



Myen Mung Hka Myihprap Wan Hte Seng Ai Zai Ninggawn Makau Grupyin Maram Dawdan Lam

Ga Laidung

IN PARTNERSHIP WITH



Creating Markets, Creating Opportunities

© International Finance Corporation 2017. All rights reserved.
2121 Pennsylvania Avenue, N.W.

Washington, D.C. 20433

Internet: www.ifc.org

Ndai laika buk kaw lawm ai ginlam yawng hte seng ai ahkang aya yawng hpe madu da sai re. Ndai laika buk kaw lawm ai laika daw chyen hpe mi rai rai, yawng hpe mi rai rai, ahkang nlu ai shah tang dip gawng galaw ai rai yang, htung tara hpe tawt lai ai lam re. IFC hku nna galaw da ai magam bungli ni hpe garan gachyan ya ai lam hpe, n'gun jaw ai rai nna, dip shapraw da ai laika buk ni kaw na daw chyen hpe garan gachyan lu na matu, ahkang jaw na re. Laika buk hpe bai dip shapraw ai lam gaw, hpaji hte seng ai bungli hte akyu ntam ai yaw shada lam a matu rai yang, ndai zawn re ai magam bungli hte seng nna shana ya na matu, hpyi shawn yang hpyi shawn na re.

IFC hku nna, ndai laika buk kaw lawm ai ginlam yawng hkra shing nrαι, ndai laika buk kaw lawm ai ginchyum dat da ai lam ni shing nrαι dawdan da ai lam ni gaw, tup hkrak byin ai, mai kam ai shing nrαι hpring tsup ai ngu pahkam nlu hkam ai. Ndai laika buk kaw ngam taw ai lam, ga si ga ngau shut ai lam, laika gayet shut ai lam hte kaga zai ladat hte seng ai shut ai lam ni a matu mung lit la na nrαι. Lamu ga sumla kaw madun da ai jarit ni, nsam ni, garan da ai lam ni gaw, Mungkan Gumhpraw Dum hku nna ginra hte seng ai tara shang ai lam shing nrαι madi shadaw ai lam shing nrαι hkap la ai lam hte seng nna dawdan ya ai lam nrαι ai. Ndai sawk dinglik laika kaw lawm ai sawk tam mu ai lam, lachyum htai ai lam hte ginchyum dat ai lam ni gaw, Mungkan Gumhpraw Dum Uphkang Hpung shing nrαι shanhte gawng malai tai ai asuya ni a ningmu ni hpe dan dawn shangun ai lam nnga ai.

Ndai laika buk kaw lawm ai ginlam ni gaw, shiga jaw na matu yaw shada ai rai nna, tara upadi, shim lam shing nrαι hpaga arang bang na hte seng nna hpaji jaw na matu yaw shada ai nrαι li ai. Hpaga arang bang na matu shing nrαι hpa na matu mung hpaji hpyi ai yaw shada lam ni nlawm ai. IFC shing nrαι de a ginrun wuhpung ni gaw, hpaga hpung nkau mi kaw arang bang ai lam, hpaji jaw shing nrαι magam bungli galaw ya ai lam shing nrαι ja gumhpraw akyu nga ai lam ni mai nga ai.

Ndai laika buk hte seng ai ahkang aya hte tara shang masat laika hte seng nna kaga san ra ai lam ni hpe, IFC Hpaga Hpung Kanawn Mazum Dap, 2121 Pennsylvania Avenue, N.W., Washington, D.C. 20433 de matut mahkai na.

Mungsang Ja Gumhpraw Wuhpung (IFC) gaw mungsang wuhpung langai rai nna, hpung shang mungdan ni a Myit Hkrum Laika hte hpaw shabawn da ai rai nna, Mungkan Gumhpraw Dum Hpung a hpung shang wuhpung langai re. Mying ni, kumla ni hte hpaga kumla ni hpe IFC madu da ai majaw, IFC kaw na jaw ai ahkang jaw laika nlu ai rai yang, kaning zawn re ai yaw shada lam a matu mung njai lang lu na.

Cover photo credit: Tessa Bunney 2017

GA LAIDUNG

Bawngring ai ninggam ningnan kaw rai nga ai Myen mung na hka myihprap wan shapraw ai lam hpe, myihprap wan shapraw ai lam hte makau grupyin hte shinggyim wuhpawng kaw byin pru ai lam hpe sharap shara nna, aten galu ngang grin hkra mai galaw ai. Myen mung gaw, daini na aten hta lai wa sai aten hte nbung ai hku hka myihprap wan shapraw ai lam de sa taw ai rai nna, mali hka hkam wam kaw byin pru ai pawnghpawm dingbai dingna ni hpe sung sung li li myit shalawm ai lam n galaw ai sha, masing lamang langai hpra hpe gaw gap na matu ahkang jaw taw ai. Mungdan law law kaw, ndai zawn re ai byin yan ni a marang e, hka myihprap wan masing lamang galaw na matu htap htuk ai mali hka madung ni, hka gai ni kaw masing lamang ni galaw ai rai nna, hka hte seng ai mabyin ni hpe shaning 50-100 hta jan nna galai shai kau ya sai. Hkam wam hkamja lam hte grupyin shingra mabyin ni kaw pawng hpawm byin pru ai dingbai dingna ni nga ai rai nna, ndai dingbai dingna ni hpe sharai mai ai lam, kachyi sha nga ai re.

