



Rtgugpvkpi c"eqo r nkecvgf "gpxktqpo gpwcn'kuuwg"vq  
vj g"r wdne<"j qy "f kngtgpv'pgy ur cr gtu'tgr qt v"vj g  
UwJ wc ht ggy c{ "kuuwg"kp"Vcky cp

**Hcewn{ 'qhlP cwt cnT guqwt egu'c'pf 'Ci t lewnwt cnUelgpegu  
F gr ct wo gpv'qhlW dcp'c'pf 'Twt cnF gxgnro gpv**

[ kHcp"Nkcq

**O cuwt'Vj guku**

**Gpxktqpo gpwcnEqo o wplecvkqp'c'pf 'O cpci go gpv  
Uy gf kuj 'Wpkgt uk{ 'qhlCi t lewnwt cnUelgpegu**

Uy gf kuj 'Wpksgt uls{ 'qh/Ci t lewnwt criUelgpegu  
Hcewn{ 'qhP cwt criT guqwt egu'è pf 'Ci t lewnwt criUelgpegu  
F gr ct vo gpv'qh'Wtdcp'è pf 'Twt criF gxgnr o gpv  
Wpks'ht'Gpxk qpo gpvriEgo o wplecvkqp

Cwj qt < [ kHcp'Nlcq

Vkng< Rt gupvpi "c"eqo r nlecvgf "gpvktqpo gpvrikuuwg'vq"vj g'r wdrie-<j qy  
f khtgtpv'pgy ur cr gtu'tgr qt v'vj g'UwJ wc ht ggy c{ 'kuuwg'lp"Vcky cp

Mg{y qtf uk Ej kpc"Vko gu."eqv'gpv'cpcn(uku."Nlj r cq"Fc k{."MUF P."o gf kc.  
'pgy ur cr gt."pgy u'r tqf wcvkqp."UwJ wc'ht ggy c{

Uwr gt xluqt < Nqwgp"Y guvgti  
F gr ct vo gpv'qh'Wtdcp"è pf "Twt criF gxgnr o gpv."UNW

Gzco kpgt < J cpu'Rgvt"J cpugp  
F gr ct vo gpv'qh'Wtdcp"è pf "Twt criF gxgnr o gpv."UNW

Rt qi t co < Gpxkqpo gpvriEgo o wplecvkqp"è pf "O cpci go gpv="82"GEVU  
\*3" { get "O cuvgt "Rt qi t co +

Eqwt ug< Rtcevleg"è pf "Vj guku"Y qtnikp"Gpxkqpo gpvriEgo o wplecvkqp"è pf  
O cpci go gpv. GZ262; =37"GEVU

Rcrgt < O cuvgt "Vj guku"lp"Gpxkqpo gpvriEgo o wplecvkqp"è pf "O cpci go gpv.  
37"GEVU"137"j r  
Cf xcpegf "F +hgxgn"C3G  
W r ucw"4234

## Cduwcev

Vj g Uwj wc'htggyc{'kuwg'ku'qpg'qh'vj g'o quvy gm/mpqy p cpf 'eqo r nlecvf gpxktqpo gpwn kuwgu'kp'Vcky cp00 cp{'ucngj qrf gtu'gpi ci gf 'kpv'vj ku'kuwg'cpf 'vj g'o cuu'o g'f'k'j' cu'o cf g o cp{'pgy u'wqt'kgu'v'q'tgr t'gugpvqr kpkapu'cpf cti wo gpw'htqo "dqj 'rtq/'cpf 'ci ckpuv'htggyc{' ukf gu.'gur gekm{'pgy ur cr gtu'F khtg'gpv'pgy ur cr gtu'f'wg'v'vj g'kt'ur gekle ej ctcevtu.'hqt gzc'o r'ng.'v'cti gv'tgcf gtu.'o kuukq'cpf 'hpcpeg.'o c{'wug'f khtg'gpv'y c{'u'tgr t'gugpv'vj g'uco g'wqt{' . cpf 'kphwpeg'j' qy 'vj g'r wdrk '\*t'gcf gtu+'w'pf gtu'cpf 'vj g'kuwg0

Vj ku'uwf {'c'ko u'v'k'p'x'g'uki cv'j'j' qy 'pgy ur cr gtu'y'kj 'f khtg'gpv'ej ctcevtu'tgr t'gugpv'vj ku eqo r nlecvf "Uwj wc'htggyc{'kuwg.'vj gp wulpi "o g'f'k' r' t'q'f' w'ek'p'vj g'qt{' 'v'g'z'r'k'p'y'j'j' {'vj g' pgy u'tgr qt'v'kng'vj ku'y'c{'.'cpf'j' qy 'vj g'ug'pgy u'y'k'k'p'hw'peg'vj g'r wdrk'w'pf gtu'cpf kpi 'qh'vj g' htggyc{'kuwg'0'Kej qug'vj tgg'pgy ur cr gtu'\*Ej kpc'V'ko gu.'Nlj r'cq'F'ckn{'.'MUF P '+y'j'kej 'y'kj f khtg'gpv'v'cti gv'tgcf gtu'cpf "o kuukq'cpf 'wulpi "eqpv'p'c'p'cn{' uku'c'p'cn{' | g'f'vj g'pgy u'eqxgtci g' cdqw'vj g'Uwj wc'htggyc{'kuwg'd'gwy ggp' l'cpwct{''4229'v'q'O c{''422: 0'k'p'vj g'g'p'f'K'h'q'w'p'f'ukz' f'q'o k'p'c'p'v'cti wo gpw'qh'vj g'htggyc{'kuwg'k'p'vj g'vj tgg'pgy ur cr gtu/ 'vj g'htggyc{'ku'vj g'q'p'n{' uq'nw'k'p'ht'v'c'p'ur'q't'v'k'p'r' t'q'd'rg'o u. 'vj g'htggyc{'ku'vj g'u'q'nw'k'p'qh'v'q'w'k'uo . 'ci t'k'w'w'g'c'p'f' uq'ek'n'r' t'q'd'rg'o u. 'vj g'htggyc{'ku'c'r' wdrk'q'r'k'p'k'p'k'p'J' w'c'k'g'p. 'vj g'htggyc{'ku'o'c'p'k'w'c'v'f' "d{' r'q'k'k'ek'p'u'k'p'g'w'k'p'u. 'vj g'htggyc{'j'cu'd'ki 'k'o' r'c'v'q'p'vj g'g'p'x'k'q'p'o'g'p'v.'cpf' 'vj g'htggyc{' ch'g'ew'cd'q't'ki k'p'c'n'g't't'k'q't'kgu'0'K'h'q'w'p'f' "f khtg'gpv'p'gy ur cr gtu'wug'f' "f khtg'gpv'r'g'tur g'v'x'g'u'v'q' t'gr'q't'v'vj g'ug'cti wo gpw'o'q't'g'q't'ng'u'0'Vj g'f khtg'g'peg'ep'd'g'z'r'k'p'g'f' "d{' 'vj cv'vj g'ug'vj tgg'pgy ur cr gtu' j'cf'x'ct'k'w'u'k'p'v'g't'g'u'u'v'q'eq'p'uk'f'g't'vj g'pgy uy'q't'vj k'p'g'u'u. 'vj g'o g'f'k'ht'co'g'vj g'f' r't'g'ht'g'f'v'q'w'ug. cpf'v'q'd'g'q'd'l'g'v'x'g'c'p'f' "d'c'p'eg'f'q't'p'q'v'c'ee'q't'f'k'pi "v'q'v'g'k't'q'y'p'ej ctcevtu'0'Vj ku'f khtg'gpv' t'gr'q't'v'k'pi "qh'vj g'pgy ur cr gtu'i'k'x'g'vj g'r'wdrk'o'q't'g'o'w'w'k'r'g'x'k'w'c'n'c'p'i'ng'u'v'q'w'p'f'g'tu'cpf' "vj ku eqo r nlecvf g'p'x'k'q'p'o'g'p'w'n'ku'wg.'dw'o c{'c'nu'q'k'p'v'g'p'ug'vj g'eq'p'h'k'v'd'g'wy ggp'uc'ng'j'q'rf'g'tu'y'j'q' t'g'eg'k'k'pi "k'p'h'q't'o'c'v'k'p'ht'q'o' f khtg'gpv'p'gy ur cr gtu'0



### 30 Kpvt qf wevkqp

Vj g" gpxktqpo gpcn' o qxgo gpv' kp" Vcky cp" dgi cp" kp" 3; 92u0' J ki j " geqpqo ke" i tqy vj ko r tqxgf "r gqr ngau'rhg"s wcrk{ . "dw'cnuq ecwugf "dki "ko r cevu'cpf "f gultq{ u'qp" vj g" gpxktqpo gpv cpf "gequ{ ugo 0 Vj wu. "gpxktqpo gpcn' o qxgo gpv' uctv'gf "vq" dg" tclugf "wr "kp" qtf gt "vq" r tngxgpv r qmwwkqpu" dtqwi j v'y kj "geqpqo ke" f gxgnr o gpv' 0'kp" vj g" r'v'g" 3; : 2u. "o qtg" r gqr ng" pqv'egf "vj cv o cp{ "kuwgu" pggf gf "vq" dg" f kuwugf "kp" r wdike" cpf "ej cmgpi gf "vj g cwj qtkw{ "qh" vj g" i qxgtpo gpv. o qtg" gpxktqpo gpcn' eco r cki pu' cpf "f go qputc'v'kqpu" y gtg" qti cpk{ gf "Ej gp. "4228+0

Co qpi "o cp{ "gpxktqpo gpcn' kuwgu vj cv j cxg" j cr r gpgf "kp" Vcky cp. vj g UwJ wc" htggyc{ r tqlgew' ku' qpg" qh" vj g" o quv' y gm' npqy p" gpxktqpo gpcn' kuwgu" cpf k' j cu' eqp' v' kwgf "c" xgt{ "npi vko g0Vj g" kf gc" o UwJ wc" htggyc{ "r tqlgew' y cu dtqwi j v'wr "kp" 3; ; 20'kp" vj ku' r tqlgew' vj g" egpvtcn i qxgtpo gpv' y qwf "rkng" vq" d'wkrf "c" htggyc{ "vq" eqppge' vj g" pqt vj "r ctv' qh" Vcky cp" \*r qnk'le" cpf geqpqo ke" egpvt+ "cpf " J cw'k'gp" \*vj g" gcu' r ctv' qh" Vcky cp. " eqw'v' { ukf g+0' O quv' qh" vj g" m'ecn r qnk'lek'cpu. "eqo o gtekn' cu' qek' v' kqpu" cpf "t'gukf gpw' kp" J cw'k'gp" y gtg" xgt{ "y greqo kpi "qh" vj g htggyc{ "cpf "j qr gf "vj g" htggyc{ "eqwf" dtkpi "f gxgnr o gpv' vq" vj ku' r qat" eqw'v' 0'kp" 4222. "vj g tguw' qh cp gpxktqpo gpcn ko r cev' cu' guuo gpv' \*GIC+ " y cu' o' eqpf k'k'qpcn' cr r tqxcti'0' Vj gp dgecwug" vj g" egpvtcn' i qxgtpo gpv' f kf p0' j cxg" gpqwi j dwf i gw. "vj g" r tqlgew' y cu' uwur gpf gf 0 F wtkpi "4223" vq" 4229. "vj g" r qu'k'k'q'p" qh vj g egpvtcn' i qxgtpo gpv' y cu' uy kpi kpi "dgw ggp" o' d'wkrf o' qt o' p'qv d'wkrf o' vj g" htggyc{ . dgecwug" qh" vj g" r tguw' t'g" htqo "m'ecn' i tqw' u" \*y cpv' vq" d'wkrf +. "cpf "vj g dwf i gv' hko k'c'v'k'p" cpf "f kuci tggo gpv' qh vj g GIC" \*pqv' d'wkrf + "h' gxlgy gf "d{ "J qw. "4232+0

