should have to go without access to safe water and sanitation services for an extended period. While the state has allocated a proportionately large budgetary amount for the provision of these services in excess of a fourfold increase in budgetary allocation over 2012 for such projects, the overall requirement exceeds the budgetary resources. Thus, the Government has requested the OPEC Fund for International Development for financing for the provision of water and sewerage services on four islands and sewerage services on one island. The following islands were selected on the basis of development parameters identified by GOM:

Atoll	**B**	**N**	**R**	**GA**	**GDh**
Island	**Thulhaadhoo**	**Velidhoo**	**Hulhudhuffaaru**	**Kolamaafushi**	**Gadhdhoo**
Area (Ha)	43.2	44.2	59.9	34.8	54.8
Population	2753	2461	1402	1595	2880
Pop. Density	63.7	55.6	23.4	45.8	52.5
Reg. House #s	317	461	436	314	548

The project components required at each location are identified as follows. In addition to main infrastructure elements of water supply and sewerage, the required soft support such as project management and construction supervision was also included.

	PMU Support	Water Supply	Sewerage System	Supervision	O & M Training
PMU - MEE	X				
N Velidhoo		X	X	X	X
B Thulhadhoo		X	X	X	X
R Hulhudhuffaaru		X	X	X	X
GA Kolamaafushi		X	X	X	X
GDH Gadhdhoo			X	X	X

The individual project items are detailed as follows:-

	Project Items	Services/Goods
1	PMU Support / Community awareness/-	Set-up costs; Staff costs for Project Engineer and two staff
2	Water Supply	RO plant; Borehole intake; Distribution network; Storage tanks; Office and stores building - O & M (common facility)
3	Sewerage System	Sewer network; Pumping stations; Lateral connections; Treatment plant and sludge management facility; Office and stores building - O & M (common facility)
4	Construction supervision	Supervisory services - civil/mechanical/electrical during the construction stage
5	O & M Training	O & M training for operator staff (to include installation and commissioning stage training)

The funding request to OFID proposes that the main items included in the project be borne by OFID. GOM will fund basic monitoring and bear all taxes/ duties.

An Overview of Maldives

Maldives is located in the Indian Ocean about 700 km south-west of Sri Lanka. The neighboring countries are India from the North and Sri Lanka from the East. Maldives consists of 1, 192 coral islands stretching over an area of 90,000 km^2. The total land area is 350km^2. The islands are formed into 26 natural atolls, functioning as 19 atolls administratively. In an attempt to introduce a more relevant local governance framework, GOM has divided the country into 7 provinces in addition to the Capital region which consists of Male', Hulhumale' and Villingili. Most of the islands are small in size and all are low-lying with an average ground level of 1.5 meters above sea level. They are surrounded by shallow lagoons enclosed by coral reefs. Out of the 1,192 islands, only about 200 islands are inhabited while about 87 islands have been developed into tourist resorts. The population recorded in the 2006 Census - 298,968 (Census, 2006) people has been projected to grow to 319, 738 by mid 2010 . There is a huge disparity in population density between Male' Capital Region and the other islands due to lack of services and employment opportunities with around 33% population residing in Male', Hulhumale' and Villingili.

Maldives has a tropical climate. With two monsoons in the year (dry and wet), it is warm and humid throughout. There is not much difference in the daily temperature, with the difference in the average daily minimum and average daily maximum temperatures at about 6degrees Celsius.

The largest contributor to the economy of Maldives is Tourism with a 25.1% of GDP. Construction is the second leading sector (contributing about 13% to the GDP), fisheries having contracted to contribute even lesser than agriculture at 1.7%. Manufacturing contributes approximately 6.7% while agriculture contributes approximately 2.2%[i]. To build on this growth, the new administration has recognized the need for greater private sector involvement and foreign direct investment in the Maldivian economy. Thus to attract more investments, Government plans to establish Special Economic Zones and other industrial zones with special incentive packages and long term land leases.

In terms of infrastructure and public facilities, government is trying to strengthen the infrastructure network, specially the accessibility to social and physical infrastructures and facilities. Of the several projects that have been proposed to reduce the disparities between Male' Region and the other islands, a major focus is given to the water and sanitation sector. Government's aim is to provide consistent access to these basic services in an affordable manner.

The Water and Sanitation Sector

Background

The Constitution of the Republic of Maldives enshrines that access to safe water and sanitation services be accorded to all citizens. This obligation is the policy statement that upon which the development strategies in the sector are based upon and is closely aligned with the commitment that GOM has made to ensure access to safe and effective health care as a human right for all citizens. The Government of Maldives has been working towards achieving the goal 'Health For All' (HFA) over the last 3 decades ever since the Maldives has developed its first Country Health Plan in 1981.

In additional to this fundamental stipulation within the Constitution, the Millennium Development Goals, and the Government's national development blueprint – the Strategic Action Plan (SAP) 2009 are the main policy documents that guide water and sanitation policy. While the general performance of the Maldives in reaching MDG7 of ensuring environmental sustainability with its target of halving the population without access to sustainable safe water and basic sanitation by 2015 appears remarkable, the context in which such progress is measured needs to be rationalized – Progress on MDGs state that while progress on access to water is slow in Maldives, the target for access to basic sanitation has largely been achieved.[ii] This is despite the fact that the 'basic sanitation' in many cases are septic tanks whose performance leads to high probabilities of damaging the precarious ground water lens.

Sewerage systems on many of the islands comprise of individual septic tanks where the effluent water seeps into the ground through soakpits and residual sludge is removed periodically. On other islands these septic tanks are connected to a small bore pipe which carries the effluent water to the nearshore. In both cases, poorly constructed systems provide easy pathways for raw sewage to contaminate the shallow groundwater table. MEE estimates that only about 16% of the outer island population had access to toilets connected to the seas while 73% used the septic tank/soak pit model. In contrast 100% of the population in the Greater Male' Region (Male', Hulhumale and Villingili) had proper wastewater collection with deep seas disposal[iii]. Conditions such as these exposed the population to epidemics such as Cholera and Shigellosis.

With virtually no surface water resources, the traditional sources of freshwater have only been groundwater and rainwater harvested from roofs. Rainwater usage for drinking has been placed between 75%[iv] and 90%[v]. The erratic rainfall patterns experienced in recent years along with prolonged dry spells has meant that rainfall cannot be a reliable means of freshwater unless a more robust and comprehensive rainwater collection system is established. However, given that there is an

average rainfall of 2000mm per year, it is a valuable resource which could supplement the water produced through desalination and which is well worth tapping into. MEE in formulating its water supply policies have started incorporating rainwater collection in their systems models to look at an integrated water resource management to complement the desalinated water supply.

The shallow groundwater lens typically found in the Maldives is highly susceptible to salinity intrusions by virtue of the saltwater-fresh water interactions on these small islands. Population growth combined with higher rates of extraction due to pumping technology introduced to the country, contributes significantly to the depletion of the groundwater lens. With the development of the sewerage system on Male' in the early-mid 1980s, the use of flush toilets increased with the consequence of having huge amounts of precious groundwater being flushed to sea without being used for groundwater recharge. The paving of the streets of Male' also had a similar effect. Rainwater usage for drinking was widespread in the Maldives. But the increasing land pressures on the more congested islands meant that there was less available land to place the storage tanks at a household level.

Climate change induced impacts such as sea level rise and extreme weather events puts additional strain on the limited groundwater resources through salinity and has the end result of it being rendered unsuitable for both potable and non-potable uses such as agriculture. While examples of groundwater depletion and/contamination are commonplace, the actual quantification of such data is not readily available on a national scale.

With groundwater deemed to be not potable on many islands, any prolonged dry period leads to water shortages. In such situations communities have to resort to one of two alternatives – using groundwater if such no visual, odour or taste contaminations can be observed even if the water is not of drinking quality or request the supply of water from GOM. Over the years and especially in the years immediately following the 2004 tsunami a number of islands were provided with small desalination plants. While more than 50 islands are recorded as having been received such plants, it appears that only 28 are currently operational. [vivii]

Year	Number of Islands	Quantity Supplied	Total Cost (MRF)
2005	91	2728	2455200
2006	86	2805	2244000
2007	82	2694	2020500
2008	74	2088	1566000
2009	86	7469	7280472
2010			
2011	68	3919.5	2192390

Supply of drinking water to islands (2005- 2011)
Source: MEE (2012), Maldives State of the Environment 2012 (Based on data from NDMC)

These alternatives are either costly or not very suitable from a health perspective and therefore the provision of reliable safe water from production water together with sanitation remains an urgent priority. The GOM's commitment to address this is very admirable and is exemplified in the increasing budgetary allocation for water and sanitation projects in recent years despite very tough fiscal times. For the current financial year the Government has announced plans for sewer systems on 31 islands and water supply systems on 3 islands financed by the national budget. Sewerage projects on a further 11 islands and water supply systems on 5 islands have been proposed under the external financing[viii]

Year	Budgetary Allocation to Water and Sanitation (in MRF)
2011	14,013,416
2012	50,825,922
2013	204,936.069

Source: MOFT Annual Budget 2013

In addition to GOM's budgetary allocation, Maldives has been the recipient of considerable aid in the sector in the years immediately following the 2004 tsunami.

ISLANDS WITH IMPROVED SEWERAGE FACILITIES (by source of funding)

#	Atoll	Island	Island Size (Ha)	System Type	STP Status	DONOR	DEADLINE	COSTS
1	HA	Dhidhdhoo	58.9	CGS	ABSENT	US State Dept	1-Jul-10	USD 1,526,638.60
2	HDh	Kulhudhuffushi	199.6	CGS	ABSENT	GOM	1-Mar-10	USD 7,985,501.39
3	Sh	Funadhoo	91	CGS	PRESENT	GOM/JBIC Loan	6-Oct-10	
4	N	Manadhoo	106.7	VS	PRESENT	UNICEF	27-Feb-09	USD 1,460,341.63
5	N	Miladhoo	22	CGS		GOM/Contractor Finance	1-Dec-11	USD 2,268,765.53 *
6	R	Ugoofaaru	33.9	VS	PRESENT	UNICEF	27-Feb-09	USD 1,460,341.63
7	R	Dhuvaafaru	49.5	SBS	PRESENT	IFRC	14-Jul-08	USD 7,727,529.41
8	B	Eydhafushi	30.9	CGS	PRESENT	GOM/JBIC Loan	22-Oct-10	
9	B	Kudarikilu	18.7			GOM/Community	30-Jun-05	
10	Lh	Hinnavaru	22.5	CGS	PRESENT	GOM/Kuwait Fund loan	1-Jan-11	USD 2,129,935.00
11	K	Guraidhoo	20.9	SBS	ABSENT	IFRC/Amer. Red Cross	31-Jul-08	USD 1,209,411.76
12	K	Maafushi	36	CGS	PRESENT	IFRC/Amer. Red Cross	31-Jul-08	USD 1,209,411.76
13	K	Huraa	25.1	CGS	ABSENT	Private	30-Jun-05	
14	K	Gulhi	9			GOM/UNICEF	21-Jun-05	
15	AA	Rasdhoo	20.1	CGS	ABSENT	US State Dept	1-Apr-10	USD 515,950.75
16	ADh	Mahibadhoo	22.3	CGS	PRSENT	ADB Loan / GOM	1-Dec-11	USD 1,679,788.01
17	V	Felidhoo	14.4	CGS	ABSENT			USD 328,593.54
18	M	Muli	37	CGS	PRESENT	GOM/JBIC Loan	29-Sep-10	
19	M	Kolhufushi	85.1	CGS	ABSENT	Abu-Dhabi	24-Sep-12	USD 2,268,207.00
20	F	Nilandhoo	56.2	VS	PRESENT	UNICEF	27-Feb-09	USD 1,460,341.63
21	Dh	Meedhoo	34.8	VS	PRESENT	UNICEF	31-Mar-09	USD 1,460,341.63
22	Dh	Kudahuvadhoo	71.7	SBS	PRESENT	IFRC/AmerRed Cross	31-Jul-08	USD 1,058,235.29
23	Th	Guraidhoo	20.9	SBS	(AP)	ADB grant	23-May-08	USD 1,681,892.08
24	Th	Thimarafushi	20.5	CGS	PRESENT	GOM/Kuwait Fund loan	31-Jan-11	USD 1,276,067.00
25	Th	Vilufushi	60.6	SBS	ABSENT	British Red Cross Society	31-Jul-08	USD 233,353.33
26	L	Dhabidhoo	56.2	SBS	(DB)	UNDP	1-Jul-08	
27	L	Isdhoo-Kalhaidhoo	?358.6	SBS	(DB)	JICA	23-Sep-07	
28	L	Fonadhoo	163	CGS	PRESENT	ADB Loan / GOM	2-Dec-11	USD 2,579,309.50
29	GA	Dhaandhoo	18	CGS	ABSENT	American Red Cross	30-Jun-10	USD 3,413,722.97 *
30	GA	Villigili	56.5	CGS	ABSENT	American Red Cross	31-May-10	USD 5,579,783.80 *

SBS - Small Bore Sewer | AP - Areation Pond | DB – Drying Bed

CGS - Conventional Gravity Sewer | VS - Vacuum Sewer | SBS - Small Bore Sewer

** - Was Given in Rf, converted to USD @ 12.80*

Source: MEE (2013)

Institutional Framework

After a revamp of the Government framework in mid 2012, the environment and energy mandate (which included the water and sanitation sector) was placed under the Ministry of Environment and Energy through a split of the Ministry of Housing and Environment. The main tasks under the water and sanitation portfolio carried out directly within MEE include policy formulation, planning at a conceptual level and program development. As a follow-up to the program development, responsibility for the management for projects under implementation also lies with MEE.