Ndai Myen mung hka myihprap wan hte seng ai Zai Ninggawn Makau Grupyin Maram Dawdan Lam (SEA) kaw, hkam wam madang kaw makau grupyin hte shinggyim wuhpawng manu shadan ai lam ni hpe myit shalawm nna, aten na na ngang grin ai hka myihprap wan masing lamang galaw ai ladat ni hpe, madi shadaw da ai re. Ngang grin ai hka myihprap wan masing lamang hpe galaw lu na matu, masing lamang langai hpra hte seng ai kaw madung tawn myit sawn ai hku nre sha, hkam wam ting hpe madung tawn nna myit sawn na matu, hpaji jaw ai.

1. Shingdu Mabyin

Myen mung gaw dat n'gun law law ra kadawn nga ai. Dingda Asha dan kaw Myen mung gaw, myihprap wan sumri gang da ai lam yawm dik rai nna, masha jahpan a 40% sha, myihprap wan lu ai re. Mungdan kata ra rawng ai myihprap wan n'gun hpe jahpring lu na matu, 2030 ning du hkra shaning shagu myihprap n'gun 500MW shapraw jat ra na re. Dai hta n-ga, ra kadawn ai lam hpe jahpring shatsup na matu, dat n'gun shalai ai myihprap wan sumri ni hpe mung, lak lai ai hku shachyaw jat ra na re.


Myen mung kaw tang madun da ai myihprap n'gun shapraw masing lamang hpe, sawn dinglun nga ai rai nna, yu maya hte lang hte lang mai lang ai dat n'gun hpe mung, mungdan dat n'gun zai ladat kaw dinglun taw ai. Dat n'gun shapraw ai kaw, manu hpa ai dat n'gun law law hpe lu shapraw ai sha n-ga, grau nna gaw myihprap wan shapraw ai lam nzim ai kaga lang hte lang mai lang ai dat n-gun daju ni hte matut mahkai ai myihprap wan sumri hpe mung, shangang shakang ya lu ai hka myihprap wan shapraw ai lam gaw, ahkyak madung rai wa mai ai.

Myen mung kata kaw myihprap wan shapraw ai lam gaw, shapraw mai ai lam hta grai naw yawm nga ai. Daini myihprap wan shapraw nga sai, wan n'gun 10 MW hta shapraw ya ai myihprap wan masing yawng 29 kaw na, myihprap n'gun 3,298 MW shapraw da nna, 2018 shaning ningnan kaw mungdan ting myihprap wan jai lang ai lam a 58% re. Myihprap n'gun 1,564 MW shapraw ya na matu myihprap wan masing kru hpe gaw gap taw sai raitim, ngut na matu masat da ai aten hta h pang hkrat ai shing nrai, gaw gap ai lam hpe hkring mat ai lam ni byin ai. Daini na aten mungdan ting hta tang madun da ai hka myihprap wan masing 69 nga nna, myihprap n'gun 43,848 MW shapraw ya na re. Ndai masing lamang ni kaw, myihprap n'gun 2,000 MW hta jan nna shapraw ya na masing lamang kru, myihprap n'gun 1,000 MW kaw na 2,000 MW shapraw ya na masing lamang sanit lawm ai. Daini aten du hkra, hka myihprap wan masing lamang ni kaw na 80% hpe hka lwi hkrat ai hkam wam kaji ni kaw gaw gap da ai rai nna, ndai kaw na pru wa ai myihprap wan ni hpe myihprap wan shabra ai shara hte myihprap wan sumri nlaw nla hte shabra ya nhtawm, htap htuk ai hkam wam kaji hte seng ai hka hte seng ai lam, lamu ga hte seng ai lam ni hte mung matut mahkai nga ai. Hka myihprap wan masing lamang law law hpe Eyawadi Hka hkam wam ni kaw gaw shachyawm da nhtawm, masing lamang yawng a 64% rai nna, Sittawng Hka hkam wam kaw gaw masing lamang yawng a 25% nga ai re.

Kaba de 671,700 km² nga ai Myen mung gaw hka hpung tsin nhprang law law nga ai. Hka madung hkam wam rai nga ai Eyawadi gaw mungdan ting a 55% (hkam wam 90% gaw Myen mung kata kaw) nga ai rai nna, Tsanlun hkam wam gaw mungdan ting a 19% (hkam wam 45% gaw Myen mung kata kaw) nga ai re. Myen mung kaw nga ai masha jahpan a 70% gaw, kahtawng ningchyawng kaw nga ai rai nna, masha law law gaw kan bau magam bungli a matu, mali hka hte shingra nhprang sut rai kaw shanu machyu nga ma ai.

Myen mung a mali hka hkrang masa gaw, shinra byin yan ni hpe hkang zing ai lam kaw madung nga ai. Hka hpung tsin shingra byin yan hte seng ai lam ni kaw lawu na lam ni lawm ai:

- **Karum ningtum ai lam:** Nga hkwi nga rem ai magam bungli, hka shalai ya ai lam hte dum nta kaw jai lang na hka hpe jaw ya ai lam;
- **Hka lwi ai lam:** hka lwi ai lam hpe hkang zing ai lam, hka hpe jasan ai lam, shingra tsin yam (sha-u ing ai lam) hpe sharai ai lam, hka hkingau mayan na lamu ga ni hpe hkang zing ai lam hte hka kata na lusha dat ni hpe madi shadaw ai lam; hte
- **Htung hking:** htung hking hte seng ai shara ni, ban sa na shara ni hte, bu hkawm chyai na shara ni.