Gpxktqpo gpcn' i tqw' u' uctv'gf "vq" gpi ci g' kp' vj ku' kuwug kp" 42250' Vj gtg' ctg' w' y q o ckp' t'gcu' ppu y j { gpxktqpo gpcn' i tqw' u' qr r qugf "vj g" htggyc{ 0' Vj g' h' tu' t'gcu' p' y cu vj cv vj ku' htggyc{ "y km i q" vj tqwi j "o cp{ "gpxktqpo gpcn' { "ugpuk'k'g" ctgcu' cpf ctgcu' y kj htckn' i gqni { . 'y j lej "y km' p'qv qpn' { "ko r cev' vj g pcwtg" dw' cnuq" vj tgcvgp" j wo cp" uchgv' 0' Vj g" ugeqpf "t'gcu' p' y cu vj cv vj g htggyc{ "eqwf p0' cej k'x'g" vj g" i qcn' vj cv' vj g" i qxgtpo gpv' erko gf . 'y j lej "y cu' vq" o' j cxg" c" tqcf "i q j qo g" uchgn' { "cpf "dtkpi "i q'qf "f g'x'gnr o gpv' o' h'qt" J cw'k'gp" r gqr ng' 0' Gpxktqpo gpcn' i tqw' u' cti wgf vj cv' vj gtg" y gtg" q'v' gt" i q'qf " cpf " ej gcr gt" uq' n'w'k'qpu vj cv eqwf " cej k'x'g" vj g" i qcn' vj cv' vj g i qxgtpo gpv' cpf "m'ecn' r gqr ng" y cpvgf . "uq" d'wkrf kpi "c" htggyc{ "y cup' o' p'gegu' ct{ 0' Qp" vj g" q'v' gt j cpf . vj g r tq/htggyc{ "i tqw' "erko gf "vj cv' vj g UwJ wc" htggyc{ "y kn' ko r tqxg" vj g" t'cpur qt' v'k'q'p eqpf k'k'qpu" dgw ggp" vj g" pqt vj "cpf "vj g" gcu' qh" Vcky cp 0' Vj wu. "hcto gtu y kn' d'gpg' h'k'v' htqo "vj g" u' j qtv vko g" vq" u'gpf "ci t'k'ew' n'w'c' n' r tqf wev' vq" o ctngw= o qtg" k'p'f w' u' t'k'g' u' y kn' i' k'ng" vq" j' cxg" k'p'x'guo gpw' kp J cw'k'gp= cpf "vj g" o quv' ko r q'v' cpv. vj g UwJ wc" htggyc{ "y kn' i k'x'g" vj g" t'gukf gpw' c" y c{ "vq" i q" j' qo g gcu' k'gt" cpf o qtg uchgn' 0' U'peg" 4225. "dqj "ci ck'pu' v' htggyc{ "i tqw' u' cpf r tq/htggyc{ "i tqw' u' j cf qti cpk{ gf "o cp{ "gpxktqpo gpcn' eco r cki pu' cpf "f go qputc'v' k'qpu" vq" cf xqecv' g" vj gk' cti wo gpw' 0 Dqj "ukf gu' ecwi j v' o gf k'c" cpf vj g r wdike" g{ g" uweegu' h'w' n' 0' Vj g" eqph' kev' dgw ggp vj g" vq" q' ukf gu dgeco g" o qtg" cpf "o qtg k'p'v' g'pug 0

Htqo "O ctej "4229" vq" Cr' t'kn' 422: . "vj g" gpxktqpo gpcn' r tq' v' g' v' k'q'p" cf o k'p' k'ut' v' k'q'p" qti cpk{ gf t'gxlgy u' qh vj g cpcn' uk' t'gr qt' v' qp" vj g" f k'ht' g' t'p'eg" qh" vj g" gpxktqpo gpcn' ko r cev' h'qt" h'q'w' vko gu 0

Dghqtg" gxgt{" txxky ." vj g ci kpuvhtggy c{" i tqwr " cm' qti cpl gf" dki " o qxgo gpw" vj tqwi j f lhtgtpvej cpgnu'cpf "ecwi j v'o gf kc"cpf "vj g'r vdrleu'cwgpvkqp"uweeguuhwm(0K"422: "Cr tkn"vj g GIC"eqo o kwgg"tgwtpgf "vj g cpcn(uku'tgr qtv'qp"vj g"lhtgtpg qh"vj g"gpxtqpo gpvcn'ko r cev'vq vj g O kpkut {"qh Vtcur qtvcvkqp"cpf Eqo o wplecvkqp"tglgev0Vj g ecrpgf ct"qh'ko r qtvcpv'gxgpw qh vj g"UwJ wc'htggy c{"r tqlgv'ku'kp"cr r gpf kz"30

Y gnkpi u" cpf " O cef qy cm' \*4222+" r qkpvf" qw" vj cv" qpg" kpf kecvt" qh" vj g" r vdrle wpf gtucpf kpi "qh"kuuwgu"ku"vj g"o cuu"o gf kc0Gpxtqpo gpvcn'kuuwgu"j cxg"dggp"kp"vj g"o gf kc ur qvki j v'ht" f gecf gu'kp y guvtp"eqwvkuu."cpf "pgy ur cr gtu'kp"r ct vewct"j cxg"dggp"qpg"qh"vj g ko r qtvcpv"uqwtegu"qh" gpxtqpo gpvcn'kphqto cvkqp"ht" vj g" r vdrle \*Hqtpgt et al.."3; ; 3-0 K Vcky cp."chgt tgo qxkpi "vj g"kvgtf lev'qh"pgy ur cr gtu'kp"3; : . "o qtg"cpf "o qtg"gpxtqpo gpvcn kuuwgu"j cxg dggp f kuewuuf "vj tqwi j "pgy ur cr gtu'htv j gto qtg."vj g"pgy ur cr gt"ku'vkn"vj g"o gf kc y kj vj g"ncti guv cvf kgpegu"\*j cpi ."4227-0 Vj wu."pgy ur cr gtu"r n{"gf"cp"ko r qtvcpv"tqng"ht ur tgcf kpi "vj g"kphqto cvkqp"qh vj g"UwJ wc'htggy c{"kuuwg"vq"vj g'r vdrle0K"qvj gt'y qtf u."vj g'r vdrle tgrkf"qp"pgy ur cr gtu"vq"qdvckp"vj g"pgy " f gxgnr o gpv'qh vj g"UwJ wc'htggy c{"kuuwg."cpf pgy ur cr gtu"y gtg"ugeqpf ct{"vcpuo kwgtu"dgw ggp"tgcf gtu"cpf vj g htggy c{"kuuwg"\*j cpi . 4227-0

Eqo o wplecvkqpu'tgugctej gtu"j cxg"hqwpf "vj cv'vj g pgy u'o gf kc"dqj "uj cr g'cpf "tghgev r vdrle"qr kpkp0F lhtgtpvpgy ur cr gtu o c{ f wv"vq" f lhtgtpv'cvf kgpegu"cpf "xcwv"qtkgpvkqp. j cxg" f lhtgtpv'r tghgtpgpegu"cpf "r gtu r gevku"y j gp'tgr qtv'kpi "vj g"uco g"kuuwg."y j lej "kphwpeg j qy vj g'r vdrle"wpf gtucpf u'vj g kuuwg0Cu"Vtcxku"Y ci pgt"\*422: ."r 49+"uckf ."o*Most of what society learns about the environment is from news... [Yet] news is not an objective presentation of political reality, but an interpretation of events and issues from the perspective of reporters, editors, and selected sources....*o"Vj g"UwJ wc'htggy c{"kuuwg"ku'qpg"qh vj g"o quv'eqo r decvf"gpxtqpo gpvcn'kuuwgu"kp"Vcky cp"cpf "kpxqrxgu"o cp{"uvcngj qrf gtu."o cp{ f lhtgtpv'kvgtgu"i tqwr u'y cpv'gf vq"ketgcug vj gk kphwpeg vq"vj g'r vdrle"vj tqwi j "o gf kc"cpf wuf "r vdrle"qr kpkp"cu"r tguwv'g"qp"vj g" f gekukp"o cmkpi "qh"vj g"i qxgtpo gp0Vj wu. j qy vj g pgy ur cr gtu'tgr qtv'gf cdqw vj g"UwJ wc'htggy c{"kuuwg ecp dg"cp"ko r qtvcpv'hevqt"chgevkpi "vj g hpcn'f gekukp"qh"vj g"htggy c{"r tqlgv'0K"ku'kvgtgukpi "vq f gxgnr g npqy ngf i g"cdqw"vj g kphqto cvkqp"i kxgp d{ vj g" f lhtgtpv'pgy ur cr gtu"cpf cdqw"vj g hcevqu vj cvchgevgf "vj g"pgy u vj cv'y gtg tgr qtv'gf 0K"vj ku'uwf {"Kwug"vj tgg"pgy ur cr gtu"y j lej "f lhtgtp"vj gk"vcti gv'tgcf gtu cpf "tgr qtv'o kuukpu. v{ kpi vq" f kexqgt"j qy "vj g{"r tguv'v'vj g"UwJ wc'htggy c{"kuuwg" f wtkpi "4229 vq"422: "cpf "cpuy gt"hqny kpi "s wgvkqpu:

30 J qy "ctg"r tqdngo u'cpf "cti wo gpw'tgi ctf kpi "vj g"UwJ wc'htggy c{"f guetkdgf "kp"vj g"ugrgev'f pgy ur cr gtuA

40 Y j lej "cevqtu"ctg"i kxgp"ur ceg"vq"gzr rckp"vj gk"cti wo gpw."hqtto wv'v"vj g'r tqdngo u'cpf uqnvkqpuA

50 J qy o c{ vj g'y c{ o gf kc ku r tguv'kpi vj g UwJ wc'htggy c{"kuuwg"kphwpeg"r vdrleu wpf gtucpf kpi "qh"vj g"kuuwgA

## 2. Theory

Mass media is one of the main ways that humans obtain information. The traditional media (or mainstream media, according to Cox, 2010), including network television and cable news, newspapers, news magazines, and radio news and shows, is an important source for people getting news and analyses about environmental issues. The environmental issues and stories began to appear a lot in the mainstream media since in 1960s, and strayed popular in the 1970s and 1980s. In the 1990s, the attention to environmental themes of mainstream media decreased. However, the media interest for the environment has risen up again since the 2000s, especially in the intense discussion of global warming and climate changes (Cox, 2010).