The regulatory functions of the sector which was earlier vested with Maldives Water and Sanitation Authority was placed under the jurisdiction of the Environment Protection Agency. Although EPA is an agency under MEE, they function relatively independently and is expected to report to a governing board. Formulation of design and construction standards, approval of the detailed design of water and sanitation infrastructure as well as the development of water and wastewater guidelines are the paradigm of EPA. A second regulatory function pertaining to the development of water and sanitation infrastructure and whose responsibility lies with EPA is the environmental impact assessment process – a mandatory requirement for most development projects. This second process is a very streamlined process and standards TORs have been developed for different types of projects. EPA is also responsible for issuing operating licenses for the water and sanitation operators.

The two main operators in the sector are Male' Water and Sewerage Company Ltd and Fenaka Corporation. The operational role of local councils in the provision of water and sanitation services has largely disappeared. Male' Water and Sewerage Company Ltd a preciously 100% GOM held company now has some shares vested with a foreign partner, albeit with the majority being held by GOM. With a primary mandate of providing water and sanitation services to the city of Male', MWSC has ventured into other related businesses such as bottled water and engineering and development services for the water and sanitation sector. The operational license holder for Male' water and sanitation, MWSC is also increasing involved in the construction of facilities on islands other than Male'.

An overhaul of the service provision framework for public utilities (Power, Water and Wastewater) in early 2009 saw the set-up of seven utility companies with distinct geographic jurisdictions across the country. These utility companies were entrusted with a wide for providing the basic utilities and while they remained wholly state-owned, they were to given sufficient autonomy to function relatively independently. Operational and financial constraints faced by these companies meant that

they were hard-pressed to meet their obligations until they were merged in mid 2012. The merging of these utility companies saw the formation of Fenaka Corporation which was also fully state-owned and with a general mandate of providing power, water, wastewater and solid waste disposal services to islands which had previously been under the mandate of the seven utility companies and which had not been assigned to Stelco and MWSC for the power and water and wastewater services respectively.

The overall institutional framework is very clearly delineated despite the limited human resource pool in the sector and other challenges. The policy domain and project formulation domain remains with MEE while EPA has a clear regulatory role. Service provision under commercial terms is assigned to MWSC or Fenaka Corporation. While the role of the private sector has been much touted in the SAP 2009 as a major strategy for the development of the water and sanitation services in the country, there appears to be somewhat of a realignment where the emphasis is on corporatizing rather than direct private sector involvement.

The large number of privately owned utilities at the resorts and industrial facilities are regulated mainly through a reporting system backed by site visits on a needs basis by EPA.

Organization charts of MEE (Technical Department), EPA and Fenaka Corporation are given in the Annex.

Along with the regulatory bodies and stakeholders, MEE conducts various projects in cooperation with agencies such as ADB, IDB, UNICEF, UNDP , UNOPS, World Bank, IFRC,IDB and Kuwait Fund, in the sector to enhance the different level of water and wastewater services. The number of the projects undertaken with such co-operation increased considerably in the aftermath of the 2004 tsunami and thereafter.

The following cross-cutting themes are key considerations in the development of water and wastewater infrastructure:

Decentralization:

- While FC is a national company with corporate headquarters and main services located in Male', the operations will largely be devolved to island level operational units reporting to an atoll level regional management unit usually based at the Atoll capital. The provision of key technical support from a central base allows resource optimization in a country where such resources are woefully inadequate. It is expected that with growth there will be increasing

levels of support at each atoll and island. The role of councils in monitoring service levels of the service providers are expected to remain.

Transport and connectivity:

- Transport network will assist in enhancing atoll-level and inter-atoll synergies in technical support services.

Private Sector Partnership:

- While the role of the private sector has been much touted in the SAP 2009 as a major strategy for the development of the water and sanitation services in the country, there appears to be somewhat of a realignment where the emphasis is on corporatizing rather than direct private sector involvement perhaps due to a realization that the small size of the individual communities offers a less than ideal commercial opportunity unless it were to be bundled with a strong cross subsidy package. However, no deviation from this policy has been explicitly communicated.

Policy Framework

The current policy framework is based on three elements:-

1- The Constitution of the Republic of Maldives which has explicit requirements for the government to provide all its citizens access to safe water and sanitation.

2- The Millennium Development Goals MDGs which has been obviously been adopted by the Maldives and to which all administrations have shown exemplary commitment to. For the water and sanitation sector, MDG 7 of halving the population who do not have access to safe water and sanitation is the key guidance statement.

3- The Strategic Action Plan, 2009-2013 (SAP) for the country level formulated by the current administration.

In the Strategic Action Plan, 2009-2013 (SAP) the water and sanitation sector has been identified explicitly as one area which needs focused attention due to its close link with the health objective to *"provide affordable, accessible and quality health care for all"* as a human right as well as a impediment to economic development . The policy, guidance notes and regulations for the water and sanitation sector due for adoption within this year will be developed to align closely with the goals of the sector as identified in the SAP:-

1. **Ensure access to safe drinking water and sanitation facilities as a basic human right for all.**
2. **Protect and preserve the country's vital freshwater resources and establish water stocks for use in emergency and disasters.**
3. **Enhance the role of private sector participation in the provision of water and sanitation services while encouraging a smooth shift in the role of the government as a regulator and facilitator in the provision of these services.**
4. **Introduce the use of renewable energy and other modern technologies to minimize the cost of providing drinking water and sanitation systems and to protect ground water.**

To the end of achieving the goals in the sector, the key policy statements that have been developed are:

Policy 1: Improve accessibility in delivery of safe water and sanitation services
Policy 2: Prioritize provision of safe water and sanitation when designing developmental projects and emergency response
Policy 3: Establish effective operation and maintenance procedures for water and sanitation systems in the Maldives
Policy 4: Facilitate private sector investment in the water and sanitation sector
Policy 5: Strengthen technical, financial and human resources capacity for water and sanitation sector.
Policy 6: Enhance community and civil society participation in the water and sanitation sector
Policy 7: Strengthen legal and institutional framework to improve sector performance

Policy 8: Improve water resource management to preserve environment
Policy 9: Improve safe water consumption at public and domestic levels through implementation of water safety plans

It must also be recognized that vulnerability of the water sector to climate-related changes and more specifically the impacts of extreme events such as the 2004 tsunami was a key policy driver. [ix] The clear link between the rehabilitation and continued health risks of the devastated communities and water and sanitation were perhaps never seen as explicitly before this event.

GOM and the international community's commitment to addressing this broad issue is also reflected in the fact that environmental health and emergency preparedness and response as priority areas by WHO for the WHO Country Cooperative Strategy for the period 2007 to 2011.

A number of challenges exist in achieving these objectives – primary among them are the geographic dispersion of the communities, the inherent natural vulnerability (hydroeological setting and climate change induced risk) of the water resource. However GOM's commitment to working with all potential stakeholders; both public and private and international co operations in accomplishing the above mentioned objectives and at the same time sustain the current improvements in the health sector needs the unequivocal support from the international donor agencies.

Water and Sanitation Sector in the Project Islands

Although there has been much improvement in the water and sanitation sector over the past decade, growing population demand on water resources and resulting over extraction together with climate change impacts such as extreme weather events continue to impact the project regions.

The five islands identified under the project have factors conducive for growth including current and anticipated population. In common with many islands, the groundwater has been largely rendered unusable and cannot be considered potable. There is limited groundwater quality data that have been collected under a testing regime. However, the limited data available for one of the project islands exemplifies the extent to which groundwater has been contaminated and is considered representative of all islands. The general summary of existing water and sanitation infrastructure on the islands is shown below:-

EXISTING CONDITION							
					Sewerage	Water	
Atoll	Island	Area (Ha)	Reg. Pop 2012	Reg. Houses	System current	Ground water	Rainwater publiclocation
B	Thulhadhoo	43.2	2,753	538	15 years old network in (poor)	Contaminated	4 locations (170000L)
N	Velidhoo	44.2	2,461	630	Septic Tank	Contaminated	2 locations (240000L)
R	Hulhuduffaaru	59.9	1,402	435	Septic Tank	Acceptable at some areas	3 locations (90,000L)
GA	Kolamaafushi	34.8	1,595	372	Septic Tank	Contaminated	4 locations (70000L)
GDh	Gahdhoo	54.8	2,909	569	Septic Tank	Acceptable at some areas	Not in use

Water infrastructure on all 4 of the project islands is extremely limited and the overall quality lends itself to a major impediment in public health. There is limited potential for rainwater storage at a household level due to overcrowding and limited available land for rain water tanks. While there has been some interventions to address the limited land shortage through land reclamation, rainwater as a primary source for water supply remains untenable due to climatic uncertainties and future growth scenarios. However, the government has a commitment to integrated water resources management as a strategy to counter the high cost of desalination which will see rainwater being used as a supplementary source where possible.

The Project

In the development and formulation of the project, GOM has considered alternatives which would optimize the overall capital costs and reduce the overall O and M costs. Such as mobilization costs associated with implementing two components simultaneously. There were some conceptual designs done for some of the project components. However, it was deemed inappropriate to use them for any basis of the project because some of them were outdated in terms of population data and some were deemed not be compliant with current technical standards.

For the four islands selected for the provision of water supply services, the required redundancy in terms of water production was incorporated into the project as per EPA regulations. The main elements of the water network component – the production plant, storage tanks and water network together with ancillary facilities needed have been incorporated into the project. Similarly, what is required for the sewer project components include the connection network, pumping stations (including the sea outfalls), and the treatment facilities along with the required ancillary facilities. The required technical support (PMU and construction supervision) crucial for the successful implementation of the project has been assessed and included in the project.

The land-use plans for each island have been studied and discussed with the island council to ensure that land for the facilities to be developed under the project can be adequately sited. The exact location of the facilities will be confirmed as part of the design finalization and EIA process.
The project scope includes the following:-

1. The set-up and manning of the PMU within MEE. A water and sanitation engineer with relevant experience shall be recruited to head the PMU. Two other junior staff will be recruited to assist him. The PMU will also guide and drive community consultation processes and activities. The PE heading the PMU shall be tasked with developing the Tender documents and more specifically the Employer's Requirements for the Design-Build Contract. While the requirements for all of the islands will be generally very similar, there are bound to be some differences which have to be incorporated into the requirements in consultation with the relevant stakeholders.
2. Design, supply, install and construct all facilities and components of the water production and network. The combined foreign and local companies active in this sector are sufficient to handle then projects.

3. Design, supply, install and construct all facilities and components of the wastewater collection, treatment and disposal system. The combined foreign and local companies active in this sector are sufficient to handle then projects.
4. Recruitment of engineers for the construction supervision stage. While the majority of the supervision will be carried out by civil/ water and sanitation engineers, there is a limited amount of mechanical and electrical supervision that may be necessary.

Due to lack of time and non-availability of data, only very rough sizing of the components was carried out. All components of each system should be designed and constructed to conform to the required specifications of MEE and EPA and shall follow standard practice where such specifications are not available.

At appraisal stage, based on the data available, it appears that the following may be used as a guide for determining the costs required:-

ESTIMATED SEWERAGE SYSTEM COMPONENT CAPACITIES

Island	Estimated Population	Development Area (m2)	House Connections (nos)	Est. Pipe length (m)	Est. Pumping main length(m)	Average Flow (m3/day) 15Y	STP Plant Capacity (m3/day) 15Y
B. Thulhaadhoo	4565	432155	538	10000	1500	323	350
N. Velidhoo	4081	439200	630	10000	1500	289	300
R. Hulhudhuffaaru	2325	585320	435	12000	2000	165	200
Ga. Kolamaafushi	2645	295600	372	8000	1200	187	200
Gdh. Gahdhoo	4824	548534	569	13000	1000	338	350

ESTIMATED WATER SUPPLY SYSTEM COMPONENT CAPACITIES

Island	Estimated Population	Development Area (m2)	Est. Pipe length (m)	Average Demand (m3/day) 15Y	Average Demand (m3/day) 35Y	7 day Storage capacity (m3) 15Y	RO Plant Capacity (m3/day) 15Y
B. Thulhaadhoo	4966	432155	10000	291	408	2037	2 x 150
N. Velidhoo	4440	439200	10000	261	365	1827	2 x 150
R. Hulhudhuffaaru	2529	585320	12000	148	208	1036	2 x 100
Ga. Kolamaafushi	2933	295600	8000	169	237	1183	2 x 100

At this stage we would suggest that the following issues be considered when developing the procurement packages for the machinery and equipment:-

1. All the project infrastructure components be considered under a design-build framework. This will fast-track the actual delivery of the project facilities. Servicing for all major equipment and machinery for a minimum period be included in the package.
2. In 4 of the 5 islands where both water and waste-water systems are to be installed, the two components should be bundled to enable mobilization and optimize overall logistics. Thus, the overall total bid price should be compared in the final selection.
3. A post-qualification assessment of the contractors shall be carried out in a transparent manner as the first stage in the bid evaluation. A post-qualification mechanism as opposed to a pre-qualification mechanism reduces the overall procurement time line.
4. Training should be an important consideration for the projects and provisions shall be made in the design-build contract to require the selected bidder to provide training to staff from the intended operator. This should cover installation, commissioning and operation and maintenance training.