Myen mung na hka nhprang a ahkyak ai lam hpe, nga hkwi nga rem ai magam bungli gaw madun ya nga ai. Hka hpung tsin nga hte pang lai nga hkwi magam bungli gaw masha wan 3.2 hpe bungli jaw da ai rai nna, dai masha ni kaw na 800,000 gaw aten hpring hte masha wan 2.4 gaw aten daw chyen bungli galaw ai (www.worldfishcenter.org/country-pages/myanmar).Ndai magam bungli gaw Myen mung na mungdan kata gunrai shapraw shadang (GDP) kaw masat shadang mali kaw nga ai sha n-ga, maigan gumhpraw shang ai kaw mung masat shadang mali kaw rai nga ai. Dai hta n-ga, ndai bungli gaw, lusha kaw na lu ai proting dat hpe mung laning mi hta masha langai mi hpe 30 kg jaw ya lu ai.

Mali hka madung ni kaw tang madun da ai masing lamang ni hpe grau ninghkap ma ai majaw, asuya gaw Mali-Nmai Zup, Tamanhti, Tanintari hka myihprap wan masing lamang ni hpe jahkring kau ra ai. Ndai hka myihprap wan masing lamang ni gaw wan n-gun 7,800 MW shapraw ya lu ai. Myen mung kata na hka myihprap wan masing lamang galaw ai shara ni gaw, hpai shai ai lam byin ai shara ni kaw mung lawm ai majaw, shingra nhprang (hka hte seng ai, hkarang hte seng ai, hka hte seng ai shingra mabyin, shinggyim wuhpawng hte kanbau bungli) hte seng ai shiga lamang ni nna ai sha n-ga, asuya a galaw lu ai lam hte nhprang ni yawm ai. Mungdan shinggyim sut masa bawngring lam kaw hka myihprap wan masing lamang ni gaw, lak lai ai hku madi shadaw mai ai raitim, masing lamang kaba ni hpe mungshawa ninghkap ai majaw, ndai shaning ni hta hka myihprap wan masing lamang ni gaw yak hkak ai lam ni hkrum nga ai.Ndai zawn ninghkap ai lam ni gaw, masing lamang hte seng ai brang lang masa nnga ai lam hte nbung ai tsang ni hte hkrum zup ai lam hte shalawm la ai lam nnga ai majaw sha n-ga, mungmasa galai shai ai lam ni a majaw byin pru wa ai.

2. Galoi shagu na zawn galaw ai lam a ra rawng ai lam ni

Myen mung daini na aten hta galaw ai masing lamang ni gaw, mungkan mungdan law law kaw galaw ai ladat hte bung nga ai. Dai gaw, hkam wam, hkam wam kaji ting hpe hkyen lajang ai hku nre sha, masing lamang langai hpra hpe madung tawn ai lam re. Byin mai masa hpe dinglun ai shaloi, zai ladat hte hpaga lam hte seng ai hpe sha madung myit shalawm ai majaw, pawng hpawm nna byin pru wa mai ai makau grupyin hte shinggyim wuhpawng hte seng ai dingbai dingna ni hpe myit shalawm ai lam grai nlaw lawm ai.

Du na 30 ning laman gaw shachyaw na masing lamang ni gaw, galoi shagu na zawn galaw ai masing lamang ni re ai majaw, hkam wam ni a hkamja lam hpe galoi mung jaw ya lu na nre. Eyawadi, Danai hte Tsanlun hkam wam ni kaw, kaba ai masing lamang galaw ai gaw, matut mahkai ai hkrang, hkam wam a byin yan ni hte grupyin shingra byin yan ni hpe, lak lai ai hku dingbai dingna byin shangun na re. Ndai hka madung kaw galaw ai masing lamang ni hte,

hkam wam kaji kaw galaw ai galoi shagu na zawn na ladat hte galaw ai masing lamang ni gaw, hka myihprap wan masing lamang ni na majaw, marang hka la ai shara gaw ya aten nga taw ai 14% kaw na 45% de jat mat nna, kawng hte bum kaw nga ai marang hka la ai shara yawng lawm na re. Ndaï masa a majaw, hkam wam hkamja lam hpe grit nem wa shangun nna, mungdan shara shagu na ahkyak ai shingra nhprang hte shinggyim wuhpawng manu shadan ai lam ni hpe tat sum wa na re.

3. SEA a pandung, ginwang hte galaw ladat

Miyihprap hte Dat N'gun Hkringmang Dap (MOEE) hte Shingra Nhprang hte Makau Grupyin Hkang Zing Hkringmang Dap (MONREC) gaw, bawngring lam hte shingra nhprang hpe hkang zing na matu, nganggrin ai hka myihprap wan masing lamang ni galaw ra ai lam hpe, masat masa galaw chye na ai. Ndaï hkringmang dap ni gaw Mungsang Gumhpraw Wuhpung (IFC) hte ta gindun nna SEA hpe hkyen lajang let lawu na pandung ni hpe jahkrat da ai:

Nganggrin ai hka myihprap wan masing lamang galaw ai lam gaw, hka, hkarang ga hte shingra mabyin ni hpe rau sha hkyen lajang nna, shingra nhprang hpe jai lang ai lam hte sut masa bawngring lam, makau grup yin nganggrin lam hte shinggyim wuhpawng rap ra ai lam ni hpe sharap shara ai kaw ningpawt ninghpang tawn ai re.