The public interest of an environmental issue is an increased-declined cycle. Anthony Fyfe (1972) brought up a classic model of the issue-attention cycle as a five-stage progression: the pre-problem stage, alarmed discovery and euphoric enthusiasm, realization of the cost of significant progress, a gradual decline in intense public interest, the post-problem stage. In the pre-problem stage, the problem already exists, but commands little public attention. In the discovery and enthusiasm stage, the public suddenly discover the environmental problem and band together to support a solution and attack the problem. Continuing the process, the public starts to understand the difficulty to solve the problem (realization), thus there is a decline in public interest and media attention. Finally, the issue moves into a less attention of publics stage, but institutions or policies created in the "discovery" stage may persist and continue to work toward the solution to the problem. In addition, some researches also indicated that public interests in environmental problems never disappear but repeat the cycle of intense and less-intense phases (Guber, 2003).

Unlike other news which catches media interest, environmental issues usually are unobtrusive events. Thus, the traditional media usually reports specific events of an issue but not the longer term development. This difficulty of reporting unobtrusive environmental events raises important questions about the forces which shape the production of news (Cox, 2010). There are five factors that usually restrict news production generally and environmental news especially: media political economy, gatekeeping and the environmental beat, newsworthiness, media frame, and norms of objectivity and balance (Cox, 2010).

Media political economy relates to the influence of media proprietors and their economic interests on the content of these media sources. Commercial media organizations are often owned by corporations with other businesses, for example, energy companies and industrial factories, which sometimes have environmental impact concerns (Beder, 2002). Some media managers and editors may feel pressure from owners and choose stories and news for reports which can avoid causing harm to on financial support. The political economy influences the

ölpf gr gpf gpegö"vj cv"clqwtprku"uj qwr have and cause media report news with more or less bias.

Editors and media managers who have power to decide if c"uqt {"eqwf "qt"eqwf pø"dg published are like gatekeepers in the media. In other words, the gatekeeping means that those individuals in newsrooms decide what can go through the öi cvgö"cpf "y j cv'ecpø"\*Eqz.'4232+0 Therefore, the background, training, and sources of gatekeepers strongly influence what news get published and how0J qy gxgt. "hqt"o cp {"gf kqtu"cpf "tgr qtvtu. "kø"r ctve wctn "f k h l e w n"vq deal with the environmental beat because of the unobtrusive character of environmental problems and also because reporting environmental news needs relatively specific knowledge and training; however most reporters f qpø"j cxg"vj g necessary background. To deal with this problem, reporters and editors of mainstream media have begun to obtain information from online resources, for instance websites that specifically discuss environmental issues, for instance (Cox, 2010).

Newsworthiness is the ability of a news story to attract readers or viewers (Cox, 2010), kø"cnq"cp"ko r qt vcp" hcevqt"y j gp"i cvnggr gtu"eqpukf gt"j qy "vq"r t g u g p v c"p g y u story. Yopp and McAdams (2007) identified that US traditional media usually use the following criteria for selecting, framing, and reporting environmental news to produce newsworthiness: prominence, timeliness, proximity, impact, magnitude, conflict, oddity, and emotional impact. As the result, most environmental news stories shown to readers and viewers are news with öj ki j "xkuwcn's wcrk"ö" hqt"gzco r rg."tgo qpustative activities) because of the way gatekeepers value the newsworthipguu0Vj wu "vj g"tgcf gtu"cpf "xlgv gtu"ecpø"i gv h w n-scale understanding of cp" gp xktqpo gpwcn" pgy u" uqt {"0' Kø" c" ej cngpi g" hqt" cm" gp xktqpo gpwcn" lqwtprkuu" vq" o cng environmental news both accurate and newsworthy.

Rcp"cpf "Mquenk"\*3; ; 5+f g h p g f"o g f k " h t c o g u"cu"vj g"öcentral organizing themes...that connect different semantic elements of a news story (headlines, quotes, leads, visual representations, and narrative structure) into a coherent whole to suggest what is at issueö0C similar or the same fact may be presented in a quite different way when editors and reporters choose different media frames for stories. Because different frames orient readers to different meaning, choosing a right frame to describe story is especially important with complicated news stories about environmental topics (Cox, 2010), for example, climate change and wolf conflict in Sweden. On the other hand, different stakeholders of an environmental conflict issue would compete to influence media how to frame the story.

Objectivity and balance are the bedrock norms of journalism. As Cox (2010) mentioned kp" j ku" dqqm" qdlgev k k {" " cpf " dcr:peg" ctg" öthe commitments by news media to provide information that is accurate and without reporter bias and, where there is uncertainty or controversy, to balance news stories with statements from all sides of the issueö0J qy gxgt. "kp r tcev eg. "kø"r f k h l e w n"vq"twp"vj g u g"pqto u"vq w n"00 qt g q x g t. also the norm of balance has been criticized in recent years (Cox, 2010). Cox (2010) pointed out that "kp" vj g" r cuw" öwhen



*environmental issues are controversial, or when the reporters lack the expertise to judge conflicting claims, the tendency in journalism has been to “balance” stories by quoting multiple or differing sources* (Boykoff and Boykoff, 2004). Thus to a large extent, the information of media is leading to a form of information bias (Boykoff and Boykoff, 2004). Thus to a large extent, the information of media is leading to a form of information bias (Boykoff and Boykoff, 2004). Thus to a large extent, the information of media is leading to a form of information bias (Boykoff and Boykoff, 2004).

These five factors reviewed above limit how mainstream media produce news in different ways. In other words, the information that readers receive is selected or re-constructed by these factors.

### 3. Method

#### 3.1 Content Analysis

Content analysis is a research method for analyzing written, verbal or visual communication messages (Cole 1988). This method was originally used for analyzing mass media content and documents (for example, newspaper and magazine articles) in the past few decades.

Content analysis includes two kinds of analysis approaches: quantitative and qualitative analyses (Elo and Kyngas, 2007). Quantitative content analysis uses statistical methods to count manifest textual elements and helps researchers to see the change of duration and frequency of elements. Qualitative content analysis uses statistical methods to address questions generated from theories or previous empirical research (Zhang and Wildemuth, 2009). However, the quantitative approach only shows the change of quantity, but lacks the syntactical and semantic information embedded in the text (Weber, 1990).

By contrast, qualitative content analysis focuses on exploring the meaning underlying physical messages rather than statistical significance of the texts (Zhang and Wildemuth, 2009). Qualitative content analysis deals with the forms and antecedent-consequent patterns of form (Smith, 1975). As Mayring (2000) mentioned, qualitative content analysis is *an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytic rules and step by step models, without rash quantification*. Qualitative content analysis can help researchers more easily express how they view the social world, and readers can better understand the perspectives of producers of the text (Zhang and Wildemuth, 2009).

In real research works, these two analysis approaches can be used separately or combined. Some researchers also indicated that using both qualitative and quantitative

analysis is the best way to do content-analytic studies, and can get more completed understanding of the texts (Smith, 1975, Weber, 1990).

### ***3.2 Data Selection and Analysis Process***

I used both quantitative and qualitative approaches to analyze the content of the SuHua freeway project in newspapers. The analysis include seven steps: (i) deciding the period I wanted to analyze of the SuHua freeway, (ii) identifying the news sources (which newspapers) used in this study, (iii) creating search terms to identify relevant articles, (iv) downloading relevant articles from online sources, (v) Categorizing article content to find dominant arguments, (vi) using quantitative approach to analyze the frequency of dominant arguments expressed in the articles in different periods of the freeway issue, (vii) using qualitative approach to analyze the deep meaning of different arguments in different newspapers.

The SuHua freeway issue has a long history (from 1990 to 2008). In this study, I chose the period between January 2007 to May 2008 as my research period. During This period corresponds to the pre-problem stage, the realization of the cost of significant progress stages in attention cycle. Before the beginning of 2007, only some experts and interest groups noticed this issue. After January 2007, because some notables published articles or arguments through media, the SuHua freeway issue became more and more intense. The public started to take care about this issue and more and more individuals or groups engaged into this issue with enthusiasm. Thus, this period was the time that the public were more sensitive to and interested in the issue, and also the time media produced most news articles. These reasons made the period between January 2007 to May 2008 suitably to investigate what and how newspapers reported this issue. There were five meetings in EPA during this period, and many people paid attention in these five meeting. Many advocacy activities were organized by both pro- and against-freeway parties, too. These five meetings in EPA include four reviews of the analysis report on the difference of the environmental impact and the EIA general assembly in the end, and were considered as five phases in my study. In order to focus the topic and make the sources easier to compare, I limited the analyzing texts to a week after each meeting in EPA. Thus, the first phase was between January 18<sup>th</sup> to February 3<sup>rd</sup>, 2007; the second phase was between November 1<sup>st</sup> to 16<sup>th</sup>, 2007; the third phase was between January 21<sup>st</sup> to February 5<sup>th</sup>, 2008; the fourth phase was between March 3<sup>rd</sup> to 5<sup>th</sup>, 2008; and the final phase was between April 25<sup>th</sup> to May 1<sup>st</sup>, 2008.

Three newspapers provided the textual data for the analysis. These three newspapers should be different in the target readers and publishing areas. These different characteristics may influence how different newspapers present the same event. Considering the availability of the online database, I chose China Times, Lihpao Daily, and Keng Sheng Daily News (KSDN) as the three newspapers for my study.

China Times is one of the four biggest national newspapers in Taiwan now. The reader base is over the whole country. China Times used a wider range to report news and commentaries during the state censorship period, thus it was regarded as a newspaper more supporting democratic activities. After the complete democratization of Taiwan society, although some people consider China Times had a slight political bias, the newspaper still kept relatively more space to include different voices (at least until the end of 2008, when the newspaper changed ownership). It is usually considered that China Times is advocating liberalism more and is relatively objective compared to other national newspapers (Wikipedia, 2012).

Lihpao Daily defines itself as a professional newspaper of education. The content of the newspaper is mainly in education, and often concerns aborigine, environmental protection, gender, laborers and disadvantaged minorities' issues. The goal of Lihpao Daily is giving readers the most substantial information, the most penetrating analysis, and multi-aspects judgments. The newspaper mainly publishes in the megalopolis, especially the cities in the north of Taiwan. The main readers are between 18 to 50 years old, with high educational level, especially students and people working in the education system (Admin, 2010).

Keng Sheng Daily News (KSDN) is a local newspaper published specifically in the east Taiwan (Hualien and Taitung counties). It is also the most famous newspaper in these two counties. The content of the news is more emphasized on events related to the local area. Thus, KSDN can offer more immediate and in-depth local news than national newspapers. As the promoter of KSDN said, the mission of KSDN is *“as the spokesman for the society, on the one hand spread the information of national policies and political decisions, and on the other hand should air the complaints of people as well as distinguish both the benefits and harms of various policies, exhibiting the power of the public voice.”* (KSDN, 2008).