The costs associated for the project are summarized below and discussed in the section relating to economic costs and justification:-

Executing and Implementing Framework/ Agencies

Steering Committee

A high-level Project Steering Committee headed by the State Minister of Environment and Energy and his designate will be set-up immediately on effectiveness of the loan. To make the Project Steering Committee able to respond quickly, it is intended that the project steering committee will be compact and draw on the required advice of other relevant organizations when required. The representation of the donor organization while not required will be very welcome. Currently it is suggested that the steering committee will comprise representation from the following bodies:-

- **Ministry of Finance and Treasury**
- **Ministry of Energy and Environment**
- **Department of National Planning**
- **Ministry of Housing and Environment**
- **Island/ Atoll Council**

It is also suggested that if FENAKA Corporation has been decided as the operator early on, that they be included in the Steering Committee for the project.

Executing Agency

The External Resources Management Division would act as the Executing Agency for the Project. The ERMD acts as the Maldivian Government's primary contact for international financing institutions (such as the IDB, ADB, World Bank and other banks and non-bank financial institutions). It is responsible for ensuring effective coordination between these financing institutions and the Government of Maldives (GoM). The ERMD is also responsible for the management of the country's external public debt including the administrative, accounting, statistical and debt reporting functions. The responsible officers within this division are very qualified and have extensive experience in dealing with international funding agencies. The Director General of ERMD, has been handling externally funded projects from a variety of funding agencies including Islamic Development Bank, the Asian Development Bank, and Abu Dhabi Fund for more than 15 years.

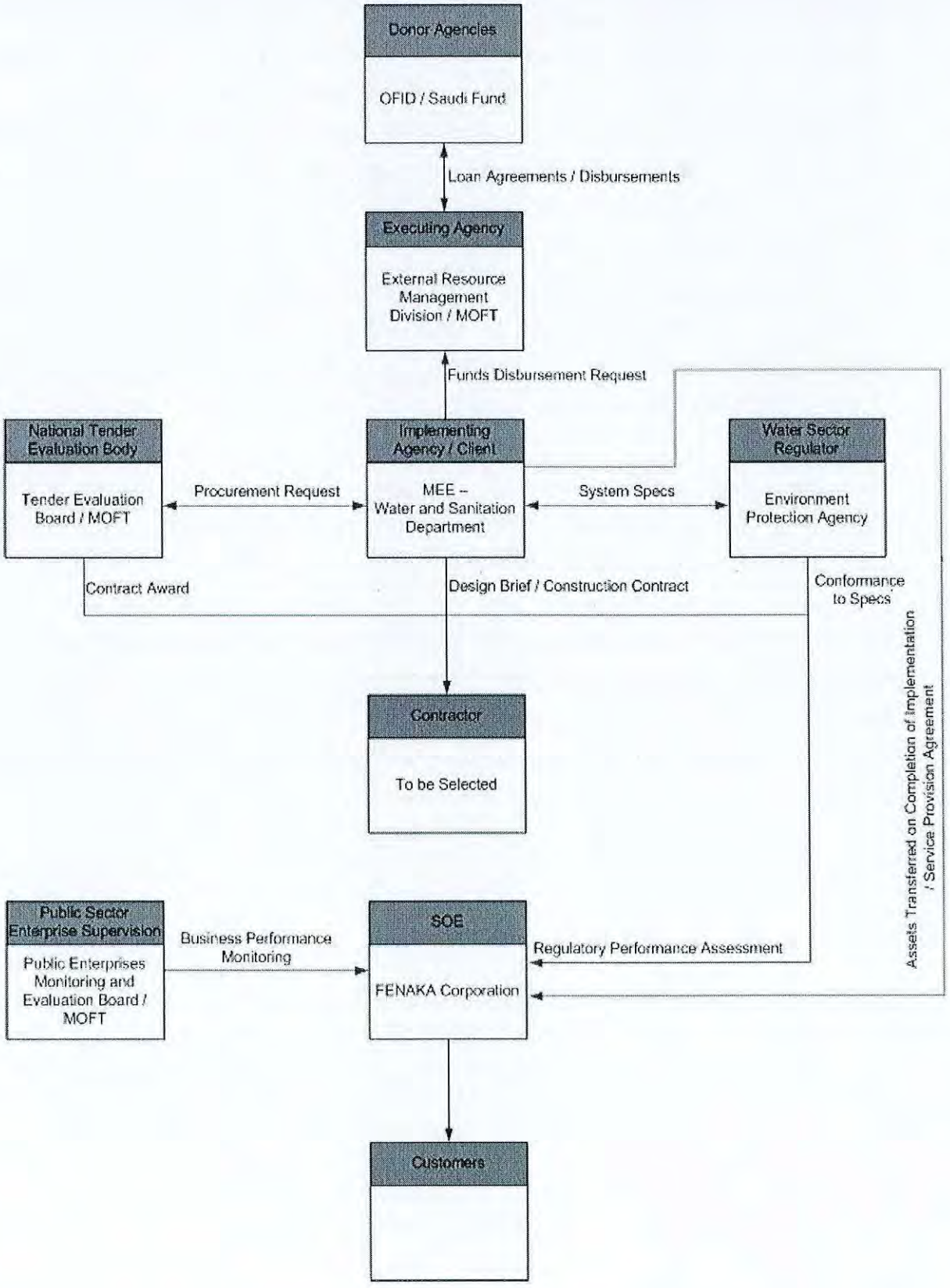
Implementing Agency

At present a project implementation unit (or its equivalent) within the client organization acts as the implementing agency for a project in a specific sector. Where expertise is not available inhouse this has been supplemented by using external consultants.

As there is very limited technical resource at MEE currently, a Project Implementation Unit has been proposed to be set up under the project. While the proposed PMU is intended to function as a dedicated implementing unit, they may also be able to provide some direly needed technical assistance to MEE if time permits. However, given that the project itself covers 5 islands and has 9 separate components (4 water projects and 5 sewerage projects) how much such assistance can be extended is uncertain. It is recommended that the PMU be led by a Project Engineer who will handle all technical matters and staffed by an additional two others covering the areas of finance and general procurement and progress monitoring. Staff recruitment for PMU will commence as soon as the loan is effective. It is also recognized that GOM's understanding with IMF and in line with prudent fiscal policy does not wish to keep an inflated civil service but will undertake to hire additional staff to meet additional project requirements as the need arises.

During the bidding stage for all components, i.e. selection of supervision consultant, selection of contractor and selection of equipment supplier, PMU will work closely with the Tender Evaluation Board which is the national body for evaluation of all government bids.

The SOE- Fenaka Corporation which will take ownership of all facilities once the project components have been delivered is a fully state-owned entity with an independent board of directors with the PEMEB of the MOFT assessing its performance. While this board is to be free to make decision regarding the delivery public utilities as per the service agreement with MEE/MOFT , it is expected to follow broad government policy.


Donor Agencies
OFID / Saudi Fund
Loan Agreements / Disbursements
Executing Agency
External Resource Management Division / MOFT
Funds Disbursement Request
National Tender Evaluation Body
Tender Evaluation Board / MOFT
Procurement Request
Implementing Agency / Client
MEE – Water and Sanitation Department
System Specs
Water Sector Regulator
Environment Protection Agency
Contract Award
Design Brief / Construction Contract
Conformance to Specs
Assets Transferred on Completion of Implementation / Service Provision Agreement
Contractor
To be Selected
Public Sector Enterprise Supervision
Public Enterprises Monitoring and Evaluation Board / MOFT
Business Performance Monitoring
SOE
FENAKA Corporation
Regulatory Performance Assessment
Customers

TECHNICAL ASSESSMENT AND RECOMMENDATIONS

Water Supply:

The primary consideration in the selection of a water supply solution is the source of the water supply itself as the pipe network would be almost identical for each of the solutions. In this context, the lack of surface water and a very limited ground water table has meant that only rainwater and production water are the alternatives that can be considered. While the very low operating costs of a rainwater system makes that alternative very appealing, the long dry periods and the impracticality of having an extensive rainwater storage tank network on islands with relatively limited land area to combat the seasonality of rainwater makes rainwater alone not a feasible one.

When water production is deemed to be the only alternative left, the means of the production needs to be assessed in conjunction with the source of the intake water. The most proven technology in the case seems to desalination of seawater through reverse osmosis with widespread availability of plant and spares and repair technicalities well under stood. The source of the intake used to be a deep sea intake pipe. However the issues with marine fouling and difficulties of servicing inlet valves as well as anchoring issues makes the option of on-land deep boreholes in the vicinity of the plant a lot more cost effective where flushing using above ground pumps at certain intervals is virtually the only maintenance required.

Reverse-osmosis desalination plants also have the advantage of being increased in a modular manner should the design demand be exceeded with no loss in operation of the existing plant. Similarly the storage tanks can also be increased to the regulatory requirement if necessary.

While there is significant power consumption associated with water production through desalination, the options of using renewable energy to power these plants exits and GOM indicated that their energy policy would be developed along these lines and that a gradual phasing of renewable energy for water production would take place.

Sewerage Systems

Three options of sewerage systems were available for consideration:-

1. Conventional gravity systems
2. Small bore systems
3. Pressurised or vacuum systems

Conventional gravity systems have been in use in the Maldives for a number of years and despite some concern regarding the construction difficulties of installing such a system in the islands where the water table is extremely shallow, once constructed they are known to function well with relatively little operating and maintenance cost if they are designed properly. On larger islands conventional gravity systems when compared with vacuum systems have a disadvantage due to the increased number of lifting stations that need to be constructed due to gravity issues. However this is taken to be less of an issue than the higher energy costs associated with vacuum systems.

The third alternative which involves removing only the effluent water from household tanks which need to be de-sludged regularly do not hold much appeal due to the fact that they still have a certain amount of possibility of contaminating the ground water especially in the case of extreme events such flooding. Thus for all the project islands conventional gravity systems were selected.

Unless proven otherwise in when an upcoming comparative sewerage system study by MEE is completed, the conventional gravity system appears to be the logical choice.

In the consideration of Sewage Treatment Plants (STPs), the regulatory requirements pertaining to effluent wastewater quality can be achieved through a number of treatment plant options such as sequential batch reactors (SBRs) and Membrane Bioreactor (MBR). With SBRs being common in the Maldives, especially in the resorts and deemed to be more cost effective, they have been used in costing the project at this stage although they have not been specified. It is suggested that the bidding documents specify a whole lifecycle approach will be adopted in the evaluation to give opportunity to other innovative treatment options.

ECONOMIC COSTS, JUSTIFICATION AND ANALYSIS

The economic costs, benefits and justification for the project have to be explained not by the project itself but by the economic costs to the nation by not having the project. It also is a fact that the cost benefits of a social project is difficult to quantify.

The costs associated with the health care provisions to be provided to residents on outer atolls to combat potential disease outbreaks and illnesses on a long-term basis will be significant. Loss in productivity and transport costs to higher level health care facilities in the short term will feature strongly in such instances.

Climate change induced events such as sea-level rise and extreme weather events such as flooding would affect the groundwater total unusable while extended dry periods would reduce the reliability of rainwater as a water supply option. In such cases the disaster responses for the provision of basic water and sanitation services will come with a very high premium.

Thus the argument for supporting a project which attempts to prevent long-term healthcare and basic sustenance costs are very sound and while they are a bit more difficult to quantify it is very likely that it will far exceed an IRR of 12% should there be sufficient data to use in an analysis.

Project Cost

Capital Cost

The costs associated for the project are summarized below and discussed in the section relating to economic costs and justification:-

The cost is expressed in financial terms proposed original costs by GoM and revised cost by the appraisal team which includes cost of infrastructure, contingencies, consultancy, monitoring, cost of furniture and equipment. Total investment cost break-down of the project is as follows.

COST ESTIMATE FOR SEWERAGE NETWORKS					
	B. Thulhaadhoo	**N. Velidhoo**	**R. Hulhudhuffaaru**	**Ga. Kolamaafushi**	**Gdh. Gahdhoo**
Survey/Design/EIA	13,000.00	13,000.00	13,000.00	13,000.00	13,000.00
Site preparation	71,800.00	73,000.00	82,900.00	67,000.00	91,200.00
Gravity sewer network	1,609,900.00	1,495,900.00	1,267,800.00	1,167,700.00	1,666,900.00
Pumping mains	164,600.00	149,700.00	142,200.00	70,100.00	179,600.00
Pumps	106,300.00	98,100.00	89,900.00	77,300.00	114,400.00
Civil works	254,700.00	227,700.00	194,100.00	159,500.00	266,400.00
Sea outfall	182,200.00	162,800.00	138,800.00	114,100.00	190,500.00
Electrical works	202,000.00	180,600.00	154,000.00	126,500.00	211,300.00
O & M spares	191,300.00	171,000.00	145,800.00	119,800.00	200,100.00
STP	279,100.00	249,500.00	212,700.00	174,800.00	291,900.00
Testing & Commissioning	2,300.00	2,300.00	2,300.00	2,300.00	2,300.00
Total Amount (US$)	**3,077,200.00**	**2,823,600.00**	**2,443,500.00**	**2,092,100.00**	**3,227,600.00**
Total (US$)					**13,664,000.00**

COST ESTIMATE FOR WATER SUPPLY NETWORKS				
	B. Thulhaadhoo	N. Velidhoo	R. Hulhudhuffaaru	Ga. Kolamaafushi
Survey/Design	9,700.00	9,700.00	9,700.00	9,700.00
Site preparation	31,000.00	31,500.00	32,600.00	21,200.00
Network piping	765,300.00	780,200.00	804,600.00	637,200.00
Customer connection	287,800.00	243,700.00	162,400.00	164,000.00
Plant & Pumping System	492,500.00	492,500.00	330,600.00	330,600.00
Storage tanks	310,900.00	278,400.00	158,200.00	180,800.00
Testing & Commissioning	2,300.00	2,300.00	2,300.00	2,300.00
Total Amount (US$)	**1,899,500.00**	**1,838,300.00**	**1,500,400.00**	**1,345,800.00**
Total (US$)				**6,584,000.00**

PROJECT COST ESTIMATES	
Component	**Total (US$)**
Sewerage Networks	
B. Thulhaadhoo	3,077,200.00
N. Velidhoo	2,823,600.00
R. Hulhudhuffaaru	2,443,500.00
Ga. Kolamaafushi	2,092,100.00
Gdh. Gahdhoo	3,227,600.00
Total Cost for Sewerage Networks	**13,664,000.00**
Water Supply Networks	
B. Thulhaadhoo	1,899,500.00
N. Velidhoo	1,838,300.00
R. Hulhudhuffaaru	1,500,400.00
Ga. Kolamaafushi	1,345,800.00
Total Cost for Water Supply Networks	**6,584,000.00**
Project Management	
PMU	**275,000.00**
Construction Supervision	**545,000.00**
Total Base Cost	**21,068,000.00**
Physical Contingencies 5%	1,012,000.00
Price Contingencies 8%	1,620,000.00
Total (US$)	**23,700,000.00**

The basis for the fees are as follows:-

1. The costs for the PMU set-up and staffing comprises the fees for hiring an expatriate project engineer. An expatriate engineer has been anticipated as there are limited experienced local engineers. The other staff are expected to be locals recruited for the project. The anticipated duration for the assignment is 30 months.
2. The fees associated with the construction supervision have been based on a 24 month project duration on site but assumes a single construction supervision contract for both the water and sewer components. The rates are taken as those comparable for locally implemented projects such as the Integrated Human Development Project on some of the atolls.
3. In coming up with the cost computation for the actual infrastructure components, recent experiences in the Maldives for water and sanitation projects were taken as the basis and adjusted for population and development potential and latest regulatory requirements. The projects of AA Mahibadhoo, L Fonadhoo and GDh Thinadhoo have been taken into consideration.
4. The contingency amounts for both types of projects have been assigned separately for this appraisal stage in case circumstances demanded that the components be carried out under separate contracts.