Ndaï pandung hpe yaw shada lam kru hte madi shadaw da ai:

- Mali hka hkamja lam hte grupyin shingra magam bungli ni hpe shabyin shatai ya ai shingra hka hkam wam byin yan ni hte magam bungli hpe hkang zing na;
- lak lai nna ahkyak ai hkrung kanu hkum hkrang hte htung hking hte seng ai shara ni, madun shadan lam ni sha n-ga, gawng malai tai ya lu ai makau grupyin manu shadan lam ni hpe lu la na;
- nhtap htuk ai makau grupyin, galaw lu galaw sha lam hte sut masa dingbai dingna ni hpe koi gam na;
- hpai shai ai hte seng ai shoihpa hpe masat masa galaw, chye na ai hte koi gam shing nrai hparan na;
- masing lamang a majaw dingbai dingna hkrum ai masha, shinggyim wuhpawng hte buga ni hpe masing lamang kaw na lu la ai akyu ara ni hpe jaw na;
- Law htam kam ging nna manu mai ai hka hpyi hprap dat n'gun hpe mungdan kata jai lang lu na matu shapraw ya na.

Ndaï SEA laika buk gaw dat n'gun 10 MW lahta shapraw ya ai masing lamang yawng hpe shalawm da ai. Hkyen lajang ai shaloi tawn da ai ningpawt ninghpang tara ni gaw lawu na hte maren re:

- i) **Hkam wam ting hpe hkyen lajang ai lam:** Masing lamang lata ai shaloi hka hte seng ai hpe lam matsun na matu hkarang tara hkamja lam kaw madung tawn ai;

- ii) **Shingra nhprang jai lang ai lam hpe sharap shara na;** Hka myihprap wan masing lamang kaw na byin pru na dingbai dingna ni hpe shading sharai na matu, nan nan nga taw ai mali hka hte hkam wam kaji ni a magam bungli hte manu shadan lam ni hpe, hkang zing na;
- iii) **Shingra nhprang ningja madung tawn bawngring lam:** shingra hkrang tara hte htap htuk ai (shing nrai dangdi lu ai) hka myihprap wan ni hpe galaw nna, shingra manu shadan lam ni shing hpe ahtu hkra ai lam nbyin shangun ai hte, shingra hpe jai lang ai shinggyim wuhpawng ni hpe lak lai ai dingbai dingna nbyin shangun na matu.

Daini na aten hta galaw nga ai hka myihprap wan masing lamang ni hpe chye na lu na matuhte, nbung ai tsang kaw na masha ni a ntsa byin pru ai makau grupyin hte shinggyim wuhpawng hte seng ai dingbai dingna ni hpe chye na lu na matu, manghkang gaiwang masat ai lam hpe galaw ai. SEA hpe galaw ai magam bungli hpe lam madun nna matu, lu mai ai shiga lamang yawng hpe sawk tam nna, mu tam ai lam ni hpe dinglun yu let SEA a pandung hte dam lada ai chye na lam hpe lu la na matu, SEA Hpaji Jaw Hpung hte Zai Ladat Hpung kru hpe hpaw shabawn ai. Ndai hpung ni kaw mungdan kata hte shinggan kaw na hpaji hpan amyu myu kaw kunghpan ai machyoi chye ai ni, asuya magam gun hte asuya nre ai wuhpung kaw na magam gun ni, dinghkrai kampani kaw na salang ni, myihprap wan masing lamang rau run galaw ai ni, magam dap amyu myu, dakkasu ni, asuya mugun usa ni hte dinghkrai sawk dinglik ai ni lawm ai.

Hka myihprap wan hte seng nna sa taw ai lam yan hte ahkyak ai manghkang ni hpe chye lu na matu dam lada ai nbung ai tsang kaw na masha ni hpe hkrum zup ai. Myen mung shara shagu kaw hkrum zup bawngban hpawng 55 galaw ai. Ndai lamang ni hta shinggyim wuhpawng (CSO) ni mungdaw asuya ni hte galaw ai buga hka hkam wam bawngban hpawng ni, nbung ai tsang kaw na masha ni hte galaw ai bawngbang hpawng ni, buga nga masha ni hte ading tawk bawngban ai lam ni, mungmasa pati, bawsang laknak lang hpung ni hte, Myen Mung Hka Myihprap Wang Mugun Hpung hte bawngban ai lam ni lawm ai.

Hka myihprap wan lamu ga shiga lamang hkrang tara (Geographic Information System) shiga daju hpe hkyen lajang let, dat n'gun 10 MW lahta hte de a lahta de shapraw ya lu ai nga taw sai masing lamang ni, gaw gap da sai masing lamang ni hte tang madun da sai masing lamang ni hpe, matsing sumhting mahkawng ai lam galaw ai. Mungdan ting kaw nga ai hkam wam 8 hpe masat ai: Eyawadi, Tsanlun, Mehkawng, Sittawng, Bagu hte Bilin, hte hkingau kaw nga ai hka lwi shara lahkawng kaw na hkinggau hkam wam ni re. Hkam wam a yak hkak ai lam hpe nbung ai shingra hparan ladat lahkawng hpe sawk tam nna hparan ai. Dai ladat lahkawng gaw-

- i) **Mali hka madung:** hkam wam matut mahkai lam hpe jaw ya lu ai; hte
- ii) **Hkam wam kaji:** hkam wam na grupyin shingra magam bungli hpe shingkang lu ai hka hte hkarang hte seng nna, hkum hkrang, dat hte hkrung kanu hte seng ai byin yan ni hpe jaw ya ai.


Mungdan ting kaw nga ai hkam wam kaji yawng 58 hpe masat nna dinglun yu ai. Galoi shagu na zawn galaw ai masing lamang kaw na byin pru ai dingbai dingna ni hpe chye na lu na matu, galoi shagu galaw ai ladat hte galaw ai masing lamang ni hpe masam maram dawdan nna, htawm hpang na masing lamang ni hpe lam madun na matu ‘nganggrin ai bawngring hkrang’ hpe hkyen lajang ai.