The search command to identify relevant articles was using “The SuHua freeway” as the key word to search the news in the target period and exclude the articles not relevant to the SuHua freeway project. Moreover, in this study I want to investigate how newspapers present news from the arguments; thus, the op-Ed page and editorial articles which reflect individual opinion and are not assumed to be neutral were excluded from the analysis, too. The articles of each newspaper were downloaded from each newspaper's website.

After downloading all articles for analysis, I read all texts several times in order to find the dominate arguments in the texts. Several themes (for instance, tourism, safety, election, public opinion, and environmental impacts) which often appeared in the content were found first. Then, according to these dominate themes, I read all texts several times again and developed main arguments across all three newspapers' texts. Finally, four dominant arguments were discovered and two arguments with sub-arguments inside. These dominant arguments were then used in both the quantitative and the qualitative analysis.

The quantitative content analysis was started by counting the number of articles in different phases to see newspapers' interest in the freeway issue as time changed. Then, I classified the content in the news coverage to “pro-freeway”, “against-freeway”, and “neutral” in order to understand the preference of the perspectives in each news article. In the end, I collected the number of news articles which discussed dominate arguments of the SuHua freeway project in the three newspapers.

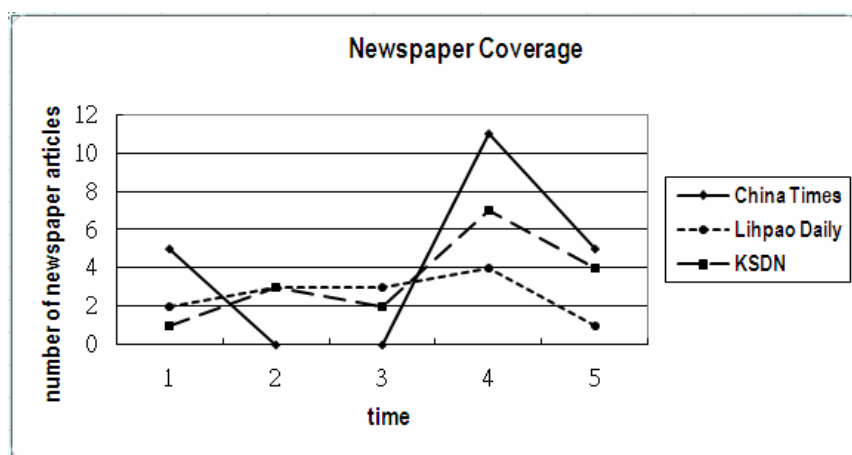
For the qualitative content analysis, I focused on the dominant arguments of the SuHua freeway project and explored how different newspapers presented these arguments in their news coverage. I analyzed every argument for each newspaper separately and added a short summary to compare the difference in the end.

There are some restrictions of this study that should be mentioned particularly here. First, all the texts that have been analyzed are written in Chinese. Chinese is my mother's tongue, it's easy for me to understand and discover the meaning behind the content of the texts. However, due to the limitation of my English, some content I translated may not show the original meaning that the reporters gave completely. Second, I am the only person who analyzed the content of news coverage in this study. Unlike other research that usually has more than two people examining the content to assure objectivity (for example, Schmid *et al.*, 2007); in this study, my personal perspective may influence how the result is displayed although I tried to make the analysis as transparent as possible. These two restrictions should be kept in mind when reading this report.

## 4. Result

### 4.1 Quantitative result

Fig 1 indicates the quantitative variation of the news coverage after five meetings in EPA. There is an obvious peak at the fourth phase in all three newspapers, meaning that the freeway issue received the most news coverage in this phase. The Taiwan presidential election, which was on 22nd March, 2008, is a big factor causing increasing coverage of freeway issue. This argument can be improved by the content of coverage. Most of the coverage in the fourth phase is related to the election.



**Fig 1.** The number of newspaper coverage with main focus on the freeway issue in three newspapers. The x-axis is the five research phases, including four reviews of the analysis report on the difference of the environmental impact (1-4) and the EIA general assembly (5). The y-axis is the number of newspaper reports in different periods.

**Table 1.** The table exhibits the perspectives of the freeway issue in three newspaper's news coverage. If a news report only describes pro-freeway opinions, this report is collected into "pro-freeway" row, and vice versa. If a news report presents both pro-freeway and against-freeway opinions, it is collected into "both" row. If I couldn't identify bias in favor of a specific perspective in the content, this news report is considered as "neutral".

Perspective	China Times						Lihpao Daily						KSDN					
	1	2	3	4	5	total	1	2	3	4	5	total	1	2	3	4	5	total
pro-freeway	3	-	-	0	0	3	2	0	0	0	0	2	1	1	1	2	2	7
against-freeway	2	-	-	3	0	5	0	3	1	2	0	6	0	0	0	1	1	2
Both	0	-	-	2	3	5	0		2	2	0	4	0	1	1	1	0	3
Neutral	0	-	-	6	2	8	0	0	0	0	1	1	0	1	0	3	1	5
<b>Total</b>	5	-	-	11	5	21	2	3	4	5	1	13	2	3	3	8	5	17

The three newspapers show different preference of perspectives in their news coverage (Table 1). In China Times, news reports which are classified as “neutral” are more common than other categories. News reports showing only the against-freeway perspective are more common than reports only show the pro-freeway perspective. In Lihpao Daily, six reports present only against-freeway perspective, which is three times more than reports that only present the pro-freeway perspective. In KSDN, seven reports use the perspective of pro-freeway, whereas only two reports show the against-freeway perspective independently. Lihpao Daily and KSDN display an obvious bias in the news coverage they reported. For China Times and Lihpao Daily, the newspaper had a trend from more pro-freeway to more against-freeway according to the number of news report of each category. In addition, although the amount of news coverage about the freeway project is less in Lihpao Daily, the content (total words) in each report is much more than other two newspapers.

If considering a report which presents both pro- and against-freeway perspectives as balanced reporting, this table indicates that balanced reports are less common than reports with a specific perspective in all three news papers. It seems for the reporters who report these news, they though this issue had at least some certain “facts” which is strongly supports one “side”.

**Table 2.** The dominant arguments of the SuHua freeway project discussed in the three news papers.

Main arguments	China Times						Lihpao Daily						KSDN					
	1	2	3	4	5	total	1	2	3	4	5	total	1	2	3	4	5	total
<b>The freeway can improve the local situation</b>																		
-The freeway is the only solution for transportation problems	3	-	-	1	2	6	0	2	2	1	0	5	0	0	1	1	4	6
-The freeway is the solution of tourism, agriculture and social problems	3	-	-	2	1	7	1	2	3	1	0	7	1	1	1	1	1	5
<b>The freeway is a public opinion in Hualien</b>	1	-	-	1	0	2	1	1	2	3	0	7	0	1	1	1	2	5
<b>The freeway is manipulated by politicians in elections</b>	0	-	-	7	1	10	0	1	0	3	0	4	0	1	0	3	1	5
<b>The freeway isn't compatible with sustainable development</b>																		
-The freeway brings huge environmental impacts	4	-	-	1	0	5	1	1	1	2	0	5	0	2	0	0	2	4
-The freeway affects aboriginal territories	0	-	-	1	0	1	0	1	1	2	1	5	0	0	0	0	1	1

The SuHua freeway project is a major environmental issue and conflict in Taiwan, especially in Hualien, the county where the freeway will end. Many arguments advocating or opposite the freeway were discussed in the newspapers multifariously. After analyzing the content in the coverage I collected, some dominant arguments can be found. They are “the freeway can improve the local (Hualien) situation”, “the freeway is a public opinion in Hualien”, “the freeway is manipulated by politicians in elections”, and “the freeway isn't

comparable with sustainable development”. Among those dominant arguments, “the freeway can improve the local situation” include two main demands: “the freeway is the only solution for transportation problems” and “the freeway is the solution of tourism, agriculture and social problems”; “the freeway isn’t comparable with sustainable development” can be divided in “the freeway has big impact on the environment” and “the freeway affects aboriginal territories”. A discourse will be collected if it relates to one of the arguments, no matter it is for or against of arguments.

Table 2 shows the number of main arguments seen in the coverage in the three newspapers in the different phases. In this table, the preference of arguments in each newspaper can be found. Furthermore, these newspapers’ preference also reflected how these three newspapers considered which argument was newsworthiness. In China Times, there are ten reports including the argument “the freeway is manipulated by politics and election”, which is much more than other arguments. China Times is interested in reporting freeway news related to election and politics more than other arguments.

In Lihpao Daily, the numbers of reports of different arguments are more equally. The most popular arguments are “freeway is the only solution of transportation problem” and “freeway is public opinion in Hualien”, appearing in seven reports; the least reported argument is “freeway is manipulated by politicians in elections”, appearing in four reports. One thing that deserves to be mentioned is that Lihpao Daily didn’t discuss the arguments above but changed its viewpoint to the EIA system in the final phase. Thus, arguments mentioned in the table don’t appear in the reports in the final phase. Furthermore, the space describing sustainable development arguments in reports is larger in Lihpao Daily than other two newspapers.

In KSDN, the most popular argument is also “the freeway is manipulated by politicians in elections” (eight reports). The second most frequent arguments are “the freeway is the only solution of the transportation problems” and “the freeway is the solution of tourism, agriculture and social problems”. The argument “the freeway affects aboriginal territories” is only shown once in the whole research period.

In summary, the discourse related to “the freeway is manipulated by politics and election” increases noticeably in the fourth phase (March 3<sup>rd</sup> to 10<sup>th</sup>, 2008). This result refers to the presidential election (March 22<sup>th</sup>, 2008). Because the candidates from both of the two main political parties used SuHau Freeway issue in their politics, the discourse of election is discussed a lot in all three newspapers. In contrast to the other two newspapers, which spent the most time discussing this argument, there were only four reports related to the election in Lihpao Daily. It seems that the election isn’t the argument that Lihpao Daily care more about. On the other hand, discourses of “the freeway affects aboriginal territories” are less discussed. This argument appears in Lihpao Daily five times, equal to other arguments. However, in China Times and KSDN, this argument is only raised once in all five phases. This result

shows that for China Times and KSDN, aboriginal territory is not an important issue they care about.

The details of discourse related to the arguments above in each newspaper will be discussed by qualitative content analysis.

## ***4.2 Qualitative result***

### **4.2.1 The freeway can improve the local (Hualien) situation - The freeway is the only solution of the transportation problem**

#### **• China Times**

In the content of China Times' reports, the newspaper used many opinions from political people representatives (for example, aldermen and legislators) and government organizations to display the argument "why the SuHua freeway is the only solution", for example:

"The Speaker of Hualien County Assembly, Wen-Che Yang, pointed out that the SuHua freeway will bring convenience of traffic and it's an immediate need of the people. Compared to the dense freeways and high-speed rails in the west of Taiwan, the transportation conditions in Hualien was far behind...." (2007/1/19, 1-2)

"The legislator of Hailian, Kun-Shan Fu, said that...Hualien people are really petty and pathetic, they only required a road without frequent interruption in order to go home safely...." (2008/4/26, 1-6)

Most of the reports mentioned why representatives of the people thought the freeway was the only solution, only one report showed both pro- and against-freeway perspectives on this argument.