While slightly longer periods have been assumed in the cost computations to allow possible time over-runs, we assume that an overall period of 25 months should be sufficient for the project duration. Under such a scenario the following task based timings are deemed appropriate:-

1. A period of 2 months for PMU set -up.
2. A period of 2.0 months for the preparation of the design-build tender documents.
3. A tender period of 2.0 months.
4. A construction period of 19 months.

Financing plan

FINANCING PLAN			
Component	**OFID**	**GOM**	**Total (US$)**
Sewerage Networks	13,430,000.00	2,010,000.00	15,440,000.00
Water Supply Networks	6,470,000.00	970,000.00	7,440,000.00
Project Management	710,000.00	110,000.00	820,000.00
Total Cost (US$)	**20,619,000.00**	**3,081,000.00**	**23,700,000.00**
Percent (%)	87%	13%	100%

Recurrent / Operating Cost

Recurrent cost required for management and operations of the water and sanitation will be mainly offset through customer tariffs and possible government subsidies from GOM to Fenaka for low income citizens. Under the current practice, the operating costs are not explicitly stated based on output, recurrent operating costs for water are of the range of MRF 65- MRF 70 per ton and wastewater operating costs account to MRF 300 per house connection for non-STP connections and about MRF 700 per house connection for STP connection.

Implementation Plan for the Project

IMPLEMENTATION PLAN																											
YEAR	2013						2014												2015								
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	37	
PMU Setup																											
Tender Document Preparation																											
Tender Period																											
Design and Construction period																											12 months defects liability period

APPROXIMATE DISBURSEMENT PLAN

YEAR	2013						2014												2015							
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	37
PMU (Setup, Tender documents, bidding)	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	12 months defects liability period
Construction							2,288,000	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	981,812.50	1,869,500.00	1,869,500.00	981,812.50	1,144,000.00
Supervision Consultancy							28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	28,684.21	
TOTAL (US$)	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	2,327,684.21	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,021,496.71	1,909,184.21	1,909,184.21	1,021,496.71	1,144,000.00
CUMULATIVE TOTAL (US$)	11,000.00	22,000.00	33,000.00	44,000.00	55,000.00	66,000.00	2,393,684.21	3,415,180.92	4,436,677.63	5,458,174.34	6,479,671.05	7,501,167.76	8,522,664.47	9,544,161.18	10,565,657.89	11,587,154.60	12,608,651.31	13,630,148.02	14,651,644.73	15,673,141.44	16,694,638.15	17,716,134.86	19,625,319.07	21,534,503.28	22,555,999.99	23,700,000.00

Economic Activities in the region

The main contributor to the GDP has seen added activity in the all regions in the country and thus the added tourism activity in the project regions. The total number of existing and upcoming numbers of resorts and beds in the region are shown below for the atolls in which the project islands are located. The impacts would be more prominent from resorts closer to the project islands and those within a 30km radius are below:

			Existing	Upcoming	Total
Baa	Thulhaadhoo	No. of Resorts	8	4	12
		No. of Beds	1606	700	2306
Gaafu Alifu	Kolamaafushi	No. of Resorts	4	7	11
		No. of Beds	524	648	1172
Gaafu Dhaalhu	Gadhdhoo	No. of Resorts	1	8	9
		No. of Beds	200	654	854
Noonu	Velidhoo	No. of Resorts	2	8	10
		No. of Beds	542	980	1522
Raa	Hulhuduffaaru	No. of Resorts	1	11	12
		No. of Beds	470	990	1460

Resort Development

Atoll	Resort Name	Beds	Operational Status
B	Embudhu Village	130	Operating
B	Kuredhdhu Island Resort	304	Operating
B	Rihiveli Beach Resort	200	Operating
B	Vakkaru	200	Operational by 2015
R	Lun'dhufushi / Ludhufushi	40	Planned
R	Maanenfushi	150	Planned
R	Ehthigili	200	Planned
N	Constance Halaveli Resort	442	Operating
N	Maavelavaru	100	Planned
N	Randheli	100	Planned
N	Ekulhivaru	180	Operational by 2015
N	Maafaru	200	Planned
N	Huvan'dhumaavattaru	200	Planned
N	Fushivelavaru	200	Operational by 2015
GA	Raaverehaa(Transit Hotel)	200	Planned
Gdh	Helengeli Island Resort	200	Operating
Gdh	Gazeera	44	Planned
Gdh	Kaishidhoo	60	Planned
Gdh	Lonudhuahuttaa	100	Planned
Gdh	Vatavarrehaa	150	Operational by 2015
GDh	Maavedhdhoo Transit Hotel	200	Planned
GDh	Odegalla Resort	200	Planned

Project benefits

It is evident that the population growth in the Greater Male' Region has been explosive mainly due to a lack of employment in the outer atolls. With the expansion of tourism to these regions prospects for jobs will increase. While the tourism model in the Maldives is largely a one resort-one island one, and the service staff generally have resided on the island, there is slow trend of service staff using dedicated resort ferries to come to work on a daily basis. With proper basic services such as water and sanitation along with primary health care and education, service are likely to stay on the islands together with their families. The cyclic relation between economic prospects with higher population will likely see higher growth rates on the project islands.

With a regular water supply, many of the islands can explore economic opportunities in agricultural production targeting the resorts in the vicinity. This can be at a household level or at a communal scale. While the total number of registered people in the project islands reach around 11000, it is crucial to note that the spin offs from new smaller businesses will multiply.

The fact that this project is fundamentally a social project means that calculation of an economic benefit is a bit more implicit and involves making a lot of assumptions due to a lack of data. However, what cannot be disputed is that provision of the basic services to residents on any one of the project islands will increase the likelihood of more residents staying and spending on the island with a resultant growth in the economy.

SOCIAL IMPACT ASSESSMENT

Introduction

A broad-based qualitative social impact assessment (SIA) was carried out to understand and manage the impacts of the project on the people. While SIA is also understood to be an umbrella or overarching framework that embodies all human impacts it is realized that the impacts on a geographical scale can only be studied within some practical limits. In this project, the assessment is focused on the impacts of installing and operating the water supply systems on N. Velidhoo, B. Thulhaadhoo, R. Hulhuduffaaru and GA Kolamaafushi and sewerage systems on and sewerage systems on N. Velidhoo, B. Thulhaadhoo, R. Hulhuduffaaru GA Kolamaafushi and GDh Gadhdhoo.

Such an SIA is a useful tool to help stakeholders including funding agencies, individuals, communities, as well as government and private sector organizations understand and be able to anticipate the possible social consequences on the human population and communities of proposed project development.

Methodology

A structured SIA would have involved detailed profiling of the affected community including their current socioeconomic status, identifying and evaluating any impacts of the proposed project and ways of mitigating any adverse impacts coupled with a monitoring plan.

Given the lack of hard data to profile the community in a comprehensive manner and more importantly recognizing the obvious positive socio-economic impacts of developing these infrastructure systems which are considered to be very basic social infrastructure deemed essential for human existence it was decided that a very rudimentary and qualitative assessment will suffice.

Scoping

The site for the proposed project covers the five islands in their entirety.

Initial social profile for project islands

Atoll	Island	Deve Area (Ha)	Population (Reg. 2012)	Reg. Houses	Average Household Size
Baa	Thulhadhoo	43.2	2,753	538	5.6
Noon	Velidhoo	44.2	2,461	630	5.6
Raa	Hulhuduffaaru	59.9	1,402	435	5.3
Ga	Kolamaafushi	34.8	1,595	372	5.8
Gdh	Gahdhoo	54.8	2,880	450	4.4

Source: Census (2006) ; Island Councils (2012)

Affected parties

The community

The people mostly affected by the development of these facilities will be the residents of these individual islands and to a lesser extent, the people in the neighbouring islands (e.g. in the same atoll).

Stakeholders

They are the individuals, groups or organizations which holds an interest in the projects, or that could be affected at some way by the assessment of the development proposals. Their involvement in the planning process is important as they are part of the decision makers of the site. The stakeholders for this project include:

-The government, MOEE, MHI

- The intended operator Fenaka Corporation

-The public

Profiling

Employment

	Labor Force Participation Rate	Unemployment Rate
Male'	55.6	11
B. Thulhaadhoo	52.4	30.4
GA. Kolamaafushi	65.4	28.6
GDh. Gadhdhoo	71.1	7.6
N. Velidhoo	54.2	16.2
R. Hulhuduffaaru	55.8	19.5

Source: Census 2006

Employment type

Employment by Sector (% of Employed)					
Industry	B. Thulhaadhoo	GA. Kolamaafushi	GDh. Gadhdhoo	N. Velidhoo	R. Hulhuduffaaru
Agriculture and forestry	2	3	99	21	7
Fishing	68	89	92	22	90
Quarrying	4	2	0	4	0
Manufacturing	120	48	132	207	143
Electricity, gas and water	5	6	12	12	11
Construction	21	6	21	50	11
Whole sale and retail trade	37	20	32	61	21
Hotels and restaurants	22	2	18	11	7
Transport, storage and communication	8	8	27	16	7
Financial intermediation	0	0	0	0	0
Real estate, renting and business activities	0	2	1	0	0
Public administration and defense	16	16	28	19	25
Education	57	47	44	49	52
Health and social work	24	16	30	18	21
Other community, social and personal services activities	9	8	9	18	8
Extra-territorial organizations and bodies	0	0	0	0	0
Not stated	15	47	24	29	11

Source: Census 2006

Household income

The absence of personal tax laws to date has meant that household incomes are not known with any degree of certainty. Consequently, with the exception of very limited surveys on household income, such figures are not available. However, it is important to note here that expenditure water and sanitation services are not really considered in a user pays context by people in many of the islands. This is especially relevant in the case of sewerage services. It is conceivable that should the full cost of the services be recovered from the customers, that the disposable household income and savings will be negatively impacted. While Fenaka Corp would like to operate this under a user-pays framework, which would seek to recover at least all of the O & M charges, tariffs are regulated and hence some subsidy mechanism may have to be set up by GOM for the needy.

Proposed project (Construction of Water and Sanitation Facilities)

This section analyses potential project impacts in a socio-economic context and proposes or enhancement measures and impact management recommendations.

Phase 1: Construction

Positive Impacts:

Income to material/ equipment suppliers and contractors

Proposed development of the infrastructure will necessitate procurement of equipment, construction materials and service, providing income to suppliers and contractors.

Negative Impacts:

Occupational health safety (OHS) Risks for contractors

For such standard construction, this is expected to be minor, and where required, this can be mitigated by providing all workers with a safe working environment

Phase 2: Operation

Positive Impacts:

Improved water and sanitation services

Once completed, these facilities will provide access to safe water and improved sanitation. On the water side, this will provide a regular water supply and thus water security during the dry season. A safe and reliable water supply is a prerequisite for basic health for all and thus is expected to contribute to sickness and deaths due to water borne diseases.

When sewerage systems are installed, they serve to protect the groundwater resources through prevention of contamination with a reduction in health issues. They also reduce the risk profile of the people in cases of extreme event such as flooding which tends to damage and flood septic tanks.

Employment opportunities

Lack of opportunities are the main reason for people to migrate from the islands to the capital city, Male'. This is especially relevant in the case of smaller communities where this disparity is more pronounced. Fenaka Corporation has indicated that they would adopt a local preference in the recruitment process where applicable. For each of the islands this means employment for about 10-15 people. A secondary prospect of employment opportunities exist for staff who after a period of employment with the utility company decide to move to employment opportunities at resorts in the region.

Improvement in livelihoods and local economies

Improved healthcare that comes about due to better sanitation and access to safe water will reduce morbidity; improve labor productivity and household incomes leading to the long-term benefit of improved local economies. This development will act as a catalyst to boom the economy of the area as it will pull several economic activities towards the hospital region.