4. Nganggrin ai bawngring hkrang (SDF)

Htawm hpang hka myihprap wan masing lamang ni na matu nganggrin ai bawngring hkrang (sustainable development framework - SDF) hpe hkam wam byin yan ni hte manu shadan hpa ni hte hka myihprap wan ni kaw na byin pru wa mai ai dingbai dingna ni kaw ningpawt tawn nna, gyin shalat da ai. Ndai ‘shawng ningnan na mahkyen’ gaw aten galu hta rap ra ai bawngring lam hpe hpaji jaw da nna, masing lamang na matu shara lata ai shawng ningnan na mahkyen hpe jaw ai. SDF gaw hkam wam hkamja lam hte ahkyak ai shingra hte shinggyim wuhpawng manu shadan lam ni hpe hkang zing na matu madung tawn ai. Ndai hku madung tawn ai hpe nganggrin ai bawngring lam byin tai wa na matu ra ahkyak ai pawng hpawm ninggam lahkawng hte madi shadaw da ai:

- Pawng hpawm dingbai dingna yu maram dawdan ai lam – masing lamang law law shing nrai lak lai ai masing lamang kaba langai galaw na matu tang madun da ai hkam wam kaji shing nrai hka lwi ai shara; hte
- Myen mung tara upadi kaw lawm ai hte maren dat n’gun 1 MW na lahta shapraw ya ai masing lamang langai hpra hte seng ai, makau grupyin hte shinggyim wuhpawng maram dawdan lam (makau grupyin dingbai dingna maram dawdan lam shing nrai ningnan makau grupyin jen jep lam) hpe galaw na.

SDF kaw lawm ai ginlam madung gaw Hkam Wam Shara Masat Mahkyen rai nna, dai kaw lawm ai ginlam gaw: (i) hkam wam madung a matut mahkai ai lam hpe hkang zing na matu mali hka madung lwi hkrat ai lam hpe hkang zing na; hte (ii) masing lamang galaw na shing nrai makawp maga na matu hkam wam kaji ni hpe masat na lam re. Mali hka madung gaw hkam wam matut mahkai lam hpe galaw ya ai rai nna, ban shingdang ai lam nnga ai sha hka, git mut, nga hte kaga hka kata nga ai hkrung kanu ni, hkam wam hte panglai lapran lwi hkrat shangun ai majaw grai ahkyak ai grupyin shingra masa hpe hkang zing ya ai. Matut mahkai



lam hte seng ai hkam wam a magam bungli ni gaw, hka kawngwang hte mali hka lwi ai kumla (du hkra ladaw, hka shadang), hka lai lam hkang zing ai lam, hka hte seng ai grupyin shingra hte byin yan ni (gsd. nga bu htawt na matu), hka hte seng ai hkrung kanu ni hpe hkang zing ai lam, hkarang kaw lawm ai lusha dat ni hpe panglai kata htawt bang ai lam, hkinggau hkarang ga hpe hkang zing ya ai panglai hte ni ai ginra ni hta gitmut jat bang ya ai lam, shingra tsinyam hpe hkang zing ya ai lam (sha-u ing ai lam hte hkinggau makawp maga ai lam), hte hka htumpa zundawng ginra ni hta shum ai hka ni shang wa ai lam hpe ban shingdang ya ai lam ni re. Hkrang, dat hte hkring kanu hte seng ai byin yan ni gaw hkam wam grupyin shingra magam bungli hpe shingkang lu ai shara ni hta hkam wam kaji ni gaw hkam wam ni a hkarang/hka hte seng ai man hpe madung madi shadaw ya ai.

SDF kaw lawm ai ginlam madung gaw Hkam Wam Shara Masat Mahkyen rai nna, dai kaw lawm ai ginlam gaw: (i) hkam wam madung a matut mahkai ai lam hpe hkang zing na matu mali hka madung lwi hkrat ai lam hpe hkang zing na; hte (ii) masing lamang galaw na shing nrai makawp maga na matu hkam wam kaji ni hpe masat na lam re. Mali hka madung gaw hkam wam matut mahkai lam hpe galaw ya ai rai nna, ban shingdang ai lam nnga ai sha hka, git mut, nga hte kaga hka kata nga ai hkrung kanu ni, hkam wam hte panglai lapran lwi hkrat shangun ai majaw grai ahkyak ai grupyin shingra masa hpe hkang zing ya ai. Matut mahkai lam hte seng ai hkam wam a magam bungli ni gaw, hka kawngwang hte mali hka lwi ai kumla (du hkra ladaw, hka shadang), hka lai lam hkang zing ai lam, hka hte seng ai grupyin shingra hte byin yan ni (gsd. nga bu htawt na matu), hka hte seng ai hkrung kanu ni hpe hkang zing ai lam, hkarang kaw lawm ai lusha dat ni hpe panglai kata htawt bang ai lam, hkinggau hkarang ga hpe hkang zing ya ai panglai hte ni ai ginra ni hta gitmut jat bang ya ai lam, shingra tsinyam hpe hkang zing ya ai lam (sha-u ing ai lam hte hkinggau makawp maga ai lam), hte hka htumpa zundawng ginra ni hta shum ai hka ni shang wa ai lam hpe ban shingdang ya ai lam ni re. Hkrang, dat hte hkring kanu hte seng ai byin yan ni gaw hkam wam grupyin shingra magam bungli hpe shingkang lu ai shara ni hta hkam wam kaji ni gaw hkam wam ni a hkarang/hka hte seng ai man hpe madung madi shadaw ya ai.