"Although the Ministry of Communications Minister, Fang-Zhi You, said that the SuHua freeway was the only and the best solution, however committee numbers didn't agree with that. They thought that although giving a road which would let Hualien people go home safely is the government's responsibility; however, it's not guaranteed that the freeway won't collapse during typhoon season...." (2008/4/26, 1-5)

#### **• Lihpao Daily**

In Lihpao Daily, the content of reports gave more space to discussing the reason why the freeway isn't the only solution. Reporters used more opinions from environmentalists and described their arguments in detail.

"...EIA committee members said the busy traffic in SuHau highway is to a large extent caused by gravel trucks. They believed the problem will be solved if gravel could be transported by ocean shipping." (2007/11/2, 1-1)

"Taiwan Area National Expressway Engineering Bureau said, the reason that the SuHau freeway must be built is that "there is no alternative solution"....A member representing NGO's, Tai-Hua Huang, pointed out that... in order to fit sustainable development in Hualien, the first priority is making the best



integration of public transport and improve the SuHua highway...He emphasized that no traffic solution given by SEA can achieve the efficiency that SuHau freeway will have....” (2008/3/4, 1-5)

The newspaper (or the reporter) also used environmentalists’ statements querying the Ministry of Transportation indirectly.

“The conservation director of the Society of Wilderness, Dong-Han Zhou, directed that the Ministry of Transportation told a lie. The reason is that the report pointed out clearly that SuHau freeway isn’t the best choice.... It’s unthinkable that Taiwan Area National Expressway Engineering Bureau made the conclusion that SuHau freeway is better without considering transportation efficiency and input. (2008/1/21, 1-4)”

- **KSDN**

In KSDN, the content of the reports didn’t clearly mention the argument “the freeway is the only solution”, but reporters more often used Hualien (people) as subject to emphasize that the Hualien people need “a safe road to go home”. The content showed that “a safe road to go home” for Hualien residents is a metaphor of The SuHua freeway.

“Kun-chi Fu said ...the voice of Hualien, "We want a safe way to go home" must speak loudly today....considering “traffic demand”, "Environmental Impact", "social justice" and other national benefits and the environmental conservation perspective, he strongly believes that the SuHau freeway is the best solution to improve the transportation between North and to East.” (2008/4/25, 1-4)

“Hundreds of people from Hualien went to Taipei and stood in front of EPA and cried: "Give a safe way home for Hualien”. The representative, Chi-Cheng Wong, suddenly knelt down and speaking in in excitement, "I beg to the EIA Committee, please pass the SuHua freeway project, giving us a safe way home.” His honestly was inspiring many people.” (2008/4/26, 1-7)

KSDN also shortly mentioned the alternative transportation system in a report in the beginning of the whole review of the analysis of the difference of the environmental impact. However, after the issue had heated up, the reports all changed to advocate the freeway project.

“...EIA members think the SuHau freeway isn’t the only solution. Moreover, the freeway will take ten years to be built and cost more than a hundred billion NT dollars....” (2008/1/22, 1-1)

- **Short summary**

Comparing how the three newspapers presented the argument “the freeway is the only solution of transportation problem”, I found that the three newspapers used different media frames to depict this argument. China Times used many statements from political people representatives (considered as belonging to the pro-freeway group) but not many from the against-freeway group. For all of the opinions in the reports, it was clearly marked who the

speaker was. In my opinion, this means that China Times wanted to keep objective, meaning the content they report isn't their opinion but they just presented what people said.

Lihpao Daily also used many statements from stakeholders. However, unlike China Times, Lihpao Daily showed more statements from the against-freeway group than from the pro-free way group. In addition, when mentioning against-freeway group opinions, Lihpao Daily focused more on questioning government organization than individual politicians' arguments.

KSDN did not use many other stakeholders' arguments in their reports, but used their own words to present Hualien people's understanding and view of this argument.

#### **4.2.2 The freeway can improve the local (Hualien) situation - The freeway is the solution for tourism, agriculture and social problems**

- **China Times**

In China Times, reporters used statements from many different stakeholders, both from pro- and against-freeway groups, and were especially focused on people related to tourism. China Times gave more space to describing the reason why pro-freeway groups (local tourist managers, local representatives) welcome the freeway. The statements that the newspaper chose emphasized that the bad transportation system affected development, so the freeway is needed.

“...When completing the SuHau freeway, a fast and convenient transportation network in Taiwan is also completed. Not only Hualien people get the benefit, it's also a benefit to all residents in Taiwan. The freeway will bring a huge overall economic efficiency; promoting tourism and industry in Taiwan and potentially improving competition potentially.” (2007/1/19, 3-2)

“Kun-Chi Fu pointed out that the Su-Hua freeway is necessary... the inconvenient traffic condition affects tourism development....” (2007/1/24, 3-3)

- **Lihpao Daily**

In Lihpao Daily, the content of the news coverage was often citing the reasons given by the pro-freeway group and then attacked (or questioned) those reasons to show that the pro-freeway group is not reasonable and logical. For example:

“Legislator, Fu Kun-Chi, claims that Hualien had the highest unemployment rate, so the freeway is needed in order to save the problem. “However, the county with the highest unemployment rate is not Hualien, but in the start and end of freeways: Keelung and Kaohsiung County. "Shu-Chen Chang pointed out. She said that Hualien is a big agricultural county...however, the agriculture condition in the west is better than in the East. It is impossible to use the freeway to compete in “sales” with the West.” (2007/11/2, 3-2)

- **KSDN**

The content of this argument in KSDN wasn't simply about pro or against freeway opinions. The newspaper explained in detail why Hualien residents really hope the living conditions can be improved and claimed that improving transportation will change everything to the better. Both pro and against freeway opinions were raised up in the content, but the main goal was to present the wish of the Hualien people to have better life. Moreover, the reporters also pointed out the dissatisfaction with the pro-freeway group.

“Qi-Ta Cai pointed out that the SuHau freeway is not only a fast road, the economic output and tourist income after completing the freeway will know no limit. And the environmental impacts can be controlled by high technology...”

Stressing that Hualien should have its own character, Jin-He Xie didn't support the construction of the freeway..... the beauty of Hualien is not for attracting quick trip tourists, so Hualien doesn't need such a fast freeway.” (2007/11/5, 3-3)

- **Short summary**

The three newspapers used different frames presenting the argument “the freeway is the solution of tourism, agriculture and social problems”. In the content of China Times, reporters described different stakeholders' opinions, which more often came from the pro-freeway group. The attitude of Lihpao Daily was opposite. The newspaper focused on giving reasons that questioned the argument “the freeway is the solution of tourism, agriculture and social problems”. It seems clear that this newspaper was close to against the freeway project. KSDN showed that their position was to support the local people. They use “the Eastern people” as the object, so the reports looked like the content was the local people's opinion. China Times seemed to try to stay more neutral than Lipao Daily and KSDN. It looked like these two newspapers had their own preference to report arguments.

#### **4.2.3 Freeway is public opinion in Hualien**

- **China Times**

China Times used many stakeholders' arguments to show that the public opinion in Hualien is in favor of building the freeway. Several news reports mentioned that “most” or “80%” of people participated in the public opinion surveys wanting to have the freeway. The government should build the freeway to reflect the public opinion.

“...legislator, Ren-Fu Yang, who attended the EPA meeting, expressed the position that most Hualien people want the SuHua freeway....” (2007/1/19, 2-1)

“Secretary-General of Hualien County Government, Ji-Bin Huang, said that eighty percent of the public opinion presented that they want the SuHua freeway. Only to start building the freeway is fitting with public opinion....” (2008/3/4, 2-2)

- **Lihpao Daily**

Lihpao Daily used a lot of space (in several different reports) trying to understand where the “most people agree” came from. They used statements and research results from local environmental groups or scholars questioning the reality of the public opinion survey.

“Donghua University recently conducted a poll, showing that if asking whether Hualien residents want freeway or not, up to 65% want the freeway be built; if asked further that taking traffic congestion, pollution and the railway improving programs into consideration, supporting rate dropped down to 19%. The director of the society of wilderness...” (2007/11/2, 2-3)

In the reports, the newspaper in detail explained why the result of public survey was wrong and why the result couldn't reflect the public opinion in Hualien. The newspaper showed the questions in the survey (where responders could only answer “agree” or “disagree”) and considered the survey questionnaire to be problematic.

“A member of Hualien Environmental Protection Institute, Shu-Chen Chang, questioned legislators' "representative" of the "public opinion".... However, this survey is not "public".... There wasn't any propaganda to people before doing the survey.... There was only "agree" or "disagree" option, and respondents had to fill in their domicile. ... Many people reflect that the workers of the Eastern Service Center said "only people holding the “agree” opinion need to fill in the survey, opposite opinions holders didn't need”, caused most of the survey results were “agree”. ...” (2008/1/21, 2-4)

- **KSDN**

KSDN used an individual report propagating the public survey, describing how the survey would be done, and the survey questionnaire was easy to complete.

“The SuHua freeway project is an issue that all citizens, especially Hualien residents care about. The Eastern Service Center is conducting a broad survey, hoping they will truly understand the real opinion of Hualien people.... The Eastern Service Center don't have any presumption, hoping interviewers express their views actively...The format of the SuHua freeway survey is simple, just with two options, “agree” or “disagree”, interviewers just need to sign and write address and birthday in the column they choose.” (2007/11/5, 2-1)

In the further reports, KSDN emphasized that public opinion was in favor of the project, and this result would be sent to the central government. The central government should respect the local opinion.

“The Service Center of Eastern had done a public opinion survey in whole county in the end of last year. The result showed 93% of the public agree to build the freeway...” (2008/3/3, 3-3)

- **Short summary**

All three newspapers focused on the public opinion survey in this argument. However, they used different media frames to represent this “public opinion survey” and its result.

China Times just described the fact and didn't clearly show the newspaper's own opinion of this argument. Lihpao Daily questioned the reliability of the public opinion, giving a message to readers that the survey was problematic. KSDN encouraged their readers to do the survey and emphasized the result of survey as a strong reason for building the SuHua freeway.

Comparing reports from Lihpao Daily and KSDN, I found that these two newspapers gave different messages to readers from the same facts. For example, the fact "the format of the SuHua freeway survey is just with two options: "agree" or "disagree". KSDN thought the simple format made it easy for people to select; however, Lihpao Daily argued that this format couldn't reflect the real opinion of the local people.

#### **4.2.4 The freeway project is manipulated by politicians in elections**

- **China Times**

China Times pointed out that the SuHua freeway project issue was always heated during election periods. The "conditional approval" result was the current government strategy, in order to obtain votes.