Improved aesthetics and leisure areas

A properly engineered sewerage system with a deepsea outfall will eliminate the unsightly nearshore effluent discharge increasing the usability of such areas for leisure.

Negative Impacts:

The only negative impacts associated with the installation of water and sewerage services will be some loss of land for the installation of the plant, storage and facilities buildings. However, this is a very small cost to pay when the improved health benefits are considered.

Conclusion

The minor negative impacts are all very manageable if project activities are carried out in a systematic manner. This the project as conceived and engineered will improve the quality of health of the community leading to a better living environment.

Environmental Justification

Project setting

All development projects that have a socioeconomic environmental relevance and are listed in Appendix Raa (Appendix 4) of the EIA Regulations 2012 are required to submit an Environmental Impact Assessment report which forms the basis for project approval. As such projects are required to follow a screening process identifying the environmental impacts associated with the project. Projects which are not listed in the above mentioned Schedule has to follow a screening process, based on which EPA decides whether the project requires the submission of an Initial Environment Evaluation report or an Environmental Monitoring report. Based on the findings of this report, EPA as

the regulator makes a decision on whether the specified project further requires the submission of an EIA based on the impacts associated with the project.

According to the regulations of Ministry of Environment and Energy (EIA regulation May 2012), water and sewerage projects are listed in Appendix *Raa* (Appendix 4) therefore EIA is mandatory for the proposed projects.

Environmental impacts

Environmental impacts are envisaged both during construction stage and operational stage.

Impacts due to construction works

The potential construction impacts are:

- Impact of construction camps / facilities and foreign workers
- Air Pollution / Dust
- Noise Pollution
- Solid Waste
- Accidental spillages (Oils other toxic materials)
- Impacts on Groundwater
- Impacts on Marine Environment
- Impact on vegetation

Impact of Construction Camps / Facilities

The temporary accommodation facilities pose potential environmental and health risks to both foreign workers employed during the construction phase but also on the local population. In particular, the arrangements for shelters, water supply and sanitation, solid waste management, surface drainage play a vital role in maintaining the health and wellbeing of the workers and local communities.

Air Pollution

There are no major sources that can cause air pollution due to the project implementations works. The likely sources that can change in the air quality are emissions from the equipment and machinery used during the construction. These include small excavators, dump trucks and concrete machines. Dust may be produced during the construction works especially during the earth works for making trenches for pipe networking and during transportation of the construction materials such as cement and sand.

Emissions from the machinery and vehicles are not anticipated to be significant due to the proposed duration of the project. Machinery and equipments are generally made to meet acceptable adequate air quality standards and if the contractor adheres to these standards the air quality issues from the project perspectives can be adequately addressed. Dust or air borne particles from construction materials can be minimized through good construction work related practices such as working restricted to enclosed areas or temporarily enclosing the work area.

It is worthwhile to note that there is no air quality standards followed in the Maldives. Generally air quality is regarded as good quality due to the few number of vehicles in the islands (except Male) and good flushing of air due to the small size of the islands. This allows rapid turnover and flushing of any harmful emissions. Major sources of emissions that are likely to deteriorate the air quality are emissions from powerhouses, motor vehicles and fishing boats. These are currently in low numbers at the islands and are not considered as a significant source of air pollution.

Noise Pollution

Construction works would create noise depending on the nature of the project and the work methodology involved. Operation of the machinery and construction of septic tanks, excavation works would be the main sources of noise. Operation of the machinery would be short term and the any unfavorable noise would also be short term. Some level of disturbance to the residential community cannot be avoided since majority of the works would be carried out in the residential areas. However every measure would be considered to minimize the noise level in the residential area during the construction phase.

Solid Waste

Solid waste generated during the construction phase will be mainly be from PVC pipe works of sewer network, empty cement bags and other packing material. Food waste will be generated in the staff kitchen and mess hall.

Accidental Spillages (Oils and other toxic materials)

Hazardous waste generated during the construction stage is limited to operation of machinery and vehicles. Below are types of hazardous wastes that are likely to be generated from the project activities;

- Grease
- Waste oil (from excavators and other machinery)

- Empty engine oil cans
- Used oil filters
- Batteries
- Chemical storage bottles

Impacts on Groundwater

The following section discusses other potential risks to the freshwater lens both during and post construction of the wastewater collection system.

Installation of Collection Pipes

It is understood that UPVC collection pipes must be buried at least 0.6m below ground level and that with the gravity wastewater collection system the pipes must be laid on a gradient. As water tables of Maldivian islands are low; significant proportion of pipe line may be laid below the water table over much of the island. This presents two risks to the freshwater lens, viz:

- the need for dewatering during laying of the collection pipes;
- leakage of the groundwater into the pipes over the life of the system, depleting the resource further and increasing the deficit.
- Impact on groundwater due to extraction of deep water from the ground

Dewatering for pipe laying will lower the water table within the area of the trench being dewatered with the potential for up-coning of the underlying transition zone and saltwater. This potential for up-coning of saltwater will increase the longer the trench is open and dewatering is required.

Installation of Lifting Stations and STP

As with laying of the collection pipes dewatering will be required for installation of the STP, lifting stations and associated works as the water table is shallow in most islands. This will have the same potential risk of local up-coning and salinization of the freshwater system.

Construction of bore-well for RO Plant (If bore well is decided in the final design)

The sludge generated by drilling works has to be disposed. The depth of bore-wells will be around 40m (estimated depth of borehole; minimum depth is 30m) therefore salt water will also be

generated and may cause localized increase of salinity of ground water. The impact of bore-well construction is envisaged to be minor compared to other components of the proposed project.

Impacts on Marine Environment

The potential impacts of the construction on the marine environment would be due to laying of outfall pipes. This involves transport of anchor blocks across the reef for laying and mooring the pipeline to reef bottom. The anchor blocks will be transported manually by workers.

Concrete slabs/blocks deployed to secure the pipe would inevitably damage the reef substrate by local crushing and overshadowing. However, once the blocks are deployed and secure, they become new substrate for marine organisms to settle including coral larvae. Several marine installations in the reef environment of Maldives have proven to be good substrate for coral settlement. These include PVC columns used in jetties and foundation of other maritime structure (e.g. water bungalows). Impact on marine habitat due pipe line installation is minor since only narrow width either side of pipe line will be actively used by the workers. Impact due to workers are mostly trampling and physical damage to live coral.

Impacts on Vegetation

STP, RO plant and Lifting Station sites nay required vegetation clearance. As per regulation two palms or trees has to be replanted per each palm or tree felled.

Impacts envisaged during operational stage

The potential operation impacts are:

- Air Quality Impacts / Odours
- Sewer System Overflows
- Accidental spillages (Oils other toxic materials)
- Groundwater Impacts
- Marine Environment Impacts
- Social Impacts

Air Quality Impacts / Odours

All sewerage systems are a potential source of odours due mainly to the decay of organic constituents of the wastewater being transported.

In a typical system sewage is collected from each household by means of an inspection chamber and

manholes at suitable intervals and allowed to flow to various lifting stations for onward pumping to the treatment plant. Despite the treatment at STP the effluent has a tendency to release odorous gases due to the ongoing decomposition of remaining organic constituents as they pass through the lifting stations and these gases will have a tendency to accumulate at the lifting station sites where they will be vented to the atmosphere. Odours will also be generated within lifting stations

It is anticipated that the overall air quality on the project sites will not be significantly affected through installation of the new sewerage systems.

Sewer System Overflows

In the event of a local power failure, or electrical / mechanical failure at a mechanical lifting station, the pumps will not operate and effluent will continue to flow from all connected properties to the pumping station. The effluent level in the pumping station will rise until the Alarm Level is reached and the system Operators alerted to the situation.

Unless emergency response action is taken to correct the fault, effluent will continue to build up within the sewer system until overflow inevitably occurs at the lowest discharge point. This has potential to contaminate ground water and cause impact on health wellbeing of the island population. Therefore appropriate redundancy systems have to be placed (over flow to outfalls in case of breakdown of pump system or STP and back pumps in each pump station).

Accidental Spillages (Oils & Other Toxic Substances)

There are no significant spillage of oils and toxic substances in relation to the operation of the sewerage systems. Having said that the disposal of effluents and the sludge is aimed to improve the quality of human health environment their disposal to the marine environment would have some negative impacts. The design criteria and the dispersal of effluents have to be assured to meet high standards so that the impact on the marine environment would be minimal. Accidental spill of effluents (leakages pipes) sludge (during removal and disposal of sludge) would be negligible compared to the persistent disposal of the effluents to the marine environment.

However, there is considerable human health risk associated with effluent spill with potentially harmful pathogenic bacteria which has the potential to cause serious diseases. Therefore, extreme care and caution should be considered in routine operation and maintenance works to avoid and minimize health risks.

Impact on Groundwater

Leakage of the Wastewater Collection Pipes

Leakage of the pipe system or "infiltration" occurs where pipelines are laid below the groundwater level or where storm water percolates through the upper soil layers and enters the pipe system through cracks or leaky joints. Direct inflow of storm water into the sewerage system can also occur at manholes, junctions and other surface fixtures through gratings & covers that are not effectively sealed. Inflow / infiltration from any source are generally undesirable as it increases the peak loading on the sewerage system and if the capacity of the sewer system is exceeded, sewage overflows may result. Alternatively if there is a positive pressure in the pipes, there is potential for effluent to leak out and pollute the groundwater. Additionally pipe network would be subject to deterioration over time which may lead to an increase in infiltration through joints or defects in the pipelines.

Impact on Marine environment

Discharge of Effluent and Sludge via the Outfall Pipeline

Typical system of effluent disposal to the marine environment is through a T-head diffuser system which is designed to achieve specific dilution performance as stated in the Design Technical Specifications Manual for Design and Construction of Sewerage System and Wastewater Treatment Plant provided by MEE.

The sewerage systems and the long term disposal of effluents to the marine environment are a significant concern where no point sources of nutrient input exist previously. The following section outlines the potential impacts associated with excessive nutrient input to the marine environment.

Pollution through effluent and septage disposal to the marine environment can have several distinct impacts. Raw sewage generally is associated with heavy load of nutrients. Partially treated effluents also contain high nutrient loadings although up to 50% less than raw sewage. Pollutants can be categorized as suspended solids, biodegradable organic matter, nutrients and pathogenic organisms. High levels of suspended solids can cause direct and indirect environmental effects to the organisms and the community within the impact zone. These include increased turbidity reducing sunlight penetration which is vital for growth and survival of many marine organisms including corals and sea grass. Increased nutrients have the potential to trigger algal blooms that directly compete with corals. Where there is high level of nutrient input there has been reports of increased algal cover. Increased nutrients can also trigger and assist in proliferation of sea grass communities in shallow coastal waters. This is quite evident in island communities where there is high level of nutrient inputs to near-shore environments (e.g. fishing villages; nutrients from fish processing on the beaches

increases coastal nutrient levels and algal or seagrass growth follows. Suspended solids also have the potential to cover and smother coral leading to "stress" due to increased energy spend to expel sediments.

Organic matter in the effluents discharged to the marine environment has the potential to reduce the oxygen content of the seawater. Increased nutrients and organic matter in the water column have the potential to increase the oxygen demand of the water body. It is often the case in high nutrient situations the BOD5 are of several magnitudes higher compared to the background levels. High BOD can cause hypoxia and anoxia especially in shallow and circulation restricted aquatic systems such as coral reef lagoons. Anerobic conditions may cause fish kill and bad odour due to formation of hydrogen sulphide.

Although having identified the potential impacts on the marine environment due to effluent disposal, the actual ecological impacts associated with effluent disposal have not been adequately reported or documented in the Maldives. Some studies have been carried out several years back to study the fate of nutrients associated with sewage disposal around Male. Sewage disposal in Male is similar to the proposed method of disposal in this project although a mixture of raw macerated sewage and effluent from small holding tanks (or catch pits) are discharged to deep sewer outfalls at several locations around Male. No lethal effects from the sewage disposal arrangements around Male have been found to occur and water samples taken have only identified trace level of nutrients suggesting high level of mixing and good circulation regimes around Male. Increased levels of phosphates and nitrates have however, been found in the bio assay of tissue samples from corals. With the secondary level of treatment proposed and effluents with a BOD5 of less than 20mg/l together with the currents associated with tidal flushing of the atoll water body and the depth of the end of the outfall all combined is likely to dilute and disburse the effluents.

There will inevitably be a small localized impact on the reef environment directly around the outfall diffuser location due to the mixing of effluent (freshwater) and seawater. These impacts will be limited due to the tendency of the effluent plume to move upward and away from the reef due to it's relatively lower density in seawater.

Overall, it is considered that there will be only minor impacts on the reef environment in a relatively small and localised area around the outfall diffuser site including possible loss of coral cover and increased algal growth. However, these minor impacts are considered acceptable when weighed

against the improvement to the groundwater quality.

Brine Disposal to the lagoon

Since brine will be discharged to an open water body impacts related to hyper saline water is minimal.

Socio economic Impacts

Social impacts due to the project are generally positive impacts. With the development of the sewerage systems the overall water and sanitation status of the island commuities will be improved. This will in turn improve the public health of the island communities as well as the overall environmental heath definitely to a better state then the state the communities are already in. Such improvements to the public health can only be assessed through systematic recording and monitoring on the health of the community. Hospital reports can be used to monitor the number of water borne disease such as diarrhea, certain skin and ear infections.

In terms of socio economic impacts the burden on island communities in terms of rental charges or operational charge is an issue (power consumption of the treatment plant and RO plant).