Ahkyak ai hkam wam byin yan ni hpe hkang zing na matu hkam wam 5 kaw mali hka madung ni hpe sawk tam da ai. Dai mali hka madung langai hpra gaw Strahler Order 4 shing nrai dai hta kaba ai rai nna, Sittawng hka madung hta lai nna ngam ai hka madung ni gaw, laning mi hta $1,000 \text{ m}^3/\text{s}$ jan lwi hkrat ai. Hka matut ai manu hpe hkang zing lu na matu mali hka madung 4,100 km ram hpe hkang zing na matu hpaji jaw ai. Dai kaw lawm ai mali hka madung ni gaw, Eyawadi (1,500 km), Danai (900 km), Tsanlun (1,200 km), Mehkawng (200 km) hte Sittawng (300 km) ni rai ma ai.

Hkam wam kaji ni hpe masat da ai gaw, masing lamang galaw na matu shing nrai makawp maga na matu rai nna, hkrung kanu hkrang hte seng ai manu shadan hpa hpan 3 hpe dinglun maram dawdan nna masat da ai re:

- i) **Ginding hkrang masa:** mali hka matut ai lam hte hka htumpa zundawng/hkingau ngang kang lam; gitmut shapraw ya ai lam; mali hka lwi ai lam;
- ii) **Hka hte seng ai grupyin shingra mabyin hte nga hkwi magam bungli:** Hka du ai shara taw ai lam (WWF, 2014); ahkyak ai dusat hpan nga ai lam, ahkyak ai dusat hpun kawa hpan amy myu nga ai shara ni, Ramsar shara hte ahkyak ai nawngwam shara ni, mali zup ai shara ni, karst ginding hkrang masa; hte mat na matu hkring tsang ra ai nga hte hkrung kanu ni; hte
- iii) **Hkarang kaw nga ai dusat hpun kawa hpan amy myu:** makawp maga da ai shara tsa lam shadang/ ahkyak ai dusat hpun kawa nga ai shara ni; hte nan nan nga taw ai nam maling tsa lam shadang.

Shinggyim wuhpawng hte kanbau magam bungli ni hpe mung dinglun maram dawdan nna shinggyim wuhpawng hte seng ai hkrit tsang hpa ni, shingra nhprang kaw manoi nga ai lam ni hte matsan ai lam ni hpe myit shalawm ai. Lu mai ai shiga lamang ni gaw, shinggyim wuhpawng tsinyam hkrum loi ai lam hte matsan ai hte seng ai masat shadang ni lawm ai 2014 yuptiong jahpan kaw madung tawn ra ai. Ndai dinglun maram dawdan ai lam gaw hkam wam kaji shara masat ai lam hpe karum ya na matuyaw shada ai raitim, lu mai ai shiga lamang ni hta hkam wam langai hpra kaw byin mai ai shinggyim wuhpawng kaw byin pru na dingbai dingna ni hpe nmadun ya lu ai majaw, nmai byin ai.

Asuya hte asuya nre ai laknak lang hpung ni na lapran kaw byin mai ai hpai shai ai lam ni hpe hkam wam kaji langai hpra kaw, maram dawdan yu nna, masing lamang ni kaw dingbai dingna byin shangun na hpai shai ai lam ni, shing nrai masing lamang na majaw hpai shai ai lam grau sawng wa mai ai lam ni hpe dinglun maram dawdan lai wa sai. Dinglun maram dawdan ai lam hpe daini na aten hte lai wa sai aten hta byin nga ai hpai shai ai lam ni kaw ningpawt tawn nna, laknak lang hpung ni nga ai lam, hprawng yen nga ai masha jahpan, nau nna shi ai shaloi byin ai hpai shai ai lam hte majan kaw si sum ai lam ni hpe myit shalamw ai. Ndai hku maram dinglun dawdan ai gaw tang madun da ai masing lamang hpe galaw ging ai kun, byin mai masa nga ai kun ngu ai ni hpe myit sawn yu na matu hte matut galaw ging ai kun n galaw ging ai kun, ngu ai hpe dawdan ya na matu, ninggam langai bai jaw ya ai. Hpai shai ai lam hte seng ai shoihpa ni gaw aten langai hte langai shai mai nna hkam wam ting kaw nga ai shoihpa mung shai mat ai majaw, hpai shai ai lam byin mai ai shara ni kaw masing lamang ni hpe galaw na

matu myit ai shaloi, nbung ai tsang kaw nga nna majan a majaw ading tawk dingbai dingna hkrum ai masha ni, lai wa sai aten hta hprawng yen nga ai masha jahpan, bawsang laknak lang hpung ni hte bawsang mungmasa pati ni hpe mung myit sawn shalawm ra na re.

Myit sawn shalawm ai hkrung kanu hkrang hte seng ai ginlam langai hpra hpe masat shadang jaw nna, hkam wam shara hpan masum hpe masat da ai:

- **Tsaw Ai** – Hkam wam byin yan ni kaw ahkyak ai lam ni hpe jaw ya ai (hka lwi ai lam law law shing nrai gitmut law law) hte/shing nrai hkrung kanu hkrang hpan lahkawng na matu lak lai ai shingra manu shadan hpa ni nga ai;
- **Pran Wan** – Shara law law hkrang zing ra na manu shadan hpa hkrung kanu hkrang, hpan law law nnga ai raitim, hkrung kanu hkrang hpan langai shing nrai nkau mi nga mai ai;
- **Nem Ai** – Shara law law kaw hkrung kanu hkrang hte seng nna hkrang zing ra na manu shadan hpa law law nnga ai sha, shara loi mi kaw sha manu dan ai ni nga ai.