"The public questioned that the EPA and the Ministry of Transportation and Communications wanted to pass the project in a hurry before the election....Secretary general of Green Party Taiwan, Han-Shun Pan, said that the present President Shui-Bian Chen gave himself a nice graduation gift, which is "conditional approval" of the SuHua freeway, ...gave more possibility to build the freeway." (2008/3/4, 4-2)

China Times also doubted that the result "conditional approval" of the fourth review of the analysis report on the difference of the environmental impact was the temporary result and assumed it would be changed after election.

"... through many actions from Ministry of Transportation and Communications and EPA , it is not hard to see manipulations of political power...let people wonder that this conclusion is mostly a "check of election"..." (2008/3/4, 4-4)

- **Lihpao Daily**

Lihpao Daily used environmental groups' perspective and thought that the SuHua freeway was manipulated by election.

"Environmental groups worried about that the SuHua freeway is a tool manipulated by election, because it is a sensitive time for the election now..." (2007/11/3, 4-1)

The newspaper also pointed out that the freeway project faced stress for political power already for long time, but the EPA didn't deal with this problem.

"The SuHua freeway project involved a huge local interest, environmental justice and development issues of Eastern Taiwan, so the final decision couldn't be made for ten years already. However, because of the

interference of politic power, legislators went to meeting place to clamor and "concern" in the recent reviews, but EPA never dealt with those kinds of situations.” (2008/3/6, 4-3)

- **KSDN**

KSDN considered the SuHua freeway a cheat for elections. In several reports, reporters mentioned that two political parties manipulated the SuHua freeway as a chip in order to obtain Hualien residents' votes. In this argument, KSDN manifested that Hualien people were a socially vulnerable group and the government didn't really care what they need, but saw them only for profit of the election.

“Hualien's external transport system has been at a disadvantage. Hualien residents hope to have a convenient traffic connection to the outside....Therefore, seeing the election history of Hualien, candidates never forgot to use transportation improvement as an important political point. ... Nowadays, the SuHua freeway is a beautiful dream that many people look forward to. No wonder all adults or kids in Hualien know that, "when there is an election, there is The SuHua freeway".” (2008/3/8, 4-6)

- **Short summary**

All three newspapers for once had a similar perspective on the argument” the freeway is manipulated by politicians in elections”. They all thought the SuHua freeway project was manipulated by the election, although different newspapers seem to have had a little different focus when presenting their perspectives. This argument was especially heated in March, 2008, before presidential election, showing how important social events highly affect the reported frequency in the media. All three newspapers seemed to consider this argument very clear and without controversy, none of the newspapers tried to balance or raised other perspectives about this argument.

#### **4.2.5 The freeway isn't compatible with sustainable development - The freeway has a big impact on the environment**

- **China Times**

In China Times, reporters used different stakeholders' arguments to show how these representatives of different stakeholders thoughts about the environmental impacts that will follow by the SuHua freeway. Both voices from pro- and against- freeway groups were shown in the newspaper with similar proportions.

“Zhang-Yi Zhang also said that the planned route of the SuHua freeway will go across twenty environmentally sensitive areas. It means the freeway is a dangerous construction that will cause a great impact on the eastern environment. He said, "The construction of the SuHua freeway is the beginning of another environmental disaster in Taiwan".” (2007/1/18, 5-1.1)

“For some people who worry that the SuHau freeway will damage ecological systems seriously, Ren-Fu Yang expressed that the SuHua freeway will be built with modern ecological engineering technology,

and the most important considerations of the engineering technology is not only good for construction, but also to include environmental protection and reduce impacts on the environment....“ (2007/1/19, 5-1.2)

- **Lihpao Daily**

Lihpao Daily used several big articles that explained in detail how the SuHua freeway will destroy the environment in the East and why the solution that Taiwan Area National Expressway Engineering Bureau gave wasn't realistic. Several reports look like reports from review meetings, with terminology that can give readers an impression that they were reading a research paper. The position of the newspaper was obviously close to being against the freeway.

“...although Taiwan Area National Expressway Engineering Bureau (TANEEB) used a 3D flight model showing the estimative passing routes of the SuHau freeway in order to prove that the damage is slight. In addition, TANEEB mentioned that there are some concrete methods such as corridors, impact reducing and compensatory to displace traditional methods. However, environmental groups, EIA committee, and academics considered that the plan made by TANEEB was too careless. Moreover, they didn't trust the effectiveness of the freeway nor the low environmental impacts.

... ..TANEEB should illustrate particularly the relation between the SuHua freeway and the Outline of Sustainable Development Plan of the East, identifying if the freeway could reach sustainable development or not.... Construction and Planning Agency, Ministry of the Interior also requested that TANEEB should give it a detailed report on the engineering influence on national parks...Retired professor, Si-Kun Li, said he worried about the many tunnels that will be excavated...the release of groundwater will be a big problem....Han-Shoun Pan criticized the estimated of CO<sub>2</sub> releases...” (2007/11/2, 5-1.2)

- **KSDN**

KSDN used relative little space to discuss environmental impacts following the freeway compared to the other two newspapers. The newspaper introduced more explanations from Taiwan Area National Expressway Engineering Bureau, which concluded that new technology and design will reduce environmental impacts, and that EIA should trust their engineers' ability. There was one editorial that mentioned that maybe Hualien people (using “we” in the text) should also accept different voices from the against-freeway group and give the new government more space to work. But this sentence only occupied a very small space in the report.

“Taiwan Area National Expressway Engineering Bureau brought up environmentally friendly and culture protection designs of the SuHua freeway project. They pointed out that after overall assessment, the funding for long term repairing and improvement of the old highway is the same as the funding of

building the SuHua freeway. Moreover, the new freeway can reduce the environmental impacts and give Hualien residents a safe and fast road connecting to be outside.” (2007/11/1, 5-1.1)

“... EIA committees please believe engineering experts’ professional skills.” (2008/4/26, 5-1.4)

- **Short summary**

Basically all three newspapers considered environmental issues to be an important issue that should be discussed, but again, they used different media frames to report the argument. China Times still kept more neutral and used statements from both against- and pro- sides. Lihpao Daily spent much more space discussing this argument and mainly described why the freeway shouldn't be built and retorted reasons from the developing unit. KSDN spent less space discussing this argument, both comparing to other two newspapers and compared to other arguments discussed in KSDN. It may be considered that KSDN didn't think this argument was very important to care about. Furthermore, KSDN emphasized that environmental impacts can be reduced or solved by modern technologies, while this statement was rarely mentioned in the other two newspapers.

#### **4.2.6 The freeway isn't compatible with sustainable development - The freeway affects aboriginal territories**

- **China Times**

Out of in total 25 news articles, only one mentioned aboriginal territories, and this was in the end of the whole event period. The report focuses on that EPA didn't follow the law and only one aborigine's opinion couldn't represent whole aborigine population.

“Ciwang · Teyra, a member of Taroko Student Association, criticized that the SuHua freeway will pass through aboriginal traditional areas. However, EPA didn't communicate with aborigine before, which violated aboriginal basic law. In addition, Ren-Fu Yang, the aboriginal legislator...his opinion couldn't represent the opinion of the Taroko tribe, who is the affected tribe living in the area that the freeway will pass through.” (2008/3/6, 5-2.1)

- **Lihpao Daily**

In Lihpao Daily, the first time this argument showed up was in the second review of the analysis report on the difference of the environmental impact, which means that the newspaper started to care about this argument in the early period of the whole event. The main issue that the newspaper repeated several times was that the developing unit not only didn't follow the law, but also never respected aborigine population fundamentally.

“Ciwang · Teyra, a member of Taroko Student Association, further pointed out that no matter how the routes of the SuHua freeway project changes, all of them will go through Taroko tribe's traditional areas. According to the spirit of aboriginal basic law, the developing unit has to consult with local tribes if any development will go through the aboriginal traditional areas. However, no communication was



formulated so far. "That means we don't have authority to decide the result", Ciwang · Teyra said."  
(2007/11/2, 5-2.1)

- **KSDN**

There was only one report related to aborigine areas in KSDN in the last period of the whole issue. The report only gave very general information about aborigine.

“... EIA committee pointed out that the plan of the SuHua freeway will impact aborigine a lot, however the developing unit never discussed with aborigines, which means that it may violate aboriginal basic law. They worried that if the SuHua freeway project is passed, aboriginal tribes will face a big impact.” (2008/4/26, 5-2.1)

- **Short summary**

Lihpao Daily was the first newspaper to raise the aboriginal territories argument, and the other two newspapers started to report on this issue just in the end of the whole period. It seems China Times and KSDN didn't consider this argument was worth to be discussed specifically, especially KSDN only gave a very general description of the argument. Moreover, compared to other arguments, “the freeway affects aboriginal territories” was not something newspapers usually paid attention to.

#### **4.2.7 Summary**

In general, the three newspapers used different media frames to describe the dominant arguments of the SuHua freeway issue. China Times was relatively neutral when report the freeway news; Lihpao Daily was more close to the against-freeway perspective; and KSDN was more close to the pro-freeway perspective. Considering newspapers were an important way for people to receive freeway information, the different media frames of the three newspapers may strongly affect how the readers and the public perceive the freeway issue. People that only read China Times obtain information about both sides of the issue, but the information is usually general and come from the government systems. Thus, the readers of China Times may feel the issue is far from them, and do not engage in this issue, but prefer to trust what the government said. People that only read Lihpao Daily, get clear information saying that “the freeway shouldn't be built” and to be a part of the against-freeway group is right and criticize the government's decision making process. People that only read KSDN may perceive the local (Hualien) people are victims, the central government and against-freeway groups don't care about the local residents needs and just see the local people as a tool for politics. This kind of receiving different perspective information of readers maybe one of the reasons increases the conflict of the issue.

## 5. Discussion and Conclusion

In the discussion, I will shortly summarize the results and then use the theory of news production trying to explore why the newspapers use more or less different ways to present the SuHua freeway issue and answer the research questions.

The Quantitative results show that the SuHua freeway issue was widely reported in the fourth phase, which is before the Taiwan presidential election. One of the factors influencing news production is newsworthiness. The presidential election was a very important event for Taiwanese society, and the candidate of each political party used this issue as politics. Thus, the SuHua freeway issue was connected to the presidential election and increased the newsworthiness of this issue. It may be an important reason why the number of news articles had a big increase in the fourth phase.

The result of table 1 indicates that the three newspapers I investigated are not neutral or balanced in their reports completely. Cox (2010) mentioned that a similar set of facts may be reported differently if using different media frames to tell the story. Chinese Times used more neutral or balanced approach when reporting about the SuHua freeway issue as they described the issue from both pro and against perspectives. It seems that the newspaper itself is an observer of this issue; whereas Lihpao Daily and KSDN have specific preferences in one side of the issue respectively: against-freeway and pro-freeway. This difference is not only because the three newspapers chose different media frames, but also very related to the characters and goal (of mission) of these newspapers. This will be discussed more below.