Resettlement Program

Resettlement is not required for water and sewerage projects; lifting stations and relevant buildings will be located at existing empty lots.

RECOMMENDATIONS

After a thorough examination of the proposal sent by GOM for the water supply in 4 islands and sewerage facilities on 5 islands in the Maldives, complemented with a series of discussion with relevant stakeholders including water and sanitation sector policy makers, regulatory authorities, service providers as well as the local council representatives, the consultant would like to recommend the following:-

Given the dire need for water and sanitation infrastructure in many of the island in the country, especially as they relate closely with the health of its citizens, that this project be funded to enable it proceed with the following provisions:-

a. The scope of the project encompass all the infrastructure components requested by GOM to ensure a comprehensive water and sanitation infrastructure on the target islands:-
    i. Water supply system on 4 islands to include desalination water production plant, storage tanks, supply network together with O and M building and ancillary facilities.
    ii. Sewerage system on 5 islands to include waste water collection system together with pumping stations as required, sewage treatment plant, ocean outfall together with O and M building and ancillary facilities.
b. Due to a very limited capacity with the implementing agency to manage the project, it is recommended that OFID fund the set-up and staffing of a Project Management Unit for the project duration to manage the project.
c. To ensure that construction be carried out under quality material and workmanship, it is recommended that the fund finance the construction supervision of the project through five construction contracts which would be overseen by the PMU.
d. The project be procured under a design-bid package to expedite implementation.
e. Local consultants and contractors have preference in the respective appointments at a minimum.

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6- ***Support Consultant: Aishath Abdulla*** B.Urban and Regional Planning, M.Env

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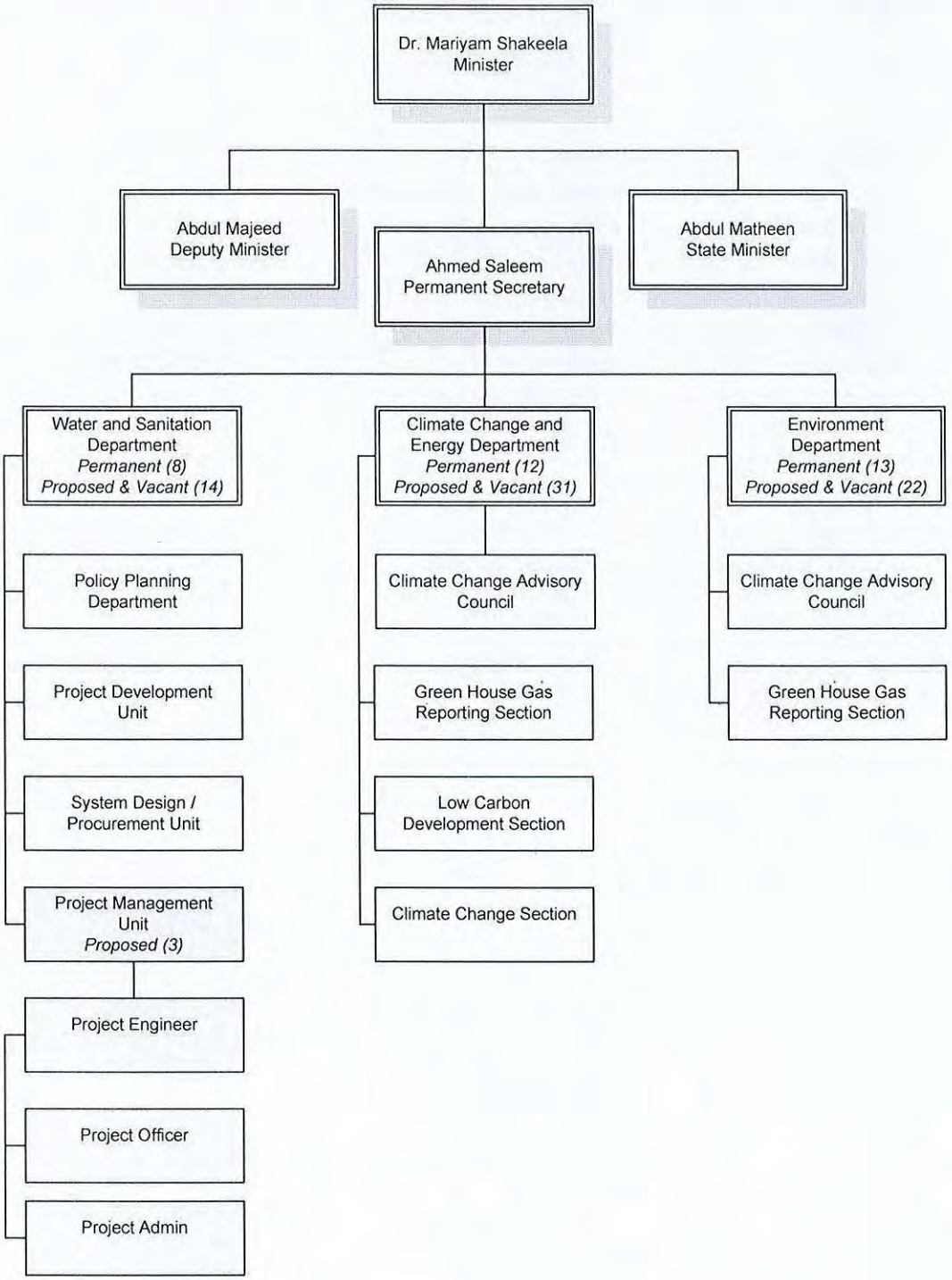
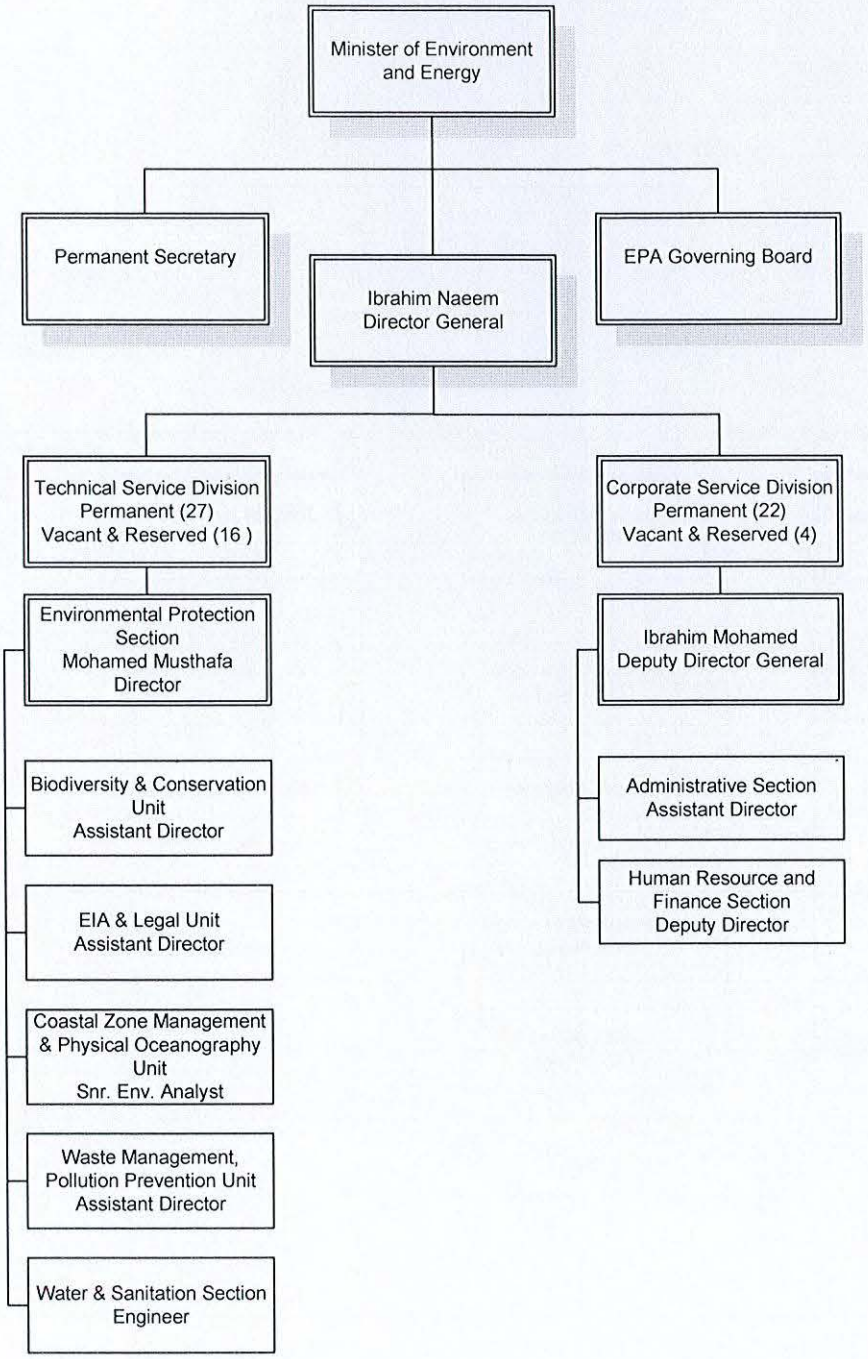
Ministry of Environment and Energy

Technical Department



Environmental Protection Agency



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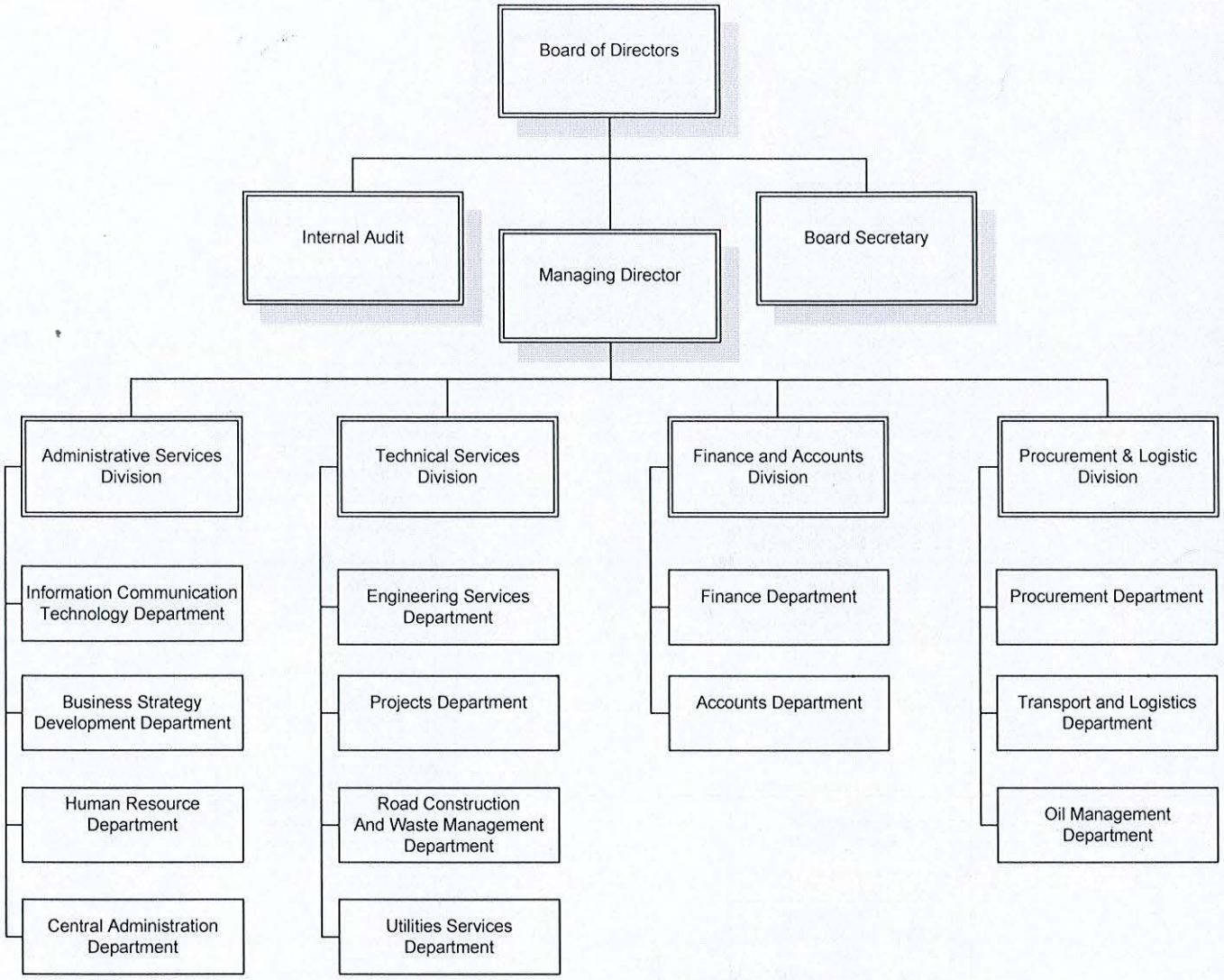

Provision of Water Supply and Sewerage Facilities in the Islands

The OPEC Fund for International Development (OFID) Proposal

October 2012

Ministry of Environment and Energy
Republic of Maldives

TABLE OF CONTENTS

1 WATER AND SANITATION SECTOR

1.1 Water and sanitation sector, its present state and future plan

The provision of safe drinking water supply and sanitation is regarded as a basic right for all Maldivians in the new constitution of the country. The Government of Maldives is committed to fulfill its constitutional obligation that all Maldivians have access to basic water supply and sanitation services at a cost which is affordable both to the household and to the country as a whole.