Tsaw ai ngu masa da ai hkam wam kaji 10 gaw Myen mung ting a 24% nga ai rai nna, ahkyak ai hkrung kanu hkrang byin yan ni hte manu shadan hpa ni nga ai majaw, makawp maga na matu hpaji jaw ai.

Ndai hkam wam ni kaw hka myihprap wan masing lamang galaw ai shaloi, hkam wam kaji na manu shadan hpa ni hpe grit nem shangun ai lam nbyin nna, makau grupyin hte shinggyim wuhpawng hpe dingbai dingna byin shangun ai masing lamang kaji ni sha galaw na matu hpaji jaw ai. Tsaw ai hkam wam kaji 5 gaw Eyawadi hkam wam a hkahku de nga ai rai nna 78,900 km² dam ai (Myen mung hkam wam a 21%) re. Ndai shara kaw nga ai ahkyak ai manu shadan hpa ni gaw hkam wam ting hka lwi ai lam a 47% jaw ya ai hte lak lai shadang hte gitmut htawt sit ai lam re. Manu dan ai hka kata na dusat ni hte Hkakaborazi Amyusha Maling, Nam Nga Dusat nga ai Maling mali hte hpung kawa dusat hte nan nan nga ta wai nam maling 35% nga ai re. Kaga Tsaw ai hkam wam kaji ni gaw Tanintari hkam wam kaw rai nna ngam ai ni gaw Tsanlun, Mehkawng hte Rahkaing hkam wam ni kaw nga ai re.

Pran Wan hkam wam kaji 21 hte Nem ai shara kaw na hkam wam kaji 27 gaw hka myihprap wan masing lamang na matu htap htuk ai rai nna, Myen mung ting a 37% hte 39% nga ma ai re. Ndai hkam wam kaji ni hpe hka myihprap wan masing lamang ni na matu asuya hku nna myit sawn ging ai ngu hpaji jaw da ai. Shingra nhprang hte shinggyim wuhpawng hte seng ai shiga lamang ningnan ni lu la ngut ai hpan hte hkam wam hkrang shayawm ai lam hte hkam wam kaji ni kaw hka myihprap wan masing lamang galaw na shara ni hte hkrang tara hkamja lam, grupyin shingra hte seng ai lam ni hte kaga ahkyak ai manu shadan hpa ni nga ai majaw,

makawp maga ra na hkam wam kaji ni hpe sharap shara na matu, asuya hku nna myit sawn ging ai lam hpe mung hpaji jaw ai.

Hkam wam kaji law law kaw, myihprap wan shapraw ai shadang bung ai masing lamang law law hpe galaw ai hku n re ai sha, lwi nga ai hka kaw masing lamang galaw ai lam hpe galaw lu na matu nganggrin ai hka myihprap wan masing lamang hpe hpaji jaw ai. Hkam wam kaji langai kaw shing nrai hka lwi ai shara kaw masing lamang galaw ai lam hte shara law law kaw masing lamang galaw ai lam kaw lu mai ai akyu ara ni kaw dat n'gun shapraw ya lu ai shadang, lwi hkrat ai hka unit langai kaw shapraw ya ai dat n'gun ni lawm ai. Ndai hku byin ai marang e, nan nan nga taw ai mali hka ni hpe hkan zing lu ai zawn maga mi kaw hkam wam kata, hka myihprap wan lu shapraw na re. Nem ai hkam wam kaji hte pran wan hkam wam kaji ni kaw, galoi na zawn galaw ai masing lamang ni hpe gaw gap yang, Myen mung na hka lwi shara 14.4% kaw na 23.5% hpe jashai kau na rai nna, masing lamang yawng shachyaw ai shaloi jashai na 45% hta yawm ai.

Nganggrin ai bawngring hkrang hte maren htawm hpang kaw shapraw lu na hka myihprap wan dat n'gun shadang hpe gaw, tup hkrak tak yu na matu nmai byin ai. Dam lada ai shingra nhprang hpan ni, shinggyim wuhpawng hte gat lawk nbung ai lam ni mung shingkang nga ai majaw re. Raitim, ntsa lam sawn lu ai gaw myihprap wan dat n'gun 13,000 MW shing nrai dai hta jan nna lu shapraw ya ai masing lamang ni mai galaw ai. Dai hku sawn da ai gaw, daini na aten hta nga ai masing lamang ni kaw na shapraw ya ai dat n'gun 3,300 MW, daini na aten gaw gap taw ai kaw na shapraw ya na dat n'gun 1,600 MW, Pran Wan hte Nem Ai shara kaw shapraw ya na matu tang madun da ai dat n'gun 7,300 MW, Tsaw ai hkam wam kaji kaw dingbai dingna yawm ai masing lamang ni kaw na shapraw ya na dat n'gun ni hte dat n'gun 10 MW hta yawm nna shapraw ya ai masing lamang ni hpe myit sawn shalawm ai re. Madung tawn ai hkam wam ni kaw hka myihprap wan hte seng nna sawk sagawn ngut ai hpang, htuk shapraw lu na dat n'gun hpe mai chye na re.