The three newspapers raised similar dominant arguments in their news coverage, but with different preferences for them. Lots of news coverage in China Times was related to the election, but this could not be found in Lihpao Daily and KSDN. China Times is a national newspaper with the readers all over country. For China Times, the SuHua freeway issue is more like a local event, not news that most of their readers care about. Thus, the issue is worth to be reported when it connects to some big, national events to increase the newsworthiness- the presidential election in this case. On the other hand, Lihpao Daily and KSDN have their specific reader groups (see method), so their reporting preference when it comes to newsworthiness, is not the politic argument, but other arguments like sustainable development and local situation arguments.

After analyzing the content of several main arguments in the three newspapers, I found that different newspapers had their specific styles to report about the SuHua freeway project.

China Times usually took the observer position to describe events, frequently used stakeholders' arguments and didn't show the newspaper's opinions. Moreover, the stakeholders' that China Times chose to quote are usually belonging to groups with economical and political power of the society; for example, government organization (e.g., Executive Yuan, Ministry of Communications, and Taiwan Area National Expressway

Engineering Bureau) or political representatives (e.g., aldermen and legislators). If the statements was from the person in environmental groups or Hualien, the newspaper often use “environmental groups” and “Hualien residents” and similar general words to concluded their opinions. China Times was one of the two government-allowed newspapers in the state censorship, thus it is used to be a megaphone for the government. The old role of China Times and its political economical concerns seems to still influence the way that the newspaper reports news and makes media frames. In addition, The SuHua freeway issue is just one of the news stories in the country, the newspaper didn’t spend much resource on it, and probably there isn’t any reporter deeply engaged in this issue. It may be one of the reasons why the newspaper usually quoted stakeholders’ arguments and the content of the news coverage sometimes was slight and general.

The content of the news coverage in Lihpao Daily was obviously close to the against-freeway and environmental protection groups and often retorted the opinions that pro-freeway groups raised. The newspaper does not seem to follow the norms and standard of objectivity and balance when it comes to reporting news that media should follow. However, as the owner of Lihpao Daily, Lucie Cheng, had said, “*Lihpao Daily doesn’t emphasize being objective and neutral, the newspaper stressed that we do not cheat, do not lie. The presentation of the news has to take care of stakeholders’ views, especially the position of disadvantaged groups in society. ...Lihpao Daily should balance the perspectives of other media....[Yet]because Lihpao Daily isn’t a profit-institution, it doesn’t need to care about how advertisers and the government think.*” (Cheng, 2004). According to this statement, Lihpao Daily never aspires to being objective or balanced, and the newspaper doesn’t have any political economical concerns. What they want to report is the news that other newspapers rarely include, for example, the perspectives of disadvantaged groups. Reflecting to the SuHua freeway issue, Lihpao Daily used more space reporting on environmental groups’ and local people’s opinions in detail, because the voices of these are usually ignored or misunderstood in other big newspapers. Moreover, although the newspaper’s position is against the freeway project, Lihpao Daily didn’t criticize the local residents who want the freeway be built, whereas it directly attacked the government system because it thought the problem comes from the government, and local residents were also the victims. Last but not least, to educate readers is one of the goals of Lihpao Daily, thus the newspaper usually explains the opinion of affected stakeholders and what they think very carefully. Each opinion, no matter if it’s for or against the freeway, was given enough space in the newspaper to clarify why it should be accepted or attacked. These kinds of deep discussions weren’t seen in other two newspapers.

KSDN took a more local (Hualien) angle of view to report the SuHua freeway issue. The news articles in KSDN were close to being pro-freeway but not very obvious sometimes. Like Lihpao Daily, KSDN is not a newspaper that displays neutral and balanced reporting of news.

As a local newspaper, one of the missions of KSDN is to transmit local people's voices, and that's the media frame when the newspaper report news. It can be consider also the political economical concerns of KSDN. Because most of Hualien residents' opinion is pro-freeway, the perspective of the newspaper also shows this trend. Moreover, we can see that the reports of KSDN focus more on the arguments related to Hualien people's life and opinion compared to the other two newspapers. Furthermore, the statements that the newspaper used are more often from the local aldermen, legislators or local stakeholders, who the readers are familiar with but not the representative from central government or environmental groups.

In conclusion, this study found that for the SuHua freeway issue- one of the most complicated environmental issues in Taiwan - the three newspapers I chose developed similar arguments regarding the local transportation and social problems, political manipulation, the public opinion, and sustainable development considerations in the content. However, different newspapers often used different aspects and perspectives to report the information. China Times (national newspaper) usually and reported about opinions for and against the freeway project. Besides, China Times often took the perspective of the government. Lihpao Daily (readers are usually high educational and come from megalopolis) had an obvious preference to the against-freeway perspective and used to give more space for groups that are seldom noticed in other newspapers, for example, environmental groups and local people. KSDN (local newspaper) preferred to report news close to the pro-freeway perspective and to report opinions from local political stakeholders. These differences of the three newspapers can be explained by the theory of the news production. Because of the different reader groups, missions, and the political economical concerns, the newspapers have different interests when they consider the newsworthiness, which media frame they want to use, and also whether they strived for being neutral and balanced or not. By the effect of these news production factors, newspapers produce reports with different perspectives, and these perspectives influence how the public understand this complicated freeway issue. This highly different reporting of the newspapers gives the public more clear opportunities to understand this complicated issue, but may also intense the conflict between stakeholders who receive information from different newspapers. The effect of these different reporting of news on the decision making of SuHua freeway issue may be interesting to discover in further work.

## 6. Reference

### 6.1 English Books and Paper

- Anderson, A. (1997). *Media, culture, and the environmental*. New Brunswick, NJ: Rutgers University Press.
- Beder, S. (2002). *Global spin: The corporate assault on environmentalism (Rev. ed.)*. White River Junction, VT: Chelsea Green.
- Boykoff, M. T., & Boykoff, J. M. (2004). Bias as balance: Global warming and the US prestige press. *Global Environmental Change*, 14(2), 125-36.
- Cole F.L. (1988) Content analysis: process and application. *Clinical Nurse Specialist* 2(1), 53-57.
- Cox, R. (2010). *Environmental communication and the public sphere (2<sup>nd</sup> ed.)*. SAGE Publications, Inc.
- Cunningham, B. (2003). Re-thinking objectivity. *Columbia Journalism Review*, 42, 24-32.
- Downs, A. (1972). Up and down with ecology-The "issue-attention cycle". *Public Interest*, 28, 38-50.
- Elo, S. & Kyngas, H. (2007). The qualitative content analysis process. *J Adv Nurs*, 62:107-115.
- Fortner, R. W., Mayer, V. J., Brothers, C. C., & Lichtkoppler, F. R. (1991). Knowledge about the Great Lakes environment: A comparison of publics. *Journal of Great Lakes research*, 17:394-402.
- Guber, D. L. (2003). *The grassroots of a green revolution: Polling America on the environment*. Cambridge, MA: MIT Press.
- Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research*, 1(2). Retrieved May 28, 2012, from <http://217.160.35.246/fqs-texte/2-00/2-00mayring-e.pdf>.
- Miller, M. M., & Riechert, B. P. (2000). Interest group strategies and journalistic norms: News media framing of environmental issues. In S. Allan, B. Adam, & C. Carter (Eds.), *Environmental risks and the media* (pp. 45-54). London: Routledge.
- Pan, Z., & Parker, J. L. (1987). Impacts of education, age, newspaper, and television on environmental knowledge, concerns, and behaviors. *Journal of Environmental Education*, 19, 3-9.
- Schmid, A. N., Thompson, J. R., and Bengston, D. N. (2007). The public discourse about land use and water quality: themes in newspapers in the upper Mississippi River Basin. *Appield Environmental Education and Communication*, 6:187-196.
- Smith, H.W. (1975). *Strategies of Social Research: The Methodological Imagination*. Englewood Cliffs, NJ: Prentice-Hall.

- Wagner, T. (2008). Reframing ecotage as ecoterrorism: News and the discourse of fear. *Environmental Communication: A Journal of Nature and Culture*, 2(1), 25-39.
- Wellings, K., & Macdowall, W. (2000). Evaluating mass media approaches to health promotion: a review of methods. *Health Education*. Vol. 100 Iss: 1, pp.23 – 32
- Weber, R.P. (1990). *Basic Content Analysis*. Newbury Park, CA: Sage Publications.
- Yopp, J. J., & McAdams, K. C. (2007). *Reaching audiences: A guide to media writing* (3<sup>rd</sup> ed.). Boston: Pearson Education.
- Zhang, Y., & Wildemuth, B. M. (2009). *Qualitative analysis of content*. In Applications of social research methods to questions in information and library science, 308-319. Westport, Connecticut: Libraries Unlimited.

## 6.2 Chinese Thesis and Report

- Admin (2010) 《關於立報》。台灣立報。 Retrieved May 27, 2012, from <http://www.lihpao.com/index.php?action-viewnews-itemid-40108>
- Cheng, L. 成露茜 (2004) 《全球都在尋找新的新聞工作典範》。台灣立報社長、世新大學新聞傳播學院院長成露茜發言稿。 Retrieved June 4, 2012, from <http://www.luciememory.org/49>
- Chen, W. Y. 陳琬瑜 (2006) 《挑戰民粹：從國道五號高速公路蘇澳花蓮段興建政策觀察環保團體與綠色政黨的關係》。國立中正大學政治學研究所碩士論文。
- He, J. Y. 何俊頤 (2010) 《反蘇花高運動：社會運動中的敘事、地方性與實踐困境》。世新大學社會發展研究所碩士論文。
- Keng Sheng Daily News。《關於更生》。 Retrieved May 27, 2012, from <http://www.ksnews.com.tw/introduction.php>
- Wikipedia。《中國時報》。 Retrieved May 27, 2012, from <http://zh.wikipedia.org/zh-tw/>
- Zhang, Y. M. 張永明 (2005) 《我國重大交通建設決策過程之研究：以國道五號蘇花段高速公路為例》。國立東華大學公共行政研究所碩士論文。
- 田德財。《環評大會今審查蘇花高》。花蓮新聞/花蓮新聞版。2008年4月25日。
- 田德財。《蘇花高暫不建需新政府重啓》。花蓮新聞/花蓮焦點版。2008年4月26日。
- 田德財。《地方吶喊：給我一條平安回家的路》。花蓮新聞/花蓮焦點版。2008年4月26日。
- 中央社台北。《蘇花高環評會議沒進展》。花蓮新聞/花蓮要聞版。2007年11月2日。
- 中央社台北。《蘇花高環評環委要求補件》。花蓮新聞/花蓮要聞版。2008年1月22日。
- 中央社台北。《環評案民代質疑標準不一》。花蓮新聞/花蓮要聞版。2008年1月22日。
- 中央社台北。《蘇花高環差案露曙光》。花蓮新聞/花蓮要聞版。2008年3月4日。
- 中央社台北。《520前決定蘇花高? 陳重信：沒有特定時程》。花蓮新聞/花蓮要聞版。2007年3月5日。
- 中央社花蓮縣。《蘇花高環審補件花縣：技術問題》。台灣立報。2007年1月18日。
- 中央社訊。《蘇揆：蘇花高環差通過就興建》。台灣立報。2007年1月24日。