The Ministry of Environment and Energy, (MEE) has developed a policy on water and sanitation in line with national development agenda and Millennium Development Goals (MDGs). The Water and Sanitation Policy outlines the governments' policy on provision of safe water and sanitation services to the population. The Policy also outlines the key strategies for achieving the national development agenda and MDGs.

Having access to safe water and sewerage facilities is a constitutional right of citizens of Maldives. The Ministry of Environment and Energy, (MEE) is mandated to fulfill the constitutional obligations of the government.

The government has initiated plans to provide social infrastructure and improved services in outer islands. The water and sewerage services policies outlined in the current development plan includes the following major 4 polices

- Designate the provision of sake drinking water and sewerage services to all as a basic human right in national policies and implement these polices;
- Prioritize provision of safe drinking water and adequate sewerage services when formulating government policies and designing development projects;
- Increase the technical capacity and financial means required to provide water and sewerage facilities;
- Facilities and regulate the provision of water and sewerage services.

The water and sanitation sector is facing enormous challenges. The primary problems addressed by this sector is a significant, climate change-induced decline of freshwater security that is affecting vulnerable communities in different isolated islands in Maldives, Freshwater resources are scarce in the Maldives. As surface freshwater is generally lacking throughout the country (with the exception of a limited number of brackish water swampy areas in some of the islands), the key problems pertaining to freshwater security relate to the management of increasingly saline groundwater and increasingly variable rainfall patterns. Groundwater is a scarce resource in Maldives, due to the hydrogeology of the country. Many freshwater aquifers are already stressed from over-extraction and face the risk of total depletion. This already precarious hydrological system is further aggravated by climate change-induced effects of sea level rise and flooding during extreme weather events, which increases saltwater intrusion into the freshwater

lens. Salinization of groundwater is affecting the quality of life in the islands, as people depend on groundwater for washing, bathing and other non-potable uses. Saltwater intrusion is also affecting soil and vegetation, causing impacts on agriculture and terrestrial ecosystems.

Roof top harvested rainwater is the main source of drinking water available on islands across Maldives. Overall, 77% of people in atolls use rainwater for drinking. However, due to limited storage capacity within house plots, householders can collect and store only a small quantity of water (the average household storage capacity on islands across Maldives is 2500L). In dry periods, many householders experience a shortage of drinking water, which is due to shifting weather patterns and prolonged dry periods. In such instances, the government is called upon to transport potable water to the affected islands. Over the last few years the National Disaster Management Centre has transported potable water to many islands facing acute water shortages due to prolonged dry periods costing over US$ 2 million every year.

About 1.5% of the population in the atolls uses desalinated water. In Malé, by contrast, approximately 96% of the population was served by desalinated water supplied to the home through a piped distribution system, but overall, only about 22% of the Maldivian population has such service. There is urgency to improve access to services, as well as the quality of the services provided, given the vulnerability of existing systems and the population growth.

In addition to unregulated extraction of groundwater from shallow aquifers, a major challenge for the conservation and protection of valuable groundwater resources during dry periods is the absence of appropriate means for domestic wastewater disposal. 98% of the population of Malé has access to flushing toilets that are connected to a sewerage system. In the atolls only 16% of the population had access to toilets connected by sewer pipes to sea, while 73% of toilets were connected to septic tanks with soak pits. On some islands, this is combined with shallow sewer or small bore sewerage systems. However these septic tanks with soak pits placed in the household premises have been contaminating the shallow groundwater aquifer of the island. The effluent from septic tanks and soak pits are often discharged through sewage outfall at the shore, which heavily pollute the coastal environment. A small proportion of the population in the Maldives still uses a rudimentary form of latrine (giffili).

After the 2004 tsunami, with loans from development banks and support by donor agencies, sewerage systems have started to be built with fair treatment and central collection facilities with ocean outfalls. It is essential to connect wastewater treatment planning to considerations of long-term freshwater supply, and to make sure to treat the management of wastewater and the management of freshwater in an integrated manner. If this connection is not made, the lack of proper wastewater management planning will undermine all efforts to ensure supply of safe water to the people against climate-related hazards.

Under such circumstances, provision of safe water supply and sanitation consequently became an urgent task for the Government. In order to fill the gaps of current status and sector goals of access to safe water and sanitation for all, the MEE is working to provide water supply and

sewerage services and to the affected islands considering the long term sector goals and objectives.

1.2 Role of the sector in the socio-economic development

Health

Improved water and sanitation will help in bringing better health and improved living conditions for individuals. The government is also emphasizing on preventive health, advocacy and awareness as integral part for reducing water have borne diseases.

The main goal of the sector is maintaining better health of the population especially vulnerable groups. This has been shown as the health status of the population has improved during the last 32 years. Life expectancy has been increased from 48 in 1978 to 73 in 2010, infant mortality and maternal mortality rate has been significantly decreased since late 70s and early 80s. Water borne diseases such as cholera and shigellosis has also significantly decreased.

Economy

Preservation of fragile environment and water resources is crucial for the economy of the country. The Maldivian economy is heavily dependent on the tourism; therefore protection of the fragile ecosystem is important for the economy and also the survival of the country. The sector is addressing the issue of sanitation systems to prevent further adverse impacts on the fragile natural resources.

Regional Development

The sector has been contributing to the regional development by providing better services and facilities in the islands. Providing appropriate social services to the target population contributes creation of development opportunities in regional centers. Providing better services in the islands will reduce the population migration to capital the Male' and also accelerates the decentralization process of the government. Through provision of public services, capacity building and knowledge transfer to the local population can be taken considered, which will enhance regional development and create more opportunities in the islands.

2 THE PROJECT

2.1 Objectives and Scope

2.1.1 Project Objectives

The project aims to provide sanitation facilities to the five target islands namely B.Thulhaadhoo, N,Velidhoo, R.Hulhudhuhfaaru, Ga.Kolamaafushi and Gdh. Gahdhoo and water supply facilities to all these islands other than Gdh. Gahdhoo. In addition to this aim, the project will help to achieve the following objectives along with the provision of safe water supply and sewerage systems.

- Reduce frequency of water borne and water related diseases;
- Reduce sufferings of the people for shortage of safe water during dry periods.
- Protect groundwater aquifer from different sources of pollution including leaching of sewage from existing facilities;
- Create development opportunities in the islands by providing basic infrastructure and services; and
- Develop capacity and increase local knowledge on water and sanitation facilities management;
- Provide job opportunities for the local people and thus improve their economic conditions

2.1.2 The Output

- The expected outputs of the project are shown below.
- Access to safe drinking water and sanitation increased among the population of the island;
- Protection of ground water aquifer from contamination.
- Provision of social infrastructure facilities for regional and commercial growth centers.

2.1.3 The Beneficiaries

The Project will directly benefit a population of about 11,070 people by improving the living standard through provision of water supply in six islands and sanitation services in five islands respectively. The benefits of the project are shown below.

2.1.4 The Project Concept

The project will be implemented in line with the government's policies on, Sustainable Management of Water Resources, Environmental Protection and Preservation Polices, Land Management Plans. The project will combine the principles of social norms, community participation, capacity building and sustainable management in all stages. The sewerage facilities will be designed and constructed in meeting the long-term needs and objectives of national development.

Technical assessments will be carried out for designing a sustainable water supply and sewerage system and best option for the islands. The following areas will be considered in designing and constructing the facilities.

Water Supply	*Sewerage System*
o Modernized and sustainable rainwater harvesting systems at household levels; o Modernized and sustainable rainwater harvesting systems at community level; o Groundwater recharge o RO plant o Distribution network o Energy efficiency hence considering renewable energy options; o Minimize environment impact; and o Efficient land management.	o Simplified conventional sewerage system with sea-outfalls; o Low-coast treatment options and technologies; o Energy efficiency hence considering renewable energy options; o Minimize environment impact; and o Efficient land management.

2.1.5 Geographic location

The Republic of Maldives located in the Indian Ocean south of India and southwest of Sri Lanka. The country consists of more than 1000 coral islands; Stretching 820 km north to south and 120 km east to west, formed by 26 natural atolls vary in shape and size. Of different sizes and shapes, these atolls are divided into 20 administrative atolls with total number of 199 inhabited islands.

As located around the Equator, the country has a tropical climate with high daily ambient temperatures and relatively high precipitation. The annual average daily temperatures are ranged between 31 oC and 24oC; the annual rainfall is an average of about 1950mm.

The target island specific information is given below:

B.Thulhaadhoo
The island of Thulhaadhoo is situated in the South Maalhosmadulu Atoll. The island has an area of 24.6 hectare. The island has a population of more than 2,743 people with a density of more than 111.5 people per hectare with 317 registered houses

N.Velidhoo
The island of Velidhoo is situated in the South Miladhun madulu' Atoll. The island has an area of 44.2 hectare. The island has a population of more than 2,456 people with a density of more than 55.5 people per hectare with 461 registered houses.

R.Hulhudhuhfaaru
The island of Hulhudhuhfaaru is situated in the North Maalhosmadulu Atoll. The island has an area of 59.9 hectare. The island has a population of 1,396 people with a density of more than 23.3 people per hectare with 436 registered houses.

Ga.Kolamaafushi

The island of Kolamaafushi is situated in the North Huvadhu Atoll. The island has an area of 34.8 hectare. The island has a population of more than 1,595 people with a density of more than 44.8 people per hectare with 314 registered houses.

Gdh. Gahdhoo

The island of Gahdhoo is situated in the South Huvadhu Atoll. The island has an area of 25.3 hectare. The island has a population of more than 2880 people with a density of more than 113.8 people per hectare with 548 registered houses.

2.2 Present Water Supply and Sanitation

Water Supply

Presently, there are no piped water supply facilities available in these target islands. The overall population depends on rainwater as their main source for drinking and cooking and groundwater for all other domestic purposes. The groundwater quality is very vulnerable because of pollution from defective on-site sanitation systems and saline water intrusion.

At this moment, the government has taken initiatives in improving water supply facilities in Gdh. Gahdhoo Island with the assistance of UNDP and Adaptation Fund. There are no projects currently in other six target islands.

Under the household water tanks distribution programme rainwater tanks have been provided to each household in the island after the Indian Ocean tsunami on December 2004. However due to lack of sustainable water supply facilities, people of these islands are suffering from water shortages during the dry period.

Sanitation

The prevailing sanitation in these entire target islands is onsite sanitation systems using septic tanks and soak pits constructed by household owners. Most of the cases, these are not well constructed. Therefore, the risk of groundwater pollutions is very high, making groundwater unsuitable for use and threatening the public health.

All of target islands are designated as affected during the Indian Ocean tsunami on December 2004. Existing sanitation systems were damaged significantly resulting into contamination and deterioration of the freshwater aquifer. Under government's tsunami recovery and reconstruction programme, sewerage facilities were proposed for these islands but due to shortage of funds the project has not been materialized till to date.

2.3 Proposed Components

The project design must be feasible and appropriate to the island context. As the project horizon is 30 years, the water supply and sewerage system shall conform to the long-term development strategy. The main components of the project are listed below.

HARDWARE COMPONENT	
Water Supply System	**Sewerage System**
▪ RO plant ▪ Borehole or sea intake ▪ Distribution network ▪ Storage facilities ▪ O&M office house	▪ Lateral connection ▪ Sewer network with pumping stations ▪ Treatment plant ▪ Sludge management facility ▪ O&M office house
SOFTWARE COMPONENT	
▪ Establishment of PMU ▪ Community consultation ▪ Community mobilization and awareness raising ▪ Training for O&M (managerial, financial and technical trainings) ▪ Participatory monitoring and evaluation	

Proper planning, design and implementation of both components are important for the project sustainability. In consultation with and involvement of EPA, The MEE will be responsible for supervising the overall quality of project design, output as well as operation and management.

2.4 *Implementation Plan*

The executing agency of the project will be The Ministry of Finance and Treasury (MoFT) and the implementing agency will be the MEE.

The overall project management will be undertaken by MEE. The consultant will be employed on fulltime basis under the responsibility for supervising and managing the project design and implementation. The MEE will oversee the progress of the work and provide technical assistance to the consultant when required. The consultant will submit monthly progress reports to MEE. The reports will be shared with relevant stake-holders and also translated and shared with local authorities.

Contractors will be engaged through competitive bidding process. Both national and international bidders will be invited to take part. However, joint venture(s) of local and international firms will be preferred to facilitate technology transfer to the local construction firms.

The project will be implemented in consultation with line ministries and authorities such as Environment Protection Agency (EPA), Department of National Planning (DNP), Atolls and Island Councils, Ministry of Finance and Treasury (MoFT), and other necessary authorities relevant to the project management.

In addition, Island Councils, Community Development Organizations and Non – Governmental Organization (NGOs) will be consulted in planning, design and implementation of the project.

2.5 *Procurement*

Procurement of consultants and contractors is undertaken on the basis of competitive bidding. The procurement will be undertaken by the executing agency on behalf of the funding agency. The necessary tender documents will be prepared by the consultant in consultation with the MEE. The projects will be contracted through government bidding process.

Where feasible, tenders will be announced locally in order to keep the size of the contracts small and thus encourage more participation by local parties. The civil work will be given to local contractors in accordance with the Government of Maldives procurement regulations. In case of international competitive bidding, encouragement will be given to the formation of joint ventures with local firm(s) by international bidder(s) will be preferred to facilitate technology transfer to the local construction firms.

2.6 Operation and maintenance

Once the construction of the system completed and commissioned, the responsibility for O&M will be shifted to the utility company.