Hkam Wam Shara Masat Mahkyen gaw masing lamang na matu shara masat ai shaloi ra ai ningshawng mahkyen jaw ya nna, dai mahkyen hpe hka myihprap wan GIS shiga lamang daju, hkam wam kaji dinglun maram dawdan ai lam hte lawu na ni lawm ai ta tut hkrang shapraw hkrang hte madi shadaw ya ai:

- Myen mung asuya (MOEE hte MONREC) hte Rau Run Mahkyen Komiti hpaw ai lam;
- amyusha Nganggrin Ai Hka Myihprap Wan Hkrang Masa hpe gyin shalat ai lam;
- Myen mung asuya ta tut jai lang na Hkam Wam Shara Masat galaw ladat hpe gyin shalat ai lam;

- Nganggrin ai masing lamang shachyaw hkrang shadawn jitna ni hpe hpaji jaw na;
- and Makau grupyin hte shinggyim wuhpawng dingbai dingna ni hpe dinglun maram dawdan ai hte hparan ladat mahkyen hpe hpaji jaw ai lam; hte
- Ningpawt ninghpang byin da masa shiga lamang hpe hta shinggyin ai lam hte sawk sagawn ai lam ni galaw ai re.


Shawng ningnan na dip shapraw ai daw hta, hkrang hpe ta tut galaw ngut sai masum ning na ai hpang bai dinglun yu na matu hte shinga lamang hte ta tut hkrang shapraw ai akyu ara ni hte seng ai shiga lamang ni lu wa ai hpang, ra ai hta hkan nna bai dinglun yu na matu hpaji jaw da ai.

5. Akyu ara ni

SEA gaw nganggrin ai hka myihprap wan masing lamang ni Myen mung kata byin pru wa mai na shawng lam hpe jaw ya na matu yaw shada ai. Ndai hku galaw ai lam hta ahkyak ai dusat hpun kata byin yan ni hte manu shadan hpa ni, nbung ai tsang kaw na masha ni a ningmu ni, mungdan kata dat n'gun ra kadawn ai lam hpe hka myihprap wan kaw na jaw ya lu ai lam ni kaw ningpawt tawn myit shalawm ai re. Hka myihprap wan masing lamang galaw ai shaloi nganggrin ai lam hte aten galu hta akyu rawng na matu nbung ai tsang kaw na masha ni hte law law bawngban na matu ahkyak ai rai nna, hka myihprap wan galaw ai lam hta hkam wam ting hpe yu nna shingra nhprang hte seng ai manu shadan hpa ni hpe mung myit shalawm ra na re. Hka myihprap wan masing lamang galaw ai lam hte shingra nhprang makawp maga ai lam lahkawng yan hpe hkam wam ting hkyen lajang ai ladat hku nna galaw mai ai rai nna, nganggrin ai bawngring hkrang gaw dai hku hkyen lajang na ninggam langai re. Masing lamang langai hpra hpe laksanakan myit ai hku nre ai sha, aten galu hta hkam wam hkamja lam hte hkrang tara kaw mahta ai grupyin shingra bungli ni hpe hkang zing ai lam ni hpe hkang zing ai lam gaw, hka myihprap wan masing lamang galaw ai marang e shingra nhprang kaw byin wa mai ai dingbai dingna ni hte buga nga masha ni hkrum sha na dingbai dingna ni hpe shayawm ya lu ai. Ndai hkrang gaw masing lamang galaw na hkrang hpe hpaji jaw ai sha n-ga, daini na aten galaw ai mahkyen ladat ni a ra rawng ai lam hpe htawng madun nna, galoi shagu na zawn masing lamang galaw ai gaw hkam wam ting hpe grit nem wa shangun ai lam hpe madi madun da ai.

Hka myihprap wan galaw ai mahkyen hte seng ai hkrang hpe ta tut galaw wa ai lam hta lawu na lam ni lawm na re ngu mai myit mada ai:

- du na 100 ning sha n-ga, de a lahta de du hkra hkam wam hkamja lam hpe hkang zing lu na matu shingra nhprang girt nem ai lam, mali hka madung matut mahkai ai lam hte



ahkyak ai hkam wam kaji hte seng ai makau grupyin hte shinggyim wuhpawng hte seng ai manu shadan lam ni hpe grit nem shangun ai lam hpe koi gam na;

- mali hka madung tawn grupyin shingra magam bungli ni hpe makawp maga na;
- dawdan ai lam galaw ai masha ni hte masing lamang galaw ai masha ni hpe masing lamang shara lata ai lam hte masing lamang shachyaw hkrang galaw ai lam ni hta, kaja nna san ai matsun ni jaw ya na;
- akyu rawng ai nbung ai tsang kaw na masha ni hte hkrum zup ai lam galaw nna masing lamang shachyaw hkrang hte nbung ai tsang kaw na masha ni hku nna, atsawm hkyen da ai masing lamang ni hpe grau nna hkap la wa hkra galaw na;
- Hkam wam ting kaw byin pru na pawng hpawm dingbai dingna hpe shayawm shing nrai koi kam nna mungsang kaw na ja gumhpraw lu la ai lam hpe sharawt na; hte
- Dinghku, hpaga bungli hte jakrung ni hpe manu mai, kam ging nna lang hte lang mai lang ai myihprap wan hpe buga hte mungsan masing lamang ni kaw na galaw ai lam hpe shatsaw sharawt ya na.

International Finance Corporation
Room 20-11~13, 20th Floor, Sule Square
221 Sule Pagoda Road, Kyauktada Township,
Yangon 11182, Myanmar.

Tel : +95 1 925 5020

Fax : +95 1 925 5021

www.ifc.org/hydroadvisory