朱武智。《蘇花高四度環評 有條件過關》。中國時報，第 A4 版，2008 年 3 月 4 日。

何醒邦。《交通部：蘇花高今年可望動工》。中國時報，第 A4 版，2008 年 3 月 4 日。

何國豐。《花蓮馬蕭聯合後援會成立人氣旺》。花蓮新聞/花蓮要聞版。2008 年 3 月 3 日。

林倖妃。《蘇花高環評全案退回 前途未卜》。中國時報，第 A13 版，2007 年 1 月 19 日。

林倖妃。《選前政治操作 難保不是芭樂票》。中國時報，第 A4 版，2008 年 3 月 4 日。

林倖妃。《蘇花高環評退回 交新政府決定》。中國時報，第 A5 版，2008 年 4 月 26 日。

林倖妃。《準署長質疑：環評是橡皮圖章》。中國時報，第 A5 版，2008 年 4 月 26 日。

林倖妃、黃如萍。《舊署長臨別砲轟 陳重信：決定全權丟給環委 不正確》。中國時報，第 A5 版，2008 年 4 月 26 日。

林倖妃。《《新聞分析》安全回家的路 陷入政治操弄》。中國時報，第 A5 版，2008 年 4 月 26 日。

林遠川。《又見蘇花高》。花蓮新聞/花蓮要聞版。2008 年 3 月 8 日。

邱福亮。《蘇花高議題東服中心再做民調》。花蓮新聞/花蓮要聞版。2007 年 11 月 5 日。

邱福亮。《蘇花高環評會今第四次審查》。花蓮新聞/花蓮要聞版。2008 年 3 月 3 日。

邱福亮。《蘇花高與核電環評命運不同受質疑》。花蓮新聞/花蓮要聞版。2008 年 3 月 8 日。

胡慕情。《蘇花高建不建相關單位各執一方》。台灣立報。2007 年 11 月 2 日。

胡慕情。《蘇花高案環保團體籲選完再審》。台灣立報。2007 年 11 月 2 日。

胡慕情。《蘇花高普查疑點多 環團批不符民意》。台灣立報。2008 年 1 月 21 日。

胡慕情。《民調當後盾 政客力批環保團體》。台灣立報。2008 年 1 月 21 日。

胡慕情。《國工局未釋疑 蘇花高環差三審失敗》。台灣立報。2008 年 1 月 21 日。

胡慕情。《貪吃萬靈丹 小心中毒》。台灣立報。2008 年 3 月 3 日。

胡慕情。《環署國工局強推蘇花高過關》。台灣立報。2008 年 3 月 3 日。

胡慕情。《蘇花高過關 張子敬成環團箭靶》。台灣立報。2008 年 3 月 5 日。

胡慕情。《給台灣環評一個自主的靈魂》。台灣立報。2008 年 4 月 25 日。

姚盈如、高有智。《環長：蘇花高 新政府決定較好》。中國時報，第 A6 版，2008 年 3 月 5 日。

高有智。《嚴長壽、侯孝賢等 反對蘇花高》。中國時報，第 A8 版，2007 年 1 月 18 日。

高有智。《環評會不中立 環團要張子敬下台》。第 A6 版，2008 年 3 月 6 日。

郭晉瑋。《想做大位 先看過來》。台灣立報。2007 年 11 月 1 日。

黃懷瑩。《對焦蘇花高謝金河蔡啓塔交流意見》。花蓮新聞/花蓮要聞版。2007 年 11 月 5 日。

陳洛薇。《馬：要先做好配套 不應躁進》。中國時報，第 A6 版，2008 年 3 月 5 日。

陳惠芳。《重建蘇花高 環團發動全民公審》。第 C1 版，2008 年 3 月 7 日。

葉文杰。《觀光學院校長為花蓮觀光建言》。花蓮新聞/花蓮要聞版。2008 年 4 月 25 日。

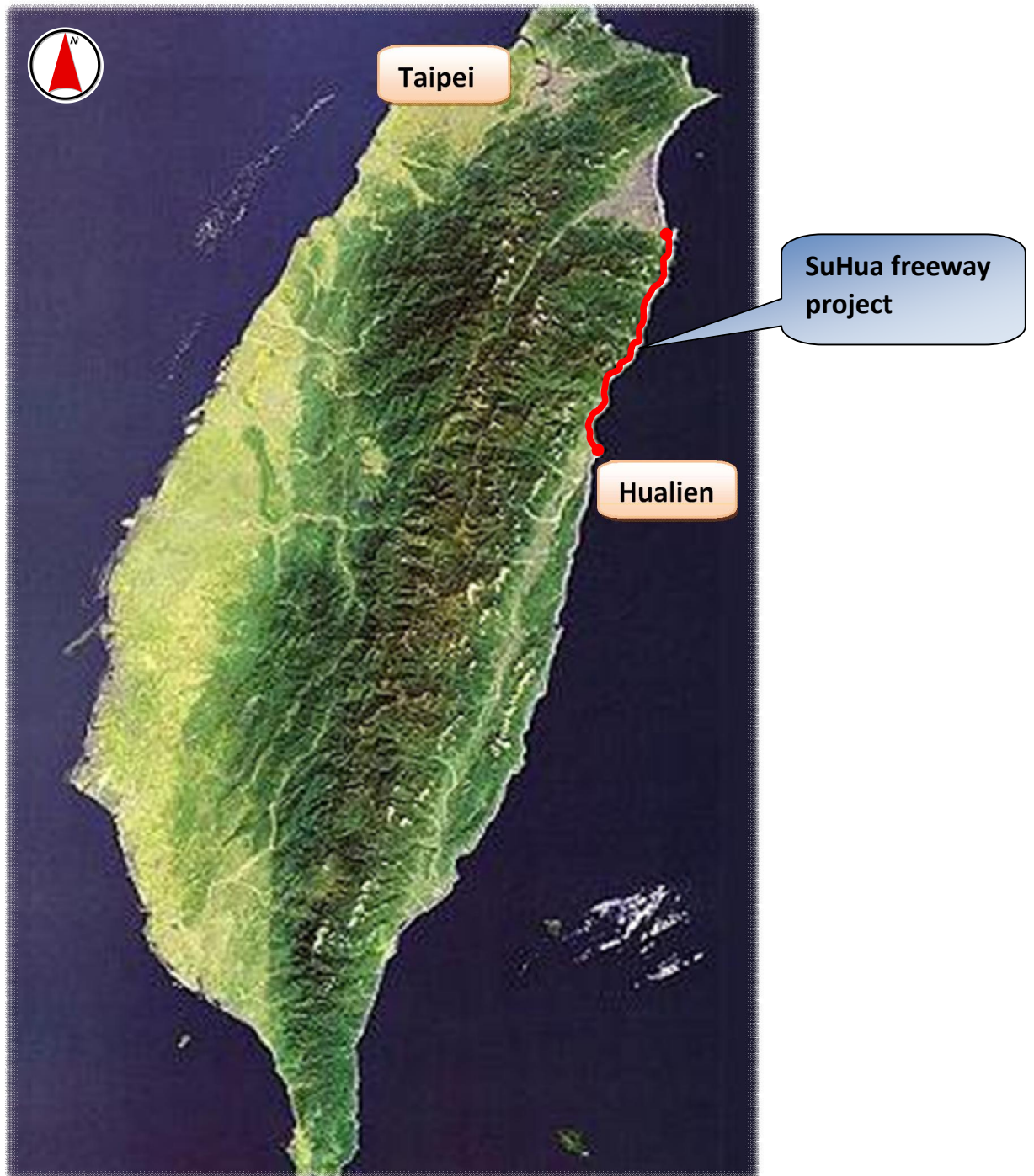
- 溫富振。《蘇花高案 地方有意「建」(2-1)》。中國時報，第 C3 版，2007 年 1 月 19 日。
- 溫富振。《蘇花高案 地方有意「建」(2-2)》。中國時報，第 C3 版，2007 年 1 月 19 日。
- 鄭可欣。《審查過關 蘇花高就動工 盧博基辦觀光產業座談聽取建言 蔡堆要求國工局月內完成環評分析補件》。花蓮新聞/花蓮要聞版。2007 年 1 月 18 日。
- 鄭可欣。《蘇花高有望觀光協會振奮》。花蓮新聞 2/花蓮生活版。2008 年 3 月 5 日。
- 蔡惠真。《與扁認知不同調 謝如履薄冰》。中國時報，第 A6 版，2008 年 3 月 5 日。
- 蔡惠真。《謝：環境優先 危險路段可討論》。中國時報，第 A6 版，2008 年 3 月 5 日。
- 簡東源。《花蓮立委 仍要蘇花高》。中國時報，第 C3 版，2007 年 1 月 25 日。
- 簡東源、陳惠芳。《地方樂觀其成 環保團體不排除興訟》。中國時報，第 A4 版，2008 年 3 月 4 日。
- 簡東源。《盼了十年退回原點 花縣府遺憾》。中國時報，第 A5 版，2008 年 4 月 26 日。
- 嚴培曉、陳木隆。《蘇花高環評過關 地方憂喜參半》。第 C1 版，2008 年 3 月 5 日。



## Appendix I. The calendar of important events of The SuHua freeway project

1990/10	The first time The SuHua freeway project raised up in the government system.
2000/3	The SuHua freeway project passed the environmental impact assessment.
2000/7	The central government suspended The SuHua freeway project because of the budget limitation.
2000/8~ 2003/12	The The SuHua freeway project was vacillated between developing or non-developing many times.
2004/1	The local government of Hualien county published the result of public opinion survey. The result showed 80% of Hualien people support to have The SuHua freeway.
2004/11	EIA committee rejected the report of analysis report on the difference of the environmental impact of The SuHua freeway. Furthermore, EIA committee asked strategic environmental assessment for this project.
2006/12	EPA completed the examination of strategic environmental assessment, concluded that The SuHua freeway would cause very huge impact on the environment, suggested the Ministry of Communications “don’t adopt” this project. The premier instructed his policy advisors that “as long as the review of analysis report on the difference of the environmental impact was passed, starting build freeway immediately.”
2007/1/18	The first meeting to the review of analysis report on the difference of the environmental impact of The SuHua freeway project. (Result: review again after adding supplement)
2007/3~ 2007/10	Against- and pro-freeway groups organized several campaigns separately to advocate their appeals.
2007/11/1	The second meeting to the review of analysis report on the difference of the environmental impact of The SuHua freeway project. (Result: review again after completing the impact investigation and adding supplement)
2008/1/21	The third meeting to the review of analysis report on the difference of the environmental impact of The SuHua freeway project. (Result: review again after adding supplement)
2008/3/3	The forth meeting to the review of analysis report on the difference of the environmental impact of The SuHua freeway project. (Result: conditional approval)
2008/3/22	The 12th Presidential and Vice Presidential Election
2008/4/25	EIA general assembly for The SuHua freeway project. (The final examination) (Result: Reject. Return the project back to the Ministry of Communications)

**Appendix II.** The map of Taiwan and the SuHua freeway design



<http://web.fg.tp.edu.tw/~earth/learn/twgeo/index.htm>