2.7 Monitoring and Evaluation

At the post-construction phase, each stakeholder will be assigned the different monitoring and evaluation task. The utility company will monitor and evaluate the services technically and financially, while the MEE will conduct Monitoring and Evaluation (M&E) of the outcome of project implementation, service support, programme review and assessment.

Monitoring will be carried out continuously, and assessment on function, utilization and impacts of the project will be done periodically. Monitoring system will be established after completion of implementation. It is important to establish the communication and coordination system for collecting and analyzing data to measure project progress and to enable accountability of the project.

To verify the objectives of the project, the indicators developed by the MEE will be used for the evaluation and review. The indicators will be used for measuring the achievement of the project outcome.

Ultimately, the following outcomes will be expected by the end of the project.

- Roles and responsibility of stakeholders;
- Coordination and communication between stakeholders;
- Accountability and delegation of duties, authority;
- Respect on user demand and preferences, community satisfaction;
- Financial and service delivery objectives; and
- Trained staff at all levels, adequate human resource.

2.8 Training needs and technical assistance

After construction, operation and maintenance personnel will be sourced from the project islands. Trainings for O&M and management of water supply and sewer system will be conducted to build the capacity of the people in aspects of project management, financial management and technical skills. Trainings and workshops will be held periodically during and after the implementation stage.

2.9 *Environmental aspects*

2.9.1 *Outline of the proposed system*

A. Water Supply Systems

The water supply system would be a combination of rainwater harvesting and RO plant supplied water. Rainwater harvesting will be encouraged both at household and community level to reduce carbon emission, investment cost, O&M costs etc. The desalinated water will be supplied to household through a network of PE pipes. Rainwater collected at community level may also be distributed through this network.

B. Sewerage System

The sewerage system would be simplified conventional system rather than shallow and settled sewerage. There wouldn't be household septic tanks and any form of wastewater shall not be discharged into the ground within the house premises. The combined wastewater (black and grey) would be collected into intermediated collection cum pump stations where sewage effluent shall be pumped to the central treatment facilities. The effluent then can be pumped into deep sea beyond the house reefs. The effluent can be given a tertiary treatment before discharge if the option is feasible at that point in time. However the entire sewerage system would be designed such that tertiary treatment could be incorporated when needed. The facility for sludge management is included so as to minimize the environmental impacts.

2.9.2 *Impact on environment*

Any similar projects will have environmental impacts either positive or negative. If there is any negative impact, it can be minimized during the implementation of the project with considering suitable mitigation measures.

Environmental Impact Assessment (EIA) shall be conducted by the consultant in line with the General EIA Guidelines issued by the Environmental Protection Agency (EPA). The EIA report shall be submitted to the Environmental Protection Agency (EPA) for the approval during the design phase before the construction phase starts.

2.10 Project cost estimates

2.10.1 Cost Estimate

The estimated cost for the project is about approximately 20.6 million US dollars. Island wise project cost estimates are shown below. The costing includes consultancy work, facilities construction and procurement of equipment such as RO plant, water distribution pumps, sewer pumps and desludging units for the project.

Sl No	Name of the Island	Water Supply Systems (USD)	Sewerage Systems (USD)
1	B.Thulhaadhoo	2,158,000	3,120,000
2	N.Velidhoo	1,872,480	2,707,200
3	R.Hulhudhuhfaaru	1,314,000	1,971,000
4	Ga.Kolamaafushi	1,298,950	1,878,000
5	Gdh.Gahdhoo		3,309,600
	TOTAL	6,643,430.0	12,985,800.0
	Supervision Consultancy (5%)	33,2171.5	649,290.00
	GRAND TOTAL (USD)	**6,975,601.5**	**13,635,090.0**

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ޤާނޫނު ނަންބަރު 3/2006 (ދައުލަތުގެ މާލިއްޔަތުގެ ޤާނޫނު) ގެ 5 ވަނަ މާއްދާގައި ދިވެހި ސަރުކާރުން ލޯނު ނުވަތަ ދަރަންޏަށް ފައިސާ ނަގަންވާނީ ނުވަތަ ގެރެންޓީ ދޫކުރާނީ، އެކަމަށް އޭގެ މިނިސްޓަރ އޮފް ފިނޭންސް އެންޑް ޓްރެޜަރީ ރައީސުލްޖުމްހޫރިއްޔާއަށް ހުށަހަޅައި، އެކަން އެގްރީ ކުރުމުން ރައީސުލްޖުމްހޫރިއްޔާ ހުއްދަދެއްވާނަމަ، ރައީސުލްޖުމްހޫރިއްޔާ ރައްޔިތުންގެ މަޖިލީހަށް ހުށަހަޅައި، އެ ހުށަހެޅުން ރައްޔިތުންގެ މަޖިލީހުން ފާސްކުރަންވާނެއެވެ.

އެގޮތުން 2013 ވަނަ އަހަރު ދިވެހިސަރުކާރުން ލޯނުނެގުމާއި ގެރެންޓީ ދިނުމުގެ އެދި މިނިސްޓަރ އޮފް ފިނޭންސް އެންޑް ޓްރެޜަރީން މަޖިލީހަށް ފޮނުއްވާފައިވާ ލިޔުންތަކުގެ ކޮޕީ، ޤާނޫނު ނަންބަރު 3/2006 (ދައުލަތުގެ މާލިއްޔަތުގެ ޤާނޫނު) ގެ 5 ވަނަ މާއްދާއާ ގުޅިގެން މިސިޓީއާއެކު ފޮނުވީމެވެ.

ވީމާ، މިމައްސަލަ ރައްޔިތުންގެ މަޖިލީހަށް ހުށަހަޅުއްވައިދެއްވައި، މިމައްސަލައާމެދު ރައްޔިތުންގެ މަޖިލީހުން ނިންމަވާ ގޮތެއް މިއޮފީހަށް އަންގަވައިދެއްވުން އެދެމެވެ.

އިޙްތިރާމް ގަބޫލުކުރައްވާން އެދެމެވެ.

15 މުޙައްރަމް 1434

29 ނޮވެމްބަރު 2012

ޚާދިމުކުމް

މުޙައްމަދު ވަޙީދު

ރައްޔިތުންގެ މަޖިލީސް

މާލެ،

ދިވެހިރާއްޖެ

ފެނާއި ނަރުދަމާގެ ނިޒާމު ޤާއިމްކުރުމަށްބޭނުންވާ 20,000,000 (ވިހި މިލިއަން) ޔޫ.އެސް ޑޮލަރުގެ ލޯނު

މަޝްރޫޢުގެ ބައެއް ތަފްސީލު

މަޝްރޫޢުގެ ނަން:	ސ.ހިތަދޫ، ސ. ފޭދޫ، ސ.މަރަދޫފޭދޫ އަދި ގއ. ކޮޅުމަޑުލުގައި ނަރުދަމާ އާއި ފެންފޯރުކޮށްދިނުމުގެ މަޝްރޫޢު އަދި ގދ. ގައްދޫ ގައި ނަރުދަމާގެ ނިޒާމު ޤާއިމް ކުރުމުގެ މަޝްރޫޢު
މަޝްރޫޢުގެ އަގު:	20,000,000 (ވިހި މިލިއަން) ޔޫ.އެސް ޑޮލަރު
މަޝްރޫޢުގެ ފަންޑް:	އޮޕެކް ފަންޑް ފޮރ އިންޓަރނޭޝަނަލް ޑިވެލޮޕްމަންޓް (އޮފިޑް)
ލޯނުގެ ސޮއި ކުރުމަށް ހަމަޖެހިފައިވާ ތާރީޚް:	2013 ވަނަ އަހަރު
މަޝްރޫޢު ހިންގާ ފަރާތް:	މިނިސްޓްރީ އޮފް އެންވަޔަރަމަންޓް އެންޑް އެނަރޖީ
އެގްޒެކެޓިންގ އޭޖެންސީ:	މިނިސްޓްރީ އޮފް ފިނޭންސް އެންޑް ޓްރެޜަރީ
މަޝްރޫޢު ހަމަޖެހި ފާސްކުރި ފަރާތް:	ވަޒީރުންގެ މަޖިލިސް

ދަރަނީގެ ގޮތުގައި ނަގާފައިސާއިން ކުރާ ބޭނުން:

ސ.ހިތަދޫ، ސ. ފޭދޫ، ސ.މަރަދޫފޭދޫ، ގއ. ކޮޅުމަޑުލު އަދި ގދ.ގައްދޫ ގައި ނަރުދަމާގެ ނިޒާމު ޤާއިމުކުރުމާއި ފެންފޯރުކޮށްދިނުމުގެ ނިޒާމު ޤާއިމުކުރުން، ނަރުދަމާގެ ވިއުގައާއި ޕަމްޕިންގ ސްޓޭޝަން، ޓްރީޓްމަންޓް ޕްލާންޓް އަދި ފެން ރައްކާކުރާ ޓޭންކް ޤާއިމުކުރުމަށް ހޭދަކުރެވޭނެ. އަދި ގދ. ގައްދޫ ފިޔަވައި، އެހެން 4 ރަށުގައި ފެނުގެ ނިޒާމު ޤާއިމު ކުރެވޭނެ.

މަޝްރޫޢުގެ ސަބަބުން މުޖުތަމަޢަށް ކުރާނެ ފައިދާ:

މި މަޝްރޫޢު ނިމުމުން ފެނުގެ ޚިދުމަތް ފޯރުކޮށްދިނުމުގެ ފަސޭހަ ހުރުމާއެކު، ޞިއްޙީ ޚިދުމަތް ފޯރުކޮށްދިނުމާއި މުއައްސަސާތައް ފެނުގެ ނިޒާމުތަކުން ފައިދާ ކުރުން، ރައްޔިތުންގެ ޞިއްޙަތަށް ލިބޭ ގެއްލުން މަދުކޮށް ފަރުވާ ހޯދުމަށްދާ ޚަރަދު ކުޑަކުރެވޭނެ. އަދި ރަށުގެ އާބާދީ އިތުރުވެ ތަރައްޤީ ވުމުގައި ފެނުގެ ނިޒާމު ޤާއިމްވެފައިވުމުން މި މަޝްރޫޢުގެ ސަބަބުން ރައްޔިތުންނަށް ލިބޭނެ.

ލޯނުގެ ތަފްސީލު

(މިބައިގައި ހިމެނޭނީ މުއްދަތު އަދި އިންޓްރެސްޓް ރޭޓް، ފައިސާ ދައްކާނެ މުއްދަތު ފަދަ ލޯނާއި ގުޅޭ ކަންތައްތަކެވެ، ލޯނުގެ ތަފްސީލު ތިރީގައި.)

ލޯން އަގު:	20,000,000 (ވިހި މިލިއަން) ޔޫ.އެސް. ޑޮލަރު
އިންޓަރެސްޓް ރޭޓް:	3.25 ޕަސެންޓް ޕަރ އެނަމް
އެޑްމިން ޗާޖަސް:	1 ޕަސެންޓް ޕަރ އެނަމް ސާރވިސް
ގްރޭސް ޕީރިއަޑް:	5 އަހަރު
ލޯން އަނބުރާ ދައްކާ ނިމޭނެ މުއްދަތު:	20 އަހަރު (ގްރޭސް 7 އަހަރު ހިމެނޭގޮން)
ލޯން ސަރވިސް ކުރުމަށް ދާނެ ޖުމްލަ ޚަރަދު:	28.92 މިލިއަން ޑޮލަރު (ލޯން އަނބުރާ ދެއްކުމަށް 20 މިލިއަން ޑޮލަރު އަދި އިންޓަރެސްޓާއި ސާރވިސް ފީ ގެ ގޮތުގައި 8.92 މިލިއަން ޑޮލަރު)
ލޯން އަދާކޮށް ނިމުމަށް ލަފާކުރާ ތާރީޚް:	2032 ވަނައަހަރު

ދަރަނި ނެގުމުގެ ސަބަބުން އިޤްތިޞާދަށް އަދި ދައުލަތުގެ މާލިއްޔަތަށް ކުރާނެ އަސަރު

ފެނާއި ނަރުދަމާގެ ޚިދުމަތްތަކަކީ ރައްޔިތުންގެ ޞިއްޙަތާއި މުޖުތަމަޢުގެ ތަރައްޤީއާ ގުޅުންހުރި އަސާސީ ޚިދުމަތްތަކެއް. ދައުލަތުގެ ދަރަނި ފުޅާވުމަކީ ދައުލަތުގެ މާލިއްޔަތަށް ނުރައްކާވެދާނެ ކަމެއް ކަމުގައި ވިޔަސް، މި ލޯނުގެ މުއްދަތަކީ 20 އަހަރުގެ ކުރު ނޫން މުއްދަތަކަށް ވުމުން ދައުލަތުގެ ބަޖެޓަށް ކުރާ ބުރަ ކުޑަވާނެ. މި މަޝްރޫޢުގެ ސަބަބުން ރަށްރަށުގައި ތަރައްޤީއާ ބިނާކުރުމުގެ ކަންތައް ހިންގުމަށް ފުރުޞަތު ތައްޔާރުވާނެ. އަދި މި މަޝްރޫޢު ހިންގުމަށް ބޭނުންވާ ސަރުކާރުގެ ޚަރަދު ކުޑަވެ، އިޤްތިޞާދީ ކަންކަމަށް ފައިދާ ކުރާނެ. މަޝްރޫޢުގެ ސަބަބުން ރަށްރަށުގެ ތަރައްޤީ އަށް އަސަރު ކުރާނެ. އިޤްތިޞާދީ ކަންކަމުގައި ދައުލަތުގެ ދަރަނި ކުރެވޭ މިންވަރު ކޮންޓްރޯލް ކުރުމުގައި މަދުކަމެއް